

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 88/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: MR Albert Keven Mead

1.3. Property details

Property: LOT 3027 ON PLAN 214439 (DUNN ROCK 6355)

Local Government Area: Shire Of Lake Grace

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
300		Mechanical Removal	Cropping

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 511: medium woodland; salmon gum and morrell (Shepherd et al 2001, Hopkins et al 2001).	Lot 3027 is bounded to the north-north east by the Lake King Nature Reserve and to the south-south east by the Dunn Rock Nature Reserve. The property itself is approximately 2000 ha of which a substantial amount has been cleared. The vegetation to be cleared includes Casuarina sp., Eucalyptus sp. (mallee), Hakea sp., Gastrolobium sp., Callitris sp., Acacia sp. & Melaleuca sp. The understorey is primarily in excellent condition with no sign of disturbance other than firebreaks. Some weed species were evident along edges adjacent to firebreaks. It was noted that the vegetation on site does not fit the description as mapped by Beard (Site visit T Brooks 24.08.04).	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The condition of vegetation was based upon a site inspection (24.08.04). There is a small 'edge effect' adjacent to firebreaks, otherwise stock have not had access due to the presence of poisonous Gastrolobium species resulting in the vegetation being in excellent condition.

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 at variance to this Principle

The area under application forms part of the Dunn Rock/Lake King Chain in the proposed Dunn Rock/Lake King Natural Diversity Recovery Catchment (DOE 2003 & CALM 2004b).

The Dunn Rock/Lake King Chain has been assessed as being a Tier 1 representative landscape as part of the Salinity Investment Framework. Tier 1 landscapes are those "ranked highest (rank 1) for biodiversity importance that are also threatened by salinity".

The removal of large areas of native vegetation in excellent condition is likely to have a significant adverse impact on the biodiversity of the region.

It is considered that the clearance of large tracts of land, such as the current proposal, has the potential to hinder the movement of fauna in a predominantly cleared landscape as well as reduce the genetic diversity of remnant vegetation.

Methodology CALM (2004b) (DOE TRIM Ref ND 538)
DOE (2003) (DOE TRIM Ref ND 559)
EPA (2000)
Site visit (24.08.04)
GIS Databases:
- Pre-European Vegetation - DA 01/01
- Newdegate 1.2m Orthomosaic - DLI 01/98

(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 at variance to this Principle

The following fauna species of conservation significance are known to occur or are likely to occur in the local area:

Carnaby's Black Cockatoo;
Malleefowl;
Peregrine Falcon;
Red-tailed Phascogale;
Heath Rat;
Carpet Python;
Daphnia jolly;
Hooded Plover;
Western Rosella;
Tamar Wallaby;
Western Brush Wallaby;
Western Mouse;
Australian Bustard;
Bush Stone Curlew;
Shy Heathwren;
Rufous Fieldwren;
White-browed Babbler; and
Crested Bellbird.
(CALM 2004a)

Given the number of Specially Protected and Priority Listed Fauna likely to occur within the land under application a fauna/habitat survey should be conducted to determine the significance of the native vegetation subject to this proposal.

CALM (2004a) report this is or likely to be a magnificent ecological area for many Threatened and Priority Fauna. Further fragmentation within the core area would be highly undesirable.

Methodology CALM (2004a) (DOE TRIM Ref ND 334)

(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

CALM (2004a) advise there are two species of Declared Rare Flora (DRF), *Eremophila subteretifolia* and *Grevillea involucrata*, present in the general area together with a number of other Priority flora species. *Eremophila subteretifolia* is regarded as being critically endangered. Given that no flora survey has been conducted, it is difficult to determine whether or not there are DRF species present on the land under application.

Methodology CALM (2004a) (DOE TRIM Ref ND 334)
GIS Databases:
- Threatened Flora Data Management System - CALM (CALM 2004)
- Herbarium Specimen Collection Database - CALM (CALM 2004)
- 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 likely to be at variance to this Principle

CALM (2004a) reports no known occurrences of Threatened Ecological Communities (TECs) in the area under application and not within 40km of this area.

Methodology CALM (2004a) (DOE TRIM Ref ND 334)
GIS Database:
- Threatened Ecological Community Database - 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 at variance to this Principle

The vegetation at the site is mapped as Beard Vegetation Association 511 (Hopkins et al. 2001) . However, the vegetation observed on site appears to be more representative of nearby Beard Vegetation Types 47 (shrublands; tallerack mallee-heath) and 2048 (shrublands; scrub-heath in the Mallee region) of which 35.8% and 46.1% respectively of the pre-European extent remains (Site Visit 24.08.04). The Shire of Lake Grace has 19.5% and the Mallee IBRA Bioregion has 21.9% remaining as native vegetation .

The area falls within the intensive landuse zone (ILZ), and is therefore subject to the EPA's Position Statement No. 2, Environmental Protection of Native Vegetation in Western Australia. This Position Statement recommends that further clearing within the ILZ for agricultural purposes should not be considered, unless the areas are small and alternative measures to protect biodiversity are put into place.

Due to the size of the area, its location and excellent condition, it is considered to represent a significant remnant in an area that has been extensively cleared. Therefore the proposal is at variance to this Principle.

Methodology Shepherd et al. (2001)
Hopkins et al. (2001)
Department of Natural Resources and Environment (2002)
EPA (2000)
Site Visit (24.08.04)
GIS Database:
- Pre-European Vegetation - DA 01/01
- EPA Position Paper No 2 Agriculture Region - DEP 12/00

(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 is not likely to be at variance to this Principle

A minor non-perennial watercourse (1st order stream) has been mapped arising within the area subject to the proposal that flows in an easterly direction toward a wetland (non-perennial lake) that is situated 120m to the east of the amended proposal. During a site visit, it was noted that the watercourse appeared not to have had any flow for a substantial period of time and the vegetation within and adjacent to the watercourse appeared not to be wetland/watercourse dependent vegetation. The proponent indicated that the watercourse did not flow during the extreme rainfall event of January 2000 (Site Visit 24.08.04).

The wetland was dry underfoot during the site visit (24.08.04) however there was considerable *Melaleuca* sp. regeneration occurring within and adjacent to the wetland. This wetland does not hold surface water except in extreme events. The proponents advised that they had walked around the wetland during the extreme rainfall event in January 2000 and that it did not overflow. There would appear to be a sub-surface outlet from this wetland and a strong sub-surface connection between this wetland and nearby Bennetts Lake or possibly Lake Ronnerup, which is lower in the chain than Bennetts Lake (Site Visit 24.08.04).

The proponent indicated at the time of the site visit that he would not clear vegetation growing in association with the watercourse and would leave a buffer (no specific buffer width was given). The proponent also has no intention to clear any vegetation associated with the wetland.

Methodology Site Visit (24.08.04)
GIS Database:
- Hydrography, linear - DOE 01/02/04

(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

DAWA's (2004) land degradation assessment identified a slight risk of erosion which could be managed with maintenance of ground cover and contour banks. DAWA (2004) advise the proposed clearing is not likely to cause appreciable on and off site land degradation subject to the implementation of appropriate management strategies to address any potential erosion.

The proponent has indicated that he intends to retain a belt of native vegetation around the outside of the proposed clearing and that contour banks to harvest surface water will be implemented. These measures are likely to reduce the impact of erosion.

Methodology Site Visit (24.08.05)
DAWA (2004) (DOE TRIM Ref ND 193)

(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 may be at variance to this Principle

CALM (2004a) report the proposed clearing may have a potentially significant impact on the Dunn Rock Nature Reserve through the reduction of a vegetative buffer to the reserve, potential impact on local hydrology/lakes within the reserve and the potential for feral mammal and weed incursions. A significant buffer would be required around the reserve boundary to maintain the ecological principles of the Reserve.

Methodology CALM (2004a) (DOE TRIM Ref ND 334)
GIS Database:
- CALM Managed Lands and Water - 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 at variance to this Principle

The site occupies a medium to high level topography above Bennetts Lake, Lake Ronnerup and Lake King, which form part of the Lockhart sub-catchment of the Avon River. Given the depth and porosity of the soil on the property and the relative ease of drainage from the area of the proposal (mostly sub-surface drainage) it would appear there is little likelihood of salinity or waterlogging affecting the area subject to the proposal. The wetland (120m east of the proposal) appears to drain immediately, and given the relatively steep banks of Bennetts Lake and the minimal impact that the January 2000 rainfall event had on both the wetland and Bennetts Lake, the system appears to have the capacity to accept additional discharge from intensive rainfall events without adversely affecting fringing vegetation. Bennetts Lake is saline and has a catchment of approximately 20,000ha and Lake King (approx. 150,000ha catchment) is hyper-saline. As a result of additional discharge into the lake system it is likely there will be an incremental increase in salinity to Bennetts Lake and Lake Ronnerup.

DAWA (2004) advise that there is a small to medium off site risk in the form of an incremental increase in salinity to Lake Bennett and Lake Ronnerup. In a Level 2 Assessment Report to the Commissioner of Soil and Land Conservation (DAWA 1998), with reference to a small unnamed lake (known as the Water Ski Lake or Bennetts Lake by the current proponent), it is reported that the former owner of the property "confirmed that the water quality of this lake has deteriorated since clearing."

With reference to a previous Notice of Intent to Clear, in which 490ha of native vegetation was notified, including the current area under application, the Water and Rivers Commission (1998) identified that there was a risk of increased seepage of groundwater into existing discharge zones and there was a risk of increased salinisation of drainage and wetland systems with particular emphasis on Lake Ronnerup and the Water Ski Lake (Bennetts Lake)."

Methodology DAWA (2004) (DOE TRIM Ref ND 193)
DAWA (1998) (DOE TRIM Ref IN 17233)
Water and Rivers Commission (1998) (DOE TRIM Ref IN 17233)
Site Visit (24.08.04)
GIS Database:
- Hydrography, linear - DOE 01/02/04

(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

Both the wetland east of the revised proposal and Bennetts Lake have recovered from the intensive rainfall event of January 2000. In fact there would appear to be a significant increase in regeneration of native vegetation as a result of the event. The proponent advised that water ponding in the wetland disappeared within a couple of days of the intensive rainfall event. At that time, water in Bennetts Lake, although three metres higher than the water level on the day of the site visit, was contained within its banks. Given the magnitude of the January 2000 event and the capability of the local sub-catchment to contain surface water, the clearing as proposed is not likely to cause or exacerbate the incidence or intensity of flooding.

Methodology Site Visit (24.08.04)
GIS Database:
- Hydrography, linear - DOE 01/02/04

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

Comments

DAWA provided a history in relation to the property (TRIM Nos. IN17233 and EI3971). The previous owners applied to clear 490 ha in 1998. The proposal was referred to the EPA. The outcome of this referral was that 221 ha was permitted to be cleared, subject to the conservation of the remaining area. The area under application is part of the area identified for conservation during the previous clearing assessment process.

The Shire of Lake Grace has no objection to the proposal.

Three submissions (two from the same organisation) were received urging that appropriately timed flora and fauna surveys be conducted before a decision is made on the clearing application. It is requested that the surveys consider issues such as biodiversity, DRF, and TECs. Other issues are topography, surface hydrology, soil mapping, vegetation condition, land salinisation, clearing of native vegetation in an area that has been extensively cleared, low representation of plant species and communities in reserved land. Reference was also made to EPA Position Statement No. 2 which states that the EPA's position is 'that any further reduction in native vegetation through clearing for agriculture cannot be supported'.

The proponent was given the opportunity to provide additional information in relation to the issues identified by this assessment (6 December 2005). Information was provided by the proponent (6 January 2006) to address the erosion issue through their intention to construct contour banks and plant groundcover (lucerne). However, it is considered that other ecological issues have not been addressed. The proponent considers that the vegetation within the area under application is similar to that in the Dunn Rock Nature Reserve. This would increase the potential for flora and fauna species of conservation significance found in this reserve to be present within the application area.

Methodology DAWA advice (DOE TRIM Ref IN17233 and EI3971)
Shire of Lake Grace (2004) (NI 749)

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Cropping	Mechanical Removal	300	Refuse	The clearing is contrary to the outcome of a previous clearing process referred to the EPA in 1998. The application has been assessed and the clearing has been determined to be at variance to Principles (a), (b), (e) & (i) and may be at variance to Principles (c) & (h). Given the above, the assessing officer therefore recommends that this application to clear native vegetation be refused.

5. References

- CALM (2004a) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref ND334.
- CALM (2004b) correspondence. DOE TRIM Ref ND538.
- CALM (2005) Correspondence. DOE TRIM Ref NI 1019.
- DAWA (1998) Level 2 Assessment Report to the Commissioner of Soil and Land Conservation. DOE TRIM Ref IN17233.
- DAWA (2004) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref ND193.
- 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.
- DOE (2003) Salinity Investment Framework Interim Report, Phase 1. Resource Science Division, Department of Environment. DOE TRIM Ref ND559.
- 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.
- 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, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P., 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.
- WRC (1998) Level 3 Summary Sheet - Notice of Intent to Clear Land (Roe Loc 3027). Water and Rivers Commission. DOE TRIM Ref IN17233.

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)

Clearing Permit Assessment Report

1. Application details

1.1. Permit application details

Permit application No.: 88/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: MR Albert Keven Mead
Postal address: Rmb 1470 Ravensthorpe WA 6346
Contacts: Phone: 98389065
Fax:
Email:

1.3. Property details

Property: LOT 3027 ON PLAN 214439 (DUNN ROCK 6355)
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
300		Mechanical Removal	Cropping

2. Background

2.1. History (including previous clearing permits, compensation paid, caveats on title deeds etc.)

Date	Comments
27 June 2006	Ken Downsborough met with Mr Mead on site.
20 June 2006	Ken Downsborough tried to ring the Meads but there was no answer.
15 June 2006	Kelly Faulkner (NVP Central) advised John Connolly (NVP SGA) that application can be progressed. A/DG advised on 9 June that he was unlikely to grant a permit in view of previous assessment by EPA and the issues identified during the current assessment (Trim ref HD28865)
10 January 2006	Terry Brooks received a telephone call from Keven Mead to advise that he had only just received the letter of intent to refuse the clearing application. It was dated 6 December 2005 and by the time it was received the 28 day period was up. Mr Mead was asked how long it would take him to provide a submission and he advised it would probably take a week or two. Terry asked him if he could return it within two weeks and he indicated that, providing the mail system was working properly, he could. He was advised to contact Terry Brooks at the time the submission was sent so that the Department was aware it was in transit.
06 December 2005	Letter of intent to refuse clearing application in 30 days sent to Mr A Mead on 6 December 2005 (Trim CEO1562/05)
22 September 2005	Terry Brooks sent an email to Keven Mead advising that the Department is going to forward a formal letter advising of the status of the application.
06 September 2005	Terry Brooks phoned Keven Mead in response to a message received earlier in the day. Discussion revolved around the issues of the proposal and the Clearing Principles and that in its present format the proposal would likely be refused. Keven showed interest in providing buffers adjacent to the nature reserve and also adjacent to the watercourse. He balked at the notion of a 200m buffer adjacent to the nature reserve saying that there would be nothing left to clear. He also plans to harvest surface water from the area he proposes to clear. Keven was advised that there had been two submissions from conservation groups.
01 September 2005	T Brooks forwarded a letter to K Mead requesting contact for discussion regarding his proposal.
03 February 2005	Received a phone call from Keven Mead who was interested to know the status of the proposal. He was advised that there were several issues that the agency was still considering and that he would be further advised as soon as the proposal was more fully assessed. Keven indicated that he would be prepared to leave a buffer along the boundary with the Dunn Rock Nature Reserve.
03 July 1998	3/7/98 - Notice of Intent to Clear (NOIC) received by the Commissioner, Soil and Land Conservation (CSLC) to Clear 490ha on Roe Loc 3027 by Donald Bradford, the previous owner. 14/9/98 - CSLC objects to 277ha of NOIC located within the catchments of Lakes Ronnerup and Bennett (Waterski Lake) on the basis that land degradation in the form of salinity was likely to occur as a result of clearing. 24/9/98 - The balance of the NOIC (213ha) was referred to the Environmental Protection Authority (EPA) which was subsequently withdrawn. 26/2/99 - D Bradford agrees to a revised NOIC of 221ha excluding the area referred to the EPA. The CSLC had no objection to this area. 22/5/99 - D Bradford signed a Conservation Covenant for 28.7ha. The Conservation Covenant is located 1.2km north of the existing proposal.

2.2. Existing environment and information

2.2.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Vegetation Association 511: medium woodland; salmon gum and morrell (Shepherd et al 2001, Hopkins et al 2001).	Lot 3027 is bounded to the north-north east by the Lake King Nature Reserve and to the south-south east by the Dunn Rock Nature Reserve. The property itself is approximately 2000 ha of which a substantial amount has been cleared. The vegetation to be cleared includes Casuarina sp., Eucalyptus sp. (mallee), Hakea sp., Gastrolobium sp., Callitris sp., Acacia sp. & Melaleuca sp. The understorey is primarily in excellent condition with no sign of disturbance other than firebreaks. Some weed species were evident along edges adjacent to firebreaks. It was noted that the vegetation on site does not fit the description as mapped by Beard (Site visit T Brooks 24.08.04).	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The condition of vegetation was based upon a site inspection (24.08.04). There is a small 'edge effect' adjacent to firebreaks, otherwise stock have not had access due to the presence of poisonous Gastrolobium species resulting in the vegetation being in excellent condition.

2.2.2. Items of interest

Theme	Value	Within meters
CALM Managed Lands and Waters - CALM 1/06/04	Dunn Rock Nature Reserve	1000
Declared Rare and Priority Flora List - CALM 13/08/03	Conservation Commission -NPNCA	10000
Declared Rare and Priority Flora List - CALM 13/08/03	Shire	10000
EPA Position Paper No 2 Agriculture Region - DEP 12/00	1	
Environmental Impact Assessments, Polygon Features - DOE 29/11/04	s48level2	
Hydrographic Catchments - Catchments - DOE 23/3/05	SwanAvon_Lockhart	
Interim Biogeographic Regionalisation of Australia - EA 18/10/00	Mallee	
Local Government Authorities - DLI 8/07/04	Shire of Lake Grace	
Native Title Claims - DLI 19/12/04	BALLARDONG	
Pre-European Vegetation - DA 01/01	511	

3. Permit assessment activities

Date	Activity	Comment	Trim Ref.
17 June 2004	Application received		
17 June 2004	Application received		
02 August 2004	Other	Advertised in 'West Australian'	
03 August 2004	Accepted for assessment		
12 August 2004	Other	A public submission was received stating that the proposal should be rejected based upon EPA Position Statement #2 and also that the vegetation is a significant as a remnant of native vegetation in an area that has been extensively cleared.	ND17803
16 August 2004	Other	Direct interest letters were sent out to Newdegate LCDC, Avon Catchment Council, CALM, NS Cummings, Shire of Lake Grace.	ND505-509
19 August 2004	Other	A public submission was received requesting that the clearing proposal be rejected based on EPA Position Statement #2.	HD17833
23 August 2004	Other	A public submission was received requesting flora and fauna surveys be conducted. Additional information was requested on hydrology, vegetation condition of the reserve, commonality of vegetation community at the site in comparison to surrounding vegetation communities.	HD17811
24 August 2004	Site Visit	Site visit with Terry Brooks (DOE), Nadene Schiller (DAWA), Keven Mead and Allison Mead (proponents). The site visit was undertaken by driving along firebreaks and stopping at points of significance. Vegetation within the application area includes Casuarina sp., Eucalyptus sp. (mallee), Hakea sp., Gastrolobium sp., Callitris sp., Acacia sp. and Melaleuca sp. in excellent condition. An inspection of Lake Bennett (Waterski Lake) which is down gradient of the proposal was also undertaken. During the inspection the applicant indicated that it was not his intention to clear the wetland or surrounding land in the eastern portion of the application. Rather than the initial proposal of 300ha it is now his intention to clear approximately 200ha.	ND561
30 August 2004	Under assessment		
30 August 2004	Direct Interest Submission	A submission was received from the Shire of Lake Grace indicating support of the application for clearing.	NI749
14 September 2004	Dept Of Ag & Food Advice Received	DAWA advised that a small to medium off site land degradation risk in the form of an incremental increase in salinity to Lake Bennett and Lake	ND193

11 October 2004	C.A.U. Advice Received	Ronnerup was identified. The proposed clearing is not likely to cause appreciable on and off site land degradation subject to the implementation of appropriate management strategies to address any potential erosion. CALM advised that the proposed clearing appears to be within the proposed Dunn Rock/Lake King Natural Diversity Recovery Catchment. This is a magnificent ecological area for many Threatened and Priority fauna (or likely to be). Further fragmentation within the core area would be highly undesirable. Given there is at least one Critically Endangered species and one Endangered species of flora present in the general area along with a number of other priority flora species, a flora survey is highly desirable to enable an assessment of the biodiversity values at risk. The proposed clearing may have a potentially significant impact on the Dunn Rock Nature Reserve through the reduction of a vegetative buffer to the reserve, potential impact on local hydrology/lakes within the reserve and the potential for feral mammal and weed incursions. A significant buffer would be required around the reserve boundary.	ND334
23 December 2004	Contacted Applicant	Letter to AK Mead advising him of the current status of the application with respect to DOE requesting further information from CALM.	ND595
05 April 2005	Other	Further advice from CALM indicating they have been trying to contact the proponent regarding the possibility of a purchase on the property however no contact was made and there are currently insufficient funds to consider a CALM purchase.	NI1019
24 November 2005	Dept Of Ag & Food Advice Received	Information from DAWA was received outlining the history of Lot 3027 in terms of Notices of Intent to Clear, EPA referrals and proposed ATR's	EI3971
29 November 2005	Dept Of Ag & Food Advice Received	Copy of the proposed ATR and map showing catchment boundaries received from DAWA (unable to scan)	EI4013
06 December 2005	Decision Pending		

4. 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 at variance to this Principle**

The area under application forms part of the Dunn Rock/Lake King Chain in the proposed Dunn Rock/Lake King Natural Diversity Recovery Catchment (DOE 2003 & CALM 2004b).

The Dunn Rock/Lake King Chain has been assessed as being a Tier 1 representative landscape as part of the Salinity Investment Framework. Tier 1 landscapes are those "ranked highest (rank 1) for biodiversity importance that are also threatened by salinity".

The removal of large areas of native vegetation in excellent condition is likely to have a significant adverse impact on the biodiversity of the region.

It is considered that the clearance of large tracts of land, such as the current proposal, has the potential to hinder the movement of fauna in a predominantly cleared landscape as well as reduce the genetic diversity of remnant vegetation.

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Officer	Terence Brooks

(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 at variance to this Principle**

The following fauna species of conservation significance are known to occur or are likely to occur in the local area:

Carnaby's Black Cockatoo;
Malleefowl;
Peregrine Falcon;
Red-tailed Phascogale;
Heath Rat;
Carpet Python;
Daphnia jollyi;
Hooded Plover;

Western Rosella;
Tamar Wallaby;
Western Brush Wallaby;
Western Mouse;
Australian Bustard;
Bush Stone Curlew;
Shy Heathwren;
Rufous Fieldwren;
White-browed Babbler; and
Crested Bellbird.
(CALM 2004a)

Given the number of Specially Protected and Priority Listed Fauna likely to occur within the land under application a fauna/habitat survey should be conducted to determine the significance of the native vegetation subject to this proposal.

CALM (2004a) report this is or likely to be a magnificent ecological area for many Threatened and Priority Fauna. Further fragmentation within the core area would be highly undesirable.

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Officer Terence Brooks

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GIS Databases:
- Threatened Flora Data Management System - CALM (CALM 2004)
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- Declared Rare and Priority Flora List - CALM 13/08/03
Officer Terence Brooks

(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

CALM (2004a) reports no known occurrences of Threatened Ecological Communities (TECs) in the area under application and not within 40km of this area.

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GIS Database:
- Threatened Ecological Community Database - CALM 15/07/03
Officer Terence Brooks

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments Proposal is at variance to this Principle

The vegetation at the site is mapped as Beard Vegetation Association 511 (Hopkins et al. 2001). However, the vegetation observed on site appears to be more representative of nearby Beard Vegetation Types 47 (shrublands; tallerack mallee-heath) and 2048 (shrublands; scrub-heath in the Mallee region) of which 35.8% and 46.1% respectively of the pre-European extent remains (Site Visit 24.08.04). The Shire of Lake Grace has 19.5% and the Mallee IBRA Bioregion has 21.9% remaining as native vegetation.

The area falls within the intensive landuse zone (ILZ), and is therefore subject to the EPA's Position Statement No. 2, Environmental Protection of Native Vegetation in Western Australia. This Position Statement recommends that further clearing within the ILZ for agricultural purposes should not be considered, unless the areas are small and alternative measures to protect biodiversity are put into place.

Due to the size of the area, its location and excellent condition, it is considered to represent a significant remnant in an area that has been extensively cleared. Therefore the proposal is at variance to this Principle.

Methodology Shepherd et al. (2001)
Hopkins et al. (2001)
Department of Natural Resources and Environment (2002)
EPA (2000)
Site Visit (24.08.04)
GIS Database:
- Pre-European Vegetation - DA 01/01
- EPA Position Paper No 2 Agriculture Region - DEP 12/00

Officer Terence Brooks

(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

A minor non-perennial watercourse (1st order stream) has been mapped arising within the area subject to the proposal that flows in an easterly direction toward a wetland (non-perennial lake) that is situated 120m to the east of the amended proposal. During a site visit, it was noted that the watercourse appeared not to have had any flow for a substantial period of time and the vegetation within and adjacent to the watercourse appeared not to be wetland/watercourse dependent vegetation. The proponent indicated that the watercourse did not flow during the extreme rainfall event of January 2000 (Site Visit 24.08.04).

The wetland was dry underfoot during the site visit (24.08.04) however there was considerable *Melaleuca* sp. regeneration occurring within and adjacent to the wetland. This wetland does not hold surface water except in extreme events. The proponents advised that they had walked around the wetland during the extreme rainfall event in January 2000 and that it did not overflow. There would appear to be a sub-surface outlet from this wetland and a strong sub-surface connection between this wetland and nearby Bennetts Lake or possibly Lake Ronnerup, which is lower in the chain than Bennetts Lake (Site Visit 24.08.04).

The proponent indicated at the time of the site visit that he would not clear vegetation growing in association with the watercourse and would leave a buffer (no specific buffer width was given). The proponent also has no intention to clear any vegetation associated with the wetland.

Methodology Site Visit (24.08.04)
GIS Database:
- Hydrography, linear - DOE 01/02/04

Officer Terence Brooks

(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

DAWA's (2004) land degradation assessment identified a slight risk of erosion which could be managed with maintenance of ground cover and contour banks.

DAWA (2004) advise the proposed clearing is not likely to cause appreciable on and off site land degradation subject to the implementation of appropriate management strategies to address any potential erosion.

The proponent has indicated that he intends to retain a belt of native vegetation around the outside of the proposed clearing and that contour banks to harvest surface water will be implemented. These measures are likely to reduce the impact of erosion.

Methodology Site Visit (24.08.05)
DAWA (2004) (DOE TRIM Ref ND 193)

Officer Terence Brooks

(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 may be at variance to this Principle

CALM (2004a) report the proposed clearing may have a potentially significant impact on the Dunn Rock Nature Reserve through the reduction of a vegetative buffer to the reserve, potential impact on local hydrology/lakes within the reserve and the potential for feral mammal and weed incursions. A significant buffer would be required around the reserve boundary to maintain the ecological principles of the Reserve.

Methodology CALM (2004a) (DOE TRIM Ref ND 334)
GIS Database:
- CALM Managed Lands and Water - CALM 01/08/04

Officer Terence Brooks

(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 at variance to this Principle

The site occupies a medium to high level topography above Bennetts Lake, Lake Ronnerup and Lake King, which form part of the Lockhart sub-catchment of the Avon River. Given the depth and porosity of the soil on the property and the relative ease of drainage from the area of the proposal (mostly sub-surface drainage) it would appear there is little likelihood of salinity or waterlogging affecting the area subject to the proposal. The wetland (120m east of the proposal) appears to drain immediately, and given the relatively steep banks of Bennetts Lake and the minimal impact that the January 2000 rainfall event had on both the wetland and Bennetts Lake, the system appears to have the capacity to accept additional discharge from intensive rainfall events without adversely affecting fringing vegetation. Bennetts Lake is saline and has a catchment of approximately 20,000ha and Lake King (approx. 150,000ha catchment) is hyper-saline. As a result of additional discharge into the lake system it is likely there will be an incremental increase in salinity to Bennetts Lake and Lake Ronnerup.

DAWA (2004) advise that there is a small to medium off site risk in the form of an incremental increase in salinity to Lake Bennett and Lake Ronnerup. In a Level 2 Assessment Report to the Commissioner of Soil and Land Conservation (DAWA 1998), with reference to a small unnamed lake (known as the Water Ski Lake or Bennetts Lake by the current proponent), it is reported that the former owner of the property "confirmed that the water quality of this lake has deteriorated since clearing."

With reference to a previous Notice of Intent to Clear, in which 490ha of native vegetation was notified, including the current area under application, the Water and Rivers Commission (1998) identified that there was a risk of increased seepage of groundwater into existing discharge zones and there was a risk of increased salinisation of drainage and wetland systems with particular emphasis on Lake Ronnerup and the Water Ski Lake (Bennetts Lake)."

Methodology DAWA (2004) (DOE TRIM Ref ND 193)
DAWA (1998) (DOE TRIM Ref IN 17233)
Water and Rivers Commission (1998) (DOE TRIM Ref IN 17233)
Site Visit (24.08.04)
GIS Database:
- Hydrography, linear - DOE 01/02/04

Officer Terence Brooks

(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

Both the wetland east of the revised proposal and Bennetts Lake have recovered from the intensive rainfall event of January 2000. In fact there would appear to be a significant increase in regeneration of native vegetation as a result of the event. The proponent advised that water ponding in the wetland disappeared within a couple of days of the intensive rainfall event. At that time, water in Bennetts Lake, although three metres higher than the water level on the day of the site visit, was contained within its banks. Given the magnitude of the January 2000 event and the capability of the local sub-catchment to contain surface water, the clearing as proposed is not likely to cause or exacerbate the incidence or intensity of flooding.

Methodology Site Visit (24.08.04)
GIS Database:
- Hydrography, linear - DOE 01/02/04

Officer Terence Brooks

Planning instrument, Native Title, RIWI Act Licence, EP Act Licence, Works Approval, Previous EPA decision or other matter.

Comments

DAWA provided a history in relation to the property (TRIM Nos. IN17233 and EI3971). The previous owners applied to clear 490 ha in 1998. The proposal was referred to the EPA. The outcome of this referral was that 221 ha was permitted to be cleared, subject to the conservation of the remaining area. The area under application is part of the area identified for conservation during the previous clearing assessment process.

The Shire of Lake Grace has no objection to the proposal.

Three submissions (two from the same organisation) were received urging that appropriately timed flora and fauna surveys be conducted before a decision is made on the clearing application. It is requested that the surveys consider issues such as biodiversity, DRF, and TECs. Other issues are topography, surface hydrology, soil mapping, vegetation condition, land salinisation, clearing of native vegetation in an area that has been extensively cleared, low representation of plant species and communities in reserved land. Reference was also made to EPA Position Statement No. 2 which states that the EPAs position is 'that any further reduction in native vegetation through clearing for agriculture cannot be supported'.

The proponent was given the opportunity to provide additional information in relation to the issues identified by this assessment (6 December 2005). Information was provided by the proponent (6 January 2006) to address the erosion issue through their intention to construct contour banks and plant groundcover (lucerne). However, it is considered that other ecological issues have not been addressed. The proponent considers that the vegetation within the area under application is similar to that in the Dunn Rock Nature Reserve. This would increase the potential for flora and fauna species of conservation significance found in this reserve to be present within the application area.

Methodology DAWA advice (DOE TRIM Ref IN17233 and EI3971)
Shire of Lake Grace (2004) (NI 749)

Officer Terence Brooks

5. Assessor's recommendations

Purpose	Method Applied	Decision	Comment / recommendation
Cropping	Mechanical Removal	300 area (ha)/ trees	Refuse
			The clearing is contrary to the outcome of a previous clearing process referred to the EPA in 1998.
			The application has been assessed and the clearing has been determined to be at variance to Principles (a), (b), (e) & (i) and may be at variance to Principles (c) & (h).
			Given the above, the assessing officer therefore recommends that this application to clear native vegetation be refused.

6. References

- CALM (2004a) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref ND334.
- CALM (2004b) correspondence. DOE TRIM Ref ND538.
- CALM (2005) Correspondence. DOE TRIM Ref NI 1019.
- DAWA (1998) Level 2 Assessment Report to the Commissioner of Soil and Land Conservation. DOE TRIM Ref IN17233.
- DAWA (2004) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref ND193.
- 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.
- DOE (2003) Salinity Investment Framework Interim Report, Phase 1. Resource Science Division, Department of Environment. DOE TRIM Ref ND559.
- 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.
- 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, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Shepherd, D.P., 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.
- WRC (1998) Level 3 Summary Sheet - Notice of Intent to Clear Land (Roe Loc 3027). Water and Rivers Commission. DOE TRIM Ref IN17233.

