Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1302/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Jaerich Pty Ltd

1.3. Property details

Property: LOT 71 ON PLAN 26866
Local Government Area: Shire Of Gingin
Colloquial name:

1.4. Application

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

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 1014: Mosaic: Low woodland; banksia / Shrublands; tea-tree thickets. (Shepherd et al. 2001, Hopkins et al. 2001)	The areas under application (total 36ha) are located within Lot 71 which is a 137ha property zoned Rural, 18.5km west north-west of the Gingin town site. The clearing is to construct paddocks with irrigated pasture.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition of the vegetation to be cleared was determined from the Site Inspection (2006), which considered the vegetation condition to vary from Good to Completely Degraded.
Heddle Vegetation Complexes: Karrakatta Complex - North: Predominantly low open forest and low woodland of Banksia spp. E- E. Todtiana, less consistently open forest of E. Gomphocephala - E. Todtiana - Banksia species. Caladenia Complex: mosaic of vegetation from adjacent vegetation complexes of Karrakatta, Yanga and Bassendean. (Heddle et al. 1980)	The vegetation within the areas under application is dominated by balga (Xanthorrhoea preissii) with sparse areas of Christmas tree (Nuytsia floribunda), banksia (Banksia spp.) and tuart (Eucalyptus gomphocephala) and no native understorey species (Site Inspection 2006). The vegetation proposed to be cleared is Balga (Xanthorrhoea preissii), with the other native vegetation to be retained.		

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

A site inspection (2006) identified the vegetation within the areas under application to be in a degraded condition, comprising predominantly of Balga (Xanthorrhoea preissii) with sparse areas of Christmas tree (Nuytsia floribunda), banksia (Banksia spp.) and tuart (Eucalyptus gomphocephala) and no native understorey species.

Given the lack of community structure and the limited species diversity, it is unlikely that the areas under application comprise a high level of biodiversity.

Methodology Site Inspection (2006) (TRIM Ref ED1423)

(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

The vegetation within the areas under application is dominated by Balga (Xanthorrhoea preissii) with sparse areas of Christmas tree (Nuytsia floribunda), banksia (Banksia spp.) and tuart (Eucalyptus gomphocephala) and no native understorey species (Site Inspection 2006).

Given, the degraded condition of the vegetation and the sparseness of the native vegetation, it is unlikely that the vegetation to be cleared comprises significant habitat for fauna indigenous to Western Australia.

Methodology

Site Inspection (2006) (TRIM Ref ED1423)
GIS Databases:
- Gingin 1m Orthomosaic - DLI 03
- Cadastre - DLI 1/12/05

(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

There is one known record of Declared Rare Flora (DRF) in the local area (10km radius). This recorded DRF is located approximately 9.8km south-west of the proposed area, on soils and within vegetation complexes that differ for those under application. Therefore the clearing is not likely to be at variance to this principle.

There are no records of Priority species in the area under application, with the following Priority species known to occur within 10km radius (closest being 3.9km and 6.1km):
- Verticordia linleyi subsp. lindleyi (Priority 4),
- Blennospora doliiformis (Priority 3),
- Eucalyptus x mundijongensis (Priority 1),
- Schoenus natans (Priority 4), and
- Haloragis aculeolata (Priority 2).

The above Priority flora occurs within the same Beard vegetation complex (except for Eucalyptus x mundijongensis) and soils (except for Eucalyptus x mundijongensis and Haloragis aculeolata), as that of the areas under application.

Methodology

GIS databases:
- Declared Rare and Priority Flora List - CALM 01/07/05
- Pre-European Vegetation - DA 01/01
- Heddle Vegetation Complexes - DEP 21/06/95
- Soils, Statewide - DA 11/99

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

Comments

Proposal is not likely to be at variance to this Principle

The nearest known recorded TEC is located approximately 6.2km east south-east of the areas under application. This TEC occurs within a buffer of a Conservation Category Wetland (CCWs), and has been identified by CALM (2004, TRIM Ref ND323), for a nearby clearing application (CPS107/1), as being Shrublands in clay pans.

The vegetation within the areas under application is dominated by Balga (Xanthorrhoea preissii) with sparse areas of Christmas tree (Nuytsia floribunda), banksia (Banksia spp.) and tuart (Eucalyptus gomphocephala) and no native understorey species, and does not occur within the buffer of the nearby wetlands (Site Inspection 2006). Furthermore, the soils within the areas under application have been identified as being deep sands (DAFWA 2006). Therefore, it is considered that the proposed clearing is not likely to be at variance with this Principle.

Methodology

Site Inspection (2006) (TRIM Ref ED1423)
DAFWA (2006) (TRIM Ref DOC3540)
GIS Databases:
- Environmentally Sensitive Areas - DOE 08/03/05
- Geomorphic Wetlands (Classification), Swan Coastal Plain - DoE 21/10/04
- Threatened Ecological Community Database - CALM 12/04/05

(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

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which

includes a target that prevents the clearance of ecological communities with an extent below 30% of that present Pre-European settlement (Commonwealth of Australia 2001). The Vegetation Complexes in the area under application are above the recommended minimum of 30% representation.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	Conservation status**	In reserves/CALM managed land
IBRA Bioregion					
- Swan Coastal Plain*	1,529,235	657,450	43.0	Depleted	
Shire of Gingin*	315,560	177,688	56.3	Least Concern	
Vegetation type:					
Beard: Unit 1014*	48,359	25,871	53.5	Least Concern	39.7%
Heddle:					
Karrakatta Complex North***	25,579	9,444	36.9	Depleted	0.2%
Caladenia Complex***	9,660	5,309	55.0	Least Concern	12.6%

* (Shepherd et al. 2001)
** (Department of Natural Resources and Environment 2002)
*** (EPA 2006)

Given that there is 56.3% of remnant vegetation remaining within the Shire and there is 53.5% (Beard 1014) (Shepherd et al. 2001) and 36.9% and 55.0% (Heddle Karrakatta Complex North and Caladenia Complex) (Heddle et al. 1980) of native vegetation remaining, the vegetation proposed to be cleared is not likely to be significant as a remnant of native vegetation in the surrounding area.

However, it is noted that the Heddle Complexes (Karrakatta and Caladenia) are not well represented in reserves.

Methodology
Commonwealth of Australia (2001)
Department of Natural Resources and Environment (2002)
EPA (2006)
Hopkins et al. (2001)
Shepherd et al. (2001)
Heddle et al. (1980)
GIS Databases:
- Pre-European Vegetation - DA 01/01
- 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 is not at variance to this Principle

Wetland mapping of the areas under application does not identify any wetlands or watercourses within the area. However, mapping does identify wetlands surrounding the areas under application including a Resource Enhancement Wetland 90m north of the area under application and two Conservation Category Wetlands 200m east and 480m south-east of the areas under application. Further, Quin Brook is located 100m south-west and Gingin Brook is located 1.8km north of the area under application.

The vegetation within the areas under application is dominated by Balga (Xanthorrhoea preissii) with sparse areas of Christmas tree (Nuytsia floribunda), banksia (Banksia spp.) and tuart (Eucalyptus gomphocephala) and no native understorey species (Site Inspection 2006).

Given the vegetation under application is not considered to be wetland dependent and does not occur within the buffer of the nearby wetlands, the clearing as proposed is not at variance to this Principle.

Methodology
Site Inspection (2006) (TRIM Ref ED1423)
GIS Databases:
- EPP, Lakes - DEP 21/07/04
- Geomorphic Wetlands (Mgt Classification), Swan Coastal Plain - DoE 21/10/04
- Gingin 1m Orthomosaic - DLI 03
- Rivers 250K - GA

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

Comments

Proposal may be at variance to this Principle

DAFWA (2006) advises that the areas under application are mapped within two soil landscape units:

Bassendean Yeal swamp complex phase (60%; DAFWA 2007) - pattern of sandy rises and many small seasonal swamps; and Bassendean phase 2 (40%; DAFWA 2007) - brown siliceous sand.

The Acid Sulphate Soil (ASS) risk mapping indicates the area under application is a mapped as having a Class 2 risk. This classification is defined as having a low to moderate risk of ASS or potential ASS, for depths less than 3 metres from the surface.

DAFWA (2006) Land Degradation Assessment Report identifies the potential for land degradation risks through eutrophication, waterlogging and wind erosion.
There is a high risk of wind erosion and phosphorous loss on occurring 50% of the area to be cleared, and a risk of waterlogging on 14% of the area to be cleared. (DAFWA 2006).

Thus, the proposed clearing may be at variance with this principle.

To mitigate any impacts from the proposed clearing the proponent has advised that windbreaks will be established around the perimeter of the area to be cleared and a condition for revegetating an area surrounding the nearby Conservation Category Wetland (approximately 8ha) has been recommended for this permit.

Methodology DAFWA (2006) (TRIM Ref DOC3540)
DAFWA (2007) (TRIM Ref ED1588)
GIS Databases:
- Acid Sulphate Soil risk map, SCP DOE 01/02/04

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

Comments

Proposal is not likely to be at variance to this Principle

There are two conservation areas within 10km of the areas under application including Gnangara-Moore River State Forest 2.2km south and Yeal Nature Reserve approximately 5.9km south-east of the areas under application. In addition, there is a System 6 Conservation Reserve (Lake Muckenburra), 5.8km east south-east of the areas under application, that is currently recognised as a Shire Reserve (land uses of Recreation and Government Requirement) and mapped as an EPP lake.

The vegetation under application is considered to be in a degraded condition with the areas applied to be cleared dominated by Balga (Xanthorrhoea preissii) with no native understorey species (Site Inspection 2006).

Given the degraded condition of the vegetation under application and the distance to the conservation areas, the clearing as proposed is unlikely to have significant impact on the local conservation values. Therefore the proposed clearing is unlikely to be at variance to this principle.

Methodology Site Inspection (2006) (TRIM Ref ED1423)
GIS databases:
- Cadastre - DLI 1/12/05
- CALM Managed Lands and Water - CALM 01/07/05
- 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 may be at variance to this Principle

There is a Resource Enhancement Wetland, 90m north of the area under application and two Conservation Category Wetlands, 200m east and 480m south-east of the areas under application. Further, Quin Brook is located 100m south-west and Gingin Brook is located 1.8km north of the area under application.

Observations of the REW during the site inspection (2006) identified the wetland as containing Melaleuca sp. in completely degraded to degraded condition. Therefore it is considered the REW supports a limited attributes and functions and the proposed clearing is not expected to impact the REW.

The area under application is not located in a Public Drinking Water Source Area or water catchment area. The ground water within the local area is relatively fresh (500-1000 mg/L). DAFWA (2006) indicate that there is a potential risk of eutrophication and waterlogging.

Given the above, the clearing as proposed may cause deterioration in the quality of surface or ground water.

To mitigate any impacts from the proposed clearing a condition for revegetating an area surrounding the nearby Conservation Category Wetland (approximately 8ha) has been recommended for this permit.

Methodology DAFWA (2006) (TRIM Ref DOC3540)
Site Inspection (2006) (TRIM Ref ED1423)

Site Inspection Photos (2006) (TRIM Ref DOC11689)
Water and Rivers Commission (2001)
GIS Databases:
- EPP, Lakes - DEP 21/07/04
- Geomorphic Wetlands (Mgt Classification), Swan Coastal Plain - DoE 21/10/04
- Groundwater Salinity, Statewide - 22/02/00
- Public Drinking Water Source Areas (PDWSAs) - DOE 09/08/05

(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 at variance to this Principle

With an average annual rainfall of 700mm and an annual evaporation rate of 2,000mm there is little surface flow during normal seasonal rains. It is only during major rainfall events that there is a likelihood of flooding. Given the transmissive nature of the sandy soils at the site (DAFWA 2006), clearing is unlikely to cause or exacerbate the incidence of flooding.

Methodology

DAFWA (2006) (TRIM Ref DOC3540)
GIS Databases:
- Evaporation Isopleths - BOM 09/98
- Isohyets - BOM 09/98

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

Comments

A submission (2006) was received advising that the vegetation proposed to be cleared is old regrowth (regrowth of Banksia spp. woodland that is now dominated by Xanthorrhoea spp.) on failed pasture land. The 44.8ha proposed to be cleared is the southern section of Lot 71 and is situated immediately above the Gingin Brook. If the waste water contains nutrients or the irrigated grass receives applied fertilizers there is a high risk of nutrient leaching to the Gingin Brook. Recommendation that the proposed land clearing and waste water be moved to the north end of Lot 71 rather than the proposed south end of Lot 71 to allow a considerable buffer of regrowth vegetation between the applied waste water and the Gingin Brook.
The 44.8ha area under application has been amended to allow for a 50m buffer to the southern boundary (and the nearby Quin Brook) and a 200m buffer to the nearby Conservation Category Wetland. The vegetation to be cleared is predominantly degraded condition with Balga (Xanthorrhoea preissii) dominating the area applied to be cleared. Further, the proponent has advised (TRIM Ref ED1575) that only 3 hectares in the northern section of the area under application will be irrigated with waste water.

Water and River Commission (2001) identifies recommended buffer distance for land uses from wetland areas, with the minimum area being 200 metres on transmissive soils.
A REW is described as been partially modified but still supporting substantial ecological attributes and functions, and should be protected (Water and Rivers Commission 2001).The REW located approximately 90 metres from the proposed clearing is within this recommended 200m buffer distance. Despite this, observations of the REW during the site inspection (2006) identified the wetland as containing Melaleuca sp. in completely degraded to degraded condition. Therefore it is considered the REW supports a limited attributes and functions and the proposed clearing is not expected to impact the REW.
A CCW is described as supporting a high level of ecological attributes and functions and is considered the most valuable of wetlands. The CCWs located 200m east and 480m south-east from the proposed clearing are not within this recommended 200m buffer distance.

The area under application is within the Proclaimed Groundwater Area of Gingin. Therefore any abstraction of groundwater would require a licence. However, this application for pasture is not associated with ground water extraction.

International Exporters (Jaerich Pty Ltd) is a Licensed Premise under Part V of the EP Act (DEC 2006), Licence Number 7989/3, for Abattoir and Livestock saleyard or holding pen. The proponent is extending the irrigation area with the aim of complying with licence conditions for the irrigation of wastewater.

There is no other RIWI Act Licence, Works Approval or EP Act Licence that affects the areas under application.

Development approval from the Shire on Gingin is required for irrigated horticulture only. The Applicant has advised that an application for Development approval from the Shire of Gingin has been submitted (TRIM Ref ED1629). Development Approval for 6 hectares of irrigated horticulture was approved by the Shire of Gingin on the 3 May 2007 (TRIM Ref DOC25985).

Methodology

DEC (2006) (TRIM Ref ED1444)
Submission (2006) (TRIM Ref DOC12196)
GIS databases:
- RIWI Act, Groundwater Areas - WRC 13/06/00
- RIWI Act, Surface Water Areas - WRC 18/10/02

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Miscellaneous	Mechanical Removal	36	The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986. The clearing as proposed may be at variance to Principles (g) and (i), and not likely to be at variance to the remaining Principles. Therefore the assessing officer recommends the clearing proposal of 36ha be granted with conditions allowing for fencing and revegetation.

5. References

Commonwealth of Australia (2001). National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.

DAFWA (2006) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. TRIM Ref DOC3540.

DAFWA (2007) Amended land degradation advice. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. TRIM Ref ED1588.

DEC (2006) Licence/Works Approval Check List. Department of Environment and Conservation (DEC), Western Australia. TRIM Ref ED1444.

Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.

EPA (2006) Guidance for the Assessment of Environmental Factors -level of assessment of proposals affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 Region. Report by the EPA under the Environmental Protection Act 1986. No 10 WA.

Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

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.

Site Inspection (2006) Site Inspection Report, Department of Environment and Conservation (DEC), Western Australia. TRIM Ref ED1423.

Site Inspection Photos (2006) Site Inspection Photos and Map of Photo Points, Department of Environment and Conservation (DEC), Western Australia. TRIM Ref DOC11689.

Waters and Rivers Commission (2001) Position Statement: Wetlands. Water and Rivers Commission, Western Australia.

6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
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 DEC)