



1. Application details

1.1. Permit application details

Permit application No.: 855/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Hydroquest Consulting

1.3. Property details

Property: ASHBURTON PART LOCATION 152 (TALANDJI 6710)

Local Government Area: Shire Of Ashburton

Colloquial name: Minderoo Station

1.4. Application

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

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 589: Mosaic Short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex (Hopkins et al., 2001).	The vegetation in the area proposed to be cleared is typical of the Ashburton flood plain, containing mainly the introduced buffel grass (<i>Cenchrus ciliaris</i> L.) amongst an open acacia and eucalypt woodland (Hydroquest, 2005). The vegetation in the area under application has been degraded by cattle grazing and human activity (Don Scott, pers. comm, 2005).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	A description of the vegetation under application was obtained from information and site photos provided by the proponent. A site inspection by the Department of Agriculture confirmed the presence of <i>Cenchrus ciliaris</i> , <i>Eucalyptus victrix</i> , <i>Acacia victoriae</i> , <i>Acacia</i> spp and <i>Ptilotus</i> spp. (DAWA Advice, 2005).
	The area under application is located within the Nanyarra Land System, which is described by Payne et al (1988) as river plains with grassy woodlands and tussock grasslands. Vegetation in this system ranges from good condition with dense perennial grass pastures including introduced buffel grass beneath an overstorey of Bardie Bush (<i>Acacia victoriae</i>) and Coolibah (<i>Eucalyptus victrix</i>), to degraded condition to the extent that it is almost devoid of perennial vegetation (Payne et al, 1988).		

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 area under application is dominated by Buffel Grass (*Cenchrus ciliaris* L.) amongst scattered Eucalyptus *victrix* and *Acacia* spp (Don Scott, pers. Comm 2005; Astron Environmental, 2003). The vegetation at this site has been significantly disturbed by human activities, grazing of stock and drought (Don Scott, pers. comm, 2005). Therefore, the site to be cleared is unlikely to be of higher biodiversity significance than the vegetation in the local region.

Methodology Hydroquest (2005);
Astron Environmental (2003);
Don Scott, pers. comm. (2005).

(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**

There is one threatened species (*Dasycercus cristicauda*) and 5 species of migratory birds known to occur within the region of the proposed clearing (DEH Environmental Reporting Tool, 2005). The preferred habitat of the vulnerable Mulgara (*Dasycercus cristicauda*) is arid sandy regions that support spinifex grasslands and while it is listed as vulnerable it is widely distributed (Thomson-Dans, 2002).

It is likely that other fauna such as birds, small mammals, small reptiles and invertebrates, will utilise the habitat available within the notified area. None of the listed species are restricted to this habitat type, or dependent on this vegetation community type alone and therefore it is unlikely that this proposed clearing is at variance to this principle.

Methodology Hydroquest (2005);
Thomson-Dans (2002);
DEH Environmental Reporting Tool, 2005.

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

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

No Declared Rare Flora has been recorded within a 20km radius of the area under application. While a botanical survey has not been undertaken at this site, due to the highly disturbed condition of the area from human activity, grazing of stock and fire (Hydroquest, 2005), it is unlikely that the area is necessary for the continued existence of significant flora.

Methodology Hydroquest (2005);
GIS Database: 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**

There are no records of Threatened Ecological Communities (TEC) within 20kms of the area under application. Further to this, as the vegetation in the area has been degraded by human activity, grazing and drought, it is unlikely that the proposed clearing represents a significant ecological community and therefore it is unlikely that the proposal is at variance to this principle.

Methodology Hydroquest (2005);
GIS Database: Threatened Ecological Communities - CALM 15/7/03.

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

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

The area applied to clear is a component of Beard Vegetation Association 589 (Hopkins et al, 2001). 1.6% of this Association is located within IUCN Class I-IV Reserves (Shepherd et al, 2001). There is approximately 99% of the pre-European extent of this Association remaining (Shepherd et al, 2001), which indicates it is well represented in the natural environment. Therefore, this Association is of least concern for biodiversity conservation (Department of Natural Resources and Environment, 2002).

Clearing of 40 hectares is unlikely to significantly reduce the remaining extent of this vegetation Association, therefore the proposal is not likely to be at variance to this Principle.

Methodology Hopkins et al (2001);

Shepherd et al (2001);
Department of Natural Resources and Environment (2002);
GIS Database: Pre-European Vegetation - DA 01/01.

(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

The Ashburton River is situated approximately 500m west, and a perennial lake is situated 700m to the north of the area proposed to be cleared. The landscape of the area under application is sloping slightly in the direction of the Ashburton River, however the fall is not significant enough to cause increased runoff due to irrigation (DAWA Advice, 2005). The riparian zone of the Ashburton River has been fenced to off protect the vegetation from grazing by stock (Hydroquest, 2005). Therefore it is unlikely that the proposed clearing will affect the Ashburton River.

Methodology DAWA Advice (2005);
Hydroquest (2005);
GIS Database:
~ Hydrology, linear - DOE 1/02/04;
~ Lakes 250K - GA;
~ Rivers 250K - GA;
~ Topographic Contours, Statewide - DOLA 12/09/02;
~ Aerial Photograph - Western Australia ETM 25m 543 - AGO 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

The removal of existing vegetation at the site would not directly contribute to a salinity problem due to its current sparse distribution. Currently minimal tree root systems are present to take up water and their removal would not significantly affect the groundwater table to mobilise salts in the soil (DAWA Advice, 2005).

The Department of Agriculture advises that retaining stubble following the last harvest of the season will reduce the incidence of wind erosion (DAWA Advice, 2005). Water erosion is unlikely to pose a problem due to the lack of fall across the area under application and the presence of crops and/or stubble will help to retain water received through cyclonic rainfall (DAWA Advice, 2005).

Therefore, as long as recommendations made by the DAWA for the ongoing management of the pastures are implemented, clearing of vegetation in the area under application is unlikely to be at variance to this principle.

Methodology Hydroquest (2005);
DAWA Advice (2005);
GIS Database:
~ Aerial Photograph - Western Australia ETM 25m 543 - AGO 04;
~ Soils, Statewide - DA 11/99;
~ Groundwater Salinity, Statewide - 22/02/00.

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Comments Proposal is not at variance to this Principle

There are no reserves or conservation areas within a 20km radius of the area under application. Therefore the proposal is unlikely to be at variance to this principle.

Methodology GIS Database: CALM Managed Land and Waters - 1/06/04;

(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

The riparian zone of the Ashburton River has been fenced off to protect the vegetation from grazing by stock (Hydroquest, 2005). However, as the area proposed to be cleared will be utilised for irrigated crop production, and as the area is relatively flat, very little, if any, surface water run-off is likely to occur from the site (DAWA Advice, 2005).

Soil moisture probes will be employed to help optimise the irrigation water application rates to minimise vertical percolation of irrigation water to the groundwater system (Hydroquest, 2005). In the event that leakage does occur to the groundwater system, there is no threat of nutrients reaching the Ashburton River since the river is a losing stream (ie the river recharges the groundwater system) with groundwater flows being away from the river.

Furthermore, drilling results suggest that the water table beneath the irrigation area is more than 10 meters below ground and the groundwater is slightly brackish (Hydroquest, 2005).

The proposed clearing of vegetation would not significantly affect the level of the groundwater table as the existing vegetation is sparse and tree root systems are minimal (DAWA Advice, 2005).

Therefore, it is unlikely that this proposal will cause deterioration in the quality of surface or underground water provided that an appropriate watering regime is established.

Methodology Hydroquest (2005);
DAWA Advice (2005);
GIS Database:
~ Public Drinking Water source Areas (PDWSA's) -DOE 29/11/04;
~ Hydrography, linear (hierachy) - DOE 13/4/05.

(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 vegetation on the area under application mainly consists of Buffel Grass amongst open acacia and Eucalyptus victrix woodland (Don Scott, pers. Comm 2005; Astron Environmental, 2003). Aerial photography and photos of the site indicate that the density of vegetation cover is very sparse. Therefore, it is unlikely that clearing of the vegetation is likely to cause or exacerbate the incidence of flooding.

Methodology Astron Environmental (2003);
Don Scott, pers. comm. (2005);
Site photo;
GIS Database:
~ Rainfall, Mean Annual - BOM 30/09/01
~ Aerial photograph - Western Australia ETM 25m 543 - AGO 04.

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

Comments

No objections were raised in relation to this application to clear.

The area under application lies within the Thalanyji Native Title Claim area. The applicant has consulted the Thalanyji People in accordance with the requirements of the Native Title Act 1993 and an agreement has been reached (Trim Ref: DOE116).

Since December 2003, DoE has negotiated with Murion Cattle Company over the provision of a sustainable water supply for the irrigated fodder proposal. DoE has carried out a formal assessment of the proposal to use surface water from the Ashburton River in accordance with relevant sections of the Rights in Water and Irrigation Act 1914 (Trim Ref: NWK2277). The proponent has responded positively and has produced an operating strategy, to DoE satisfaction, which addresses efficient and sustainable use of surface water and minimisation of potential environmental impacts.

Applications for a '5C Licence to Take Surface Water' and a 'Section 17 Permit to modify bed and banks' under the RIWI Act 1914 have been received by the Water and Rivers Commission. The water taken under the 5C licence will be used to irrigate the area under application. The permit to modify bed and banks will be used to construct a weir on the Ashburton River to create sufficient storage to irrigate the area under application.

This application to clear is not at variance to the EPA advice given under S48 level 2 (CRN 104411) (Environmental Protection Authority, 1996), which relates to the Shire of Ashburton Town Planning Scheme 6. This application does not relate to the EPA recommendations under S38 (CRN 132620) regarding Amethyst Seismic Surveys (Environmental Protection Authority, 1998).

No other planning instruments are required under the Environmental Protection Act 1986.

The Pastoral Lands Board (Department of Planning and Infrastructure) has received an application from the lessee of Minderoo Station requesting a permit to grow irrigated fodder as provided for under section 120 of the Land Administration Act 1997.

There are no sites listed on the Register of National Estate, or the Register of Heritage Places, within 20kms of the area under application.

There are no Aboriginal Sites of Significance registered in the area under application. The nearest Site on the Interim Register lies 1200m east of the area under application. The applicant has undertaken heritage surveys and has entered into a heritage protocol with the Buurabalayji Thalanyji Association Inc which satisfies the requirements of the Aboriginal Heritage Act 1972-80 (KTI6668).

Methodology Environmental Protection Authority (1996);
 Environmental Protection Authority (1998);
 GIS Themes:
 ~ Register of Heritage Places - DPI 14/7/03;
 ~ Register of National Estate - EA 28/01/03;
 ~ Aboriginal Sites of Significance - DIA 28/02/03;
 ~ Native Title Claims - DLI 7/11/05

4. Assessor's recommendations

Purpose	Method Applied	area (ha)/ trees	Decision	Comment / recommendation
Horticulture	Mechanical Removal	40	Grant	<p>Assessable criteria have been addressed and no objections were raised. The assessing officer therefore recommends that the permit should be granted.</p> <p>The applicant will be required to obtain a diversification permit (DPI) prior to any clearing of native vegetation.</p> <p>It is recommended that once cleared, the proponent retains stubble following the last harvest of the season to reduce the incidence of wind erosion at the site.</p>

5. References

- Astron Environmental (2003) Minderoo Water Resources Study: Vegetation and Flora Survey. Prepared for Worley Pty Ltd. Trim Ref: KTI 5010
- DAWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref IN25138.
- 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.
- Don Scott, pers. Comm. (2005). Trim ref KTI5871
- 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.
- Hydroquest (2005) Clearing Application for Minderoo Station (Pastoral Lease 3114-661) Trim ref: IN23369
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Payne, A.L., Mitchell, A.A., and Holman, W.F. (1988) An inventory and conditions survey of rangelands in the Ashburton River Catchment, Western Australia. Technical Bulletin No. 62, Western Australian Department of Agriculture.
- 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.
- Thomson-Dans (1996) Mammals of North-Western Australia. Department of Conservation and Land Management 1996.

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)

