



1. Application details

1.1. Permit application details

Permit application No.: 2139/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Judeen Nominees Pty Ltd

1.3. Property details

Property: LOT 10852 ON PLAN 210795 (House No. 776 ROSE THOMSON WARRADARGE 6518)
LOT 10856 ON PLAN 210802 (House No. 6674 COOROW-GREEN HEAD WARRADARGE 6518)

Local Government Area: Shire Of Coorow

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
	690	Burning	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 379 (Shrublands; scrub-heath on lateritic sandplain in the central Geraldton Sandplain Region); Beard Vegetation Association 49 (Shrublands; mixed heath). (Hopkins et al, 2001; Shepherd et al, 2001)	The trees under application are located in two separate Lots: a northern and a southern Lot separated by a different property in the middle. Removal of 600 trees is proposed in the northern Lot. The distribution of trees in the north western corner of the northern Lot is somewhat dense and thin in other parts. There are creek lines on the valley bottom; trees under application are situated elsewhere at significant distances from those creek lines. Trees under application in the northern Lot are predominantly blackbutts, with intermittent occurrence of wattle trees, Western Australian Christmas trees and Dryandra bushes in the northern corner. The other Lot is situated on the south of the proposal area. Removal of 90 trees is proposed in the southern Lot, which consists mainly of small clusters of blackbutts. The trees in both Lots are surrounded by grasses and crop residues. They are of medium sized trees, which are in a 'degraded' condition based on the vegetation condition scale of Keighery (1994).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The description and condition of the vegetation were obtained through a site inspection conducted on 8 November 2007 (DEC Site Visit, 2007).

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 trees under application are located in two separate Lots: a northern and a southern Lot separated by a different property in the middle. Removal of 600 trees is proposed in the northern Lot. The distribution of trees in the north western corner of the northern Lot is somewhat dense and thin in other parts. There are creek lines on the valley bottom; trees under application are situated elsewhere at significant distances from those creek lines. Trees under application in the northern Lot are predominantly blackbutts, with intermittent occurrence of wattle trees, Western Australian Christmas trees and Dryandra bushes in the northern corner. The other Lot is situated on the south of the proposal area. Removal of 90 trees is proposed in the southern Lot, which consists mainly of small clusters of blackbutts. The trees in both Lots are surrounded by grasses and crop residues. They are of medium sized trees in a good condition. (DEC Site visit, 2007)

The level of disturbance in a predominantly agricultural landscape and low native species density suggest that the trees under application are not likely to be representative of significant biodiversity. This proposal is therefore unlikely to be at variance with this principle.

Methodology GIS Databases:
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00.
DEC Site visit (2007)

(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 are no known records of Declared Threatened Fauna or other Significant Fauna within a radius of approximately 10 km around the proposal area. The trees under application occur on two separate areas: a northern and a southern Lot separated by a different property in the middle. Removal of 600 trees is proposed in the northern Lot. The distribution of trees in the north western corner of the northern Lot is somewhat dense and thin in other parts. There are creek lines on the valley bottom; trees under application are situated elsewhere at significant distances from those creek lines. Trees under application in the northern Lot are predominantly blackbutts, with intermittent occurrence of wattle trees, Western Australian Christmas trees and Dryandra bushes in the northern corner. The other Lot is situated on the south of the proposal area. Removal of 90 trees is proposed in the southern Lot, which consists mainly of small clusters of blackbutts. The trees in both Lots are surrounded by grasses and crop residues. They are of medium sized trees in a good condition. (DEC Site visit, 2007)

The trees under application are fragmented in the predominantly agricultural landscape. In addition, the level of disturbance by agricultural landuses is high and the native species density is low, suggesting that the habitat value has been significantly compromised. This proposal is therefore unlikely to be at variance with this principle.

Methodology GIS Databases:
- SAC Bio Datasets (070208)
DEC Site visit (2007)

(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 are over one hundred records of Declared Rare Flora and Priority Flora within a radius of approximately 10 km from the areas under application. Thirty four of them are records of DRF belonging to 11 different species: one record of *Verticordia albida*, one record of *Hemiandra rutilans* nine records of *Dryandra serratuloides* subsp. *Perissa*, six records of *Spirogardnera rubescens*, four records of *Acacia wilsonii*, two records of *Acacia splendens*, three records of *Eucalyptus lateritica*, two records of *E. suberea*, four records of *E. johnsoniana*, one record of *E. leprophloia* and one record of *Hakea megalosperma*. Some of them exist in the nearby Alexander Morrison National Park, private properties and road reserves with the closest occurrence being 300 m from the area under application while others occur far away (>9 km) in the South Eneabba Nature Reserve. The majority of the Declared Rare Flora and Priority Flora occur on the same broad soil type as the area under application.

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The trees under application are fragmented in the predominantly agricultural landscape. The majority of the Significant Flora occur either in secure tenure or at significant distances from the trees under application. Due to the high level of disturbance by agricultural landuses, the trees under application are not likely to include or be necessary for the continued existence of the Significant Flora. This proposal is therefore unlikely to be at variance with this principle.

Methodology GIS Databases:
 - Declared Rare and Priority Flora list - CALM 01/07/05
 - Clearing Regulations - Environmentally Sensitive Areas - DoE 30/05/05
 - SAC Bio Datasets (130208)
 DEC Site visit (2007)

(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 known Threatened Ecological Communities (TEC's) within 10 km of the area under application. This proposal is therefore not likely to be at variance with this principle.

Methodology GIS Databases:
 - Threatened Ecological Communities - CALM 12/04/05
 - SAC Bio Datasets (130208)

(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**

Pre-European	Current area (ha)	Remaining Reserves/CALM- extent (ha)	%*	managed land, %
IBRA Bioregion - **				
Geraldton Sandplains	3,136,026	1,337,757	42.7	35.6
Shire - Coorow	424,583	164,895	38.8	Not available
Beard veg type - 379	547,737	122,098	22.3	21.7
Beard veg type - 49	52,491	24,365	46.4	42.9

* (Shepherd et al, 2001; Shepherd, 2006)

** Area within Intensive Landuse Zone

The vegetation under application is a component of Beard Vegetation Associations 49 and 379 which have 46.4 % and 22.3 % of pre-European vegetation remaining, respectively. Shire of Coorow has 22.3 % of pre-European vegetation remaining while Geraldton Sandplains Bioregion has 42.7 % of pre-European vegetation remaining.

The area under application falls within the Intensive Landuse Zone as described under EPA Position Statement No. 2 which does not support further clearing for agricultural purposes.

The trees under application do not seem to fully represent the Beard Vegetation Associations (DEC Site Visit, 2007). In addition, the pre-European extent of the Beard Vegetation Association 49, Geraldton Sandplains Bioregion and the Shire of Coorow meets the National Objectives Targets for Biodiversity Conservation 2001-2005 (AGPS, 2001), being 30 % of that present pre-1750. Therefore, this proposal is not likely to be at variance to this Principle.

Methodology GIS Databases:
 - Interim Biogeographic Regionalisation of Australia - EA 18/10/00
 - Pre-European Vegetation - DA 01/01
 - Local Government Authorities - DLI 08/07/04
 - EPA Position Paper No 2 Agriculture Region - DEP 12/00
 AGPS (2001)
 Shepherd et al (2001)
 Shepherd (2006)

(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**
 Watercourses or wetlands are not present within the area under application (DEC Site Visit, 2007). This proposal is therefore not at variance with this principle.

Methodology GIS Databases:

- Hydrography, linear - DoE 01/02/04
- Hydrographic Catchments - Catchments - DoE 23/03/05
- DEC Site Visit (2007)

(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

The area subject to this proposal has an average annual rainfall of 600 mm, a medium risk of salinity on average, a gently sloping landscape and mostly sandy acidic yellow mottled soils. The trees under application are scattered within parkland cleared and surrounded by grasses and crop residues. Fenced vegetation bands have been created on creek lines that occur on the valley slopes within the property. It appears that revegetation is progressing at a rate of 15,000 trees per year and creek beds are protected against flood water damage. (DEC Site Visit, 2007)

DAFWA (2007) advised that the proposed clearing is at variance with Principle (g) for wind erosion on the area indicated on the attached aerial photo (trees under application on the north-western side in Vic Loc 10852). DAFWA (2007) further advised that the proposed clearing of scattered trees on the other areas is unlikely to pose a serious land degradation risk (soil erosion) under best practice management.

Due to the low regional rainfall (600 mm), the proposed clearing is not likely to cause water erosion under best practice management. Similarly, the clearing of the scattered trees may not exacerbate the existing wind erosion in areas other than the north-western part of the proposal area, provided the surface vegetation cover is maintained. There is the potential for off site degradation in the form of silt transportation to downstream properties. However, it is not likely to be a problem because the temporary waterways on the valley slopes are fringed with bands of planted vegetation.

The DAFWA submission (DAFWA, 2007) raises the issue of wind erosion as a result of clearing in areas containing predominantly sandy soils. The north-western part of the area under application consists mainly of sandy soils, which show high mobility under windy conditions. The removal of trees as proposed may cause wind erosion within this area. Therefore, this proposal may be at variance with this Principle.

In order to address the issue of wind erosion in the north-western part of the proposal area, wind erosion conditions will be imposed if clearing is approved.

- Methodology** GIS Databases:
- Rainfall, Mean Annual - BOM 30/09/01
 - Salinity Risk LM 25m - DOLA 00
 - Soils, Statewide - DA 11/99
- DAFWA (2007)
DEC Site Visit, 2007

(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 estates within a radius of approximately 10 km around the proposal area: Alexander Morrison National Park and South Eneabba Nature Reserve. Both are listed on the Register of National Estate. The Alexander Morrison National Park lies right across the Coorow-Greenhead Road with its closest point being approximately 250 m south of the proposal area, while the South Eneabba Nature Reserve lies approximately 9 km west of the area under application.

Based on the separation distance between the South Eneabba Nature Reserve and the area under application (9 km), it is unlikely that the clearing as proposed will have a significant impact on the Reserve. Even though the distance between the Alexander Morrison National Park and the area under application is small (250 m at their closest points), the existence of a major road between them means there are no opportunities for creating ecological corridors that would link the trees under application to the National Park.

This proposal is therefore unlikely to be at variance with this principle.

- Methodology** GIS Databases:
- CALM Regional Parks - CALM 12/04/02
 - CALM Managed Lands & Waters - CALM 01/07/05
 - Proposed National Parks FMP-CALM 19/03/03
 - Register of National Estate - EA 28/01/03

(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 area subject to this proposal falls within the Hill River hydrographic catchment, has an average annual rainfall of 600 mm, an evaporation rate of 2400 mm per annum and a groundwater salinity level of 500-1000 mg/L, which is considered to be fresh. The depth to groundwater was approximately 100 m in 1970. The surface run off water collected in a nearby dam did not show signs of salinity (DAFWA onsite testing). There are no potential groundwater dependent ecosystems within areas containing the trees under application. The area under application is not situated within a Public Drinking Water Source Area.

Due to the small size (690 trees), low rainfall (600 mm) and high rates of evaporation (2400 mm), the proposed clearing is not likely to increase the surface flow during normal seasonal rainfall, and not likely to contribute to groundwater recharge and water table rise.

Therefore this proposal is not likely to be at variance to this principle.

Methodology GIS Databases:
- Current WIN data sets
- Evaporation Isopleths - BOM 09/98
- Hydrographic Catchments - Catchments - DOE 23/03/05
- Hydrography, linear - DoE 01/02/04
- Mean Annual Rainfall - BOM 30/09/01
- Potential Groundwater Dependant Ecosystems - DOE 2004
- 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 likely to be at variance to this Principle

The proposal area has an average annual rainfall of 600 mm and an evaporation rate of 2400 mm per annum. It consists mainly of sandy acidic yellow mottled soils. The area under application has a gently rolling topography at an elevation between 230 m and 250 m. The trees under application are scattered on an open agricultural landscape (DEC Site Visit, 2007).

Given the relatively small size of the proposed clearing (690 trees), location and the transmissive nature of the sandy soils it is unlikely that the proposed removal of the scattered trees will cause an increase in the peak height or duration of flooding.

Methodology GIS Databases:
- Evaporation Isopleths - BOM 09/98
- Rainfall, Mean Annual - BOM 30/09/01
- Topographic Contours, Statewide - DOLA 12/09/02
DEC Site Visit, 2007

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

Comments

The Shire of Coorow has not indicated if there are any planning requirements or approvals that would affect the clearing.

There is no further requirement for a RIWI Act Licence, Works Approval or EP Act Licence for the area under application.

There is a Native Title claim over the area under application, however as the property is freehold land Native Title has been extinguished. There are no Aboriginal Sites of Significance within the area under application.

The area under application falls within the Intensive Landuse Zone as described under EPA Position Statement No 2. This has been discussed under Principle (e).

There is an Environmental Impact Assessment (EIA) over the area under application. This EIA does not impact on this proposal.

Methodology GIS databases:
- Native Title Claims - DLI 7/11/05
- Aboriginal Sites of Significance - DIA 26/04/07
- Environmental Impact Assessments
- EPA Position Paper No 2 Agriculture Region - DEP 12/00

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Cropping	Burning	690	The assessable criteria have been addressed and this proposal may be at variance with Principle (g). In order to address the issue of wind erosion within the north-western part of the proposal area, wind erosion conditions will be imposed if clearing is approved.

5. References

- AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.
- DAFWA (2007) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DEC TRIM Ref DOC41682.
- 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 (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. (2006). Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.
- 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 Visit Report (2007) Department of Environment and Conservation (DEC), Western Australia. DEC TRIM ref DOC41144.

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)