



1. Application details

1.1. Permit application details

Permit application No.: 1696/1
 Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Adrian Eric Wesley**

1.3. Property details

Property: LOT 1470 ON PLAN 211231 (TURKEY HILL 6426)
 Local Government Area: Shire Of Yilgarn
 Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
584.73		Mechanical Removal	Cropping
14.55		Mechanical Removal	Grazing & Pasture

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 435 - Shrublands; Acacia neurophylla, Acacia beauverdiana and Acacia resinomarginea thicket.	The vegetation under application was previously cleared in the 1980's as part of a Conditional Purchase Agreement, with the area being cropped in 1988, 1989 and 1990. The property was then leased and used for low stocking rate grazing until the applicant's purchased the property approximately 18 months ago. The vegetation has regenerated since the original clearing in the 1980's.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The vegetation clearing description and condition is based on aerial orthomosaics and photographs provided in the land degradation report (TRIM Ref. DOC17290).
Beard Vegetation Association 536 - Medium woodland; morrel and rough fruited mallee (<i>E. corrugata</i>) (Shepherd et al. 2001, Hopkins et al. 2001).	The vegetation under application has been divided into seven vegetated areas that have previously been cleared, and which cumulatively form a horizontal T-shape over the landscape.		
	The vegetation under application is located within the Shire of Yilgarn which has only ~23.6% native vegetation cover remaining (Shepherd et al. 2001), and is within the area defined in EPA Position Statement No. 2 (EPA 2000).		
	The areas to the north and south are largely uncleared, with cleared areas on the western side approximately 900m away. The area on the eastern		

edge of the vegetation under application is largely cleared.

The vegetation appears to range in condition from good to very good, with strong regeneration evident. The vegetation comprises of Acacia species and mallee across the over and under storeys.

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 may be at variance to this Principle**

The vegetation comprises of regenerated local species, including Acacia and mallee. Aerial orthomosaics and photographs of the vegetation indicate that the vegetation ranges from good to very good condition with a variety of overstorey and understorey species present.

The vegetation has previously been cropped and grazed, however, is regenerating well.

Given the diversity of the regeneration, condition of the vegetation and its location within an extensively cleared agricultural landscape, the proposed clearing may be at variance to this Principle.

Methodology **References:**

- DAFWA (2007) (TRIM Ref. DOC17290)

- Shepherd et al. (2001)

GIS database:

- Bullfinch 1.4m Orthomosaic - DLI01

- Pre-European Vegetation - DA 01/01

(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 vegetation under application is located within the Coolgardie Bioregion and Shire of Yilgarn which have only 25.6 % and 23.6% native vegetation remaining respectively (Shepherd et al. 2001). The vegetation under application is also within the Intensive Land Use zone (Shepherd et al. 2001) and within the area defined in EPA Position Statement No. 2 (EPA 2000).

The areas to the north and south of the vegetation under application are largely uncleared, cleared areas on the western side commence approximately 900m away and the area on the eastern edge is largely cleared. The removal of 599ha of native vegetation within an extensively cleared agricultural area is considered likely to impede fauna movement and cause fauna displacement through loss of habitat. In particular, the removal of vegetation within the two western areas will significantly impede the movement of fauna in the north-south directions across the landscape through the loss of ecological linkages across an area extending 1.2km by 2.6km. It is also considered likely that the vegetation under application provides feeding and nesting habitat for local fauna given the good condition and large area under application (599ha).

Given the above, the proposed clearing is at variance to this Principle.

Methodology **Reference:**

- Shepherd et al. (2001)

GIS database:

- Bullfinch 1.4m Orthomosaic - DLI01

- EPA Position Paper No 2 Agriculture Region - DEP 12/00

- Interim Biogeographic Regionalisation of Australia - EA 18/10/00

- Pre-European Vegetation - DA 01/01

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

Comments **Proposal may be at variance to this Principle**

The closest known declared rare flora and priority flora populations are located approximately 20kms SSW of the vegetation under application. These populations are of *Lissanthe scabra* and classified as Priority 2. This species is known to occur within a different Beard Vegetation Association and soil unit to the vegetation under application.

Given that no surveys have been conducted of this large area (599 ha), there may be other species of conservation significance present. Therefore, the proposed clearing may be at variance to this Principle.

Methodology GIS databases:
- Declared Rare and Priority Flora List - CALM 01/07/05
- Pre-European Vegetation - DA 01/01
- 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 may be at variance to this Principle

The closest known occurrence of a Threatened Ecological Community (TEC) is located approximately 16kms west of the vegetation under application. This TEC is located within a different soil unit to that within the vegetation under application.

Given that no surveys have been conducted of this large area (599 ha), there may be other TECs present. Therefore, the proposed clearing may be at variance to this Principle.

Methodology GIS databases:
- Threatened Ecological Communities, DEC, accessed 15/02/2007
- Soils, Statewide - DA 11/99

(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 under application is within the Intensive Land Use Zone (Shepherd et al. 2001) and is within the area defined in EPA Position Statement No. 2 (EPA 2000). EPA Position Statement No. 2 (EPA 2000) states that significant clearing of native vegetation has already occurred on agricultural land, leading to a reduction in biodiversity and increase in land salinisation, and therefore any further reduction in native vegetation through clearing for agriculture cannot be supported. Furthermore, the EPA (2000) recommends that all existing native vegetation be protected from passive clearing through, for example, grazing by stock or clearing by other means.

The vegetation under application is a component of Beard Vegetation Association 435 and 536 (Hopkins et al. 2001) of which 70.4% and 57.5% of Pre-European extent remain respectively (Shepherd et al. 2001). The area under application is located within the intensive landuse zone of the Coolgardie Bioregion and Shire of Yilgarn, both of which have been extensively cleared and have 25.6% and 23.6% remaining respectively.

The vegetation under application is considered to be significant on a regional and local scale. Given this and the large area proposed to be cleared (599ha), the proposed clearing is at variance to this Principle.

Methodology References:
- EPA (2000)
- Shepherd et al. (2001)
- Hopkins et al. (2001)
- Department of Natural Resources and Environment (2002)
- JANIS Forests Criteria (1997)
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 likely to be at variance to this Principle

The closest wetland is the salt lake, Lake Deborah, which is located to the west, north and east of the property. At its closest point it is approximately 6.5kms away.

Given this and the high elevation of the vegetation under application within the local landscape, the vegetation is not considered to be growing in or in association with Lake Deborah. Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS databases:
- Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05
- Geodata, Lakes - GA 28/06/02
- Topographic Contours, Statewide - DOLA 12/09/02

(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 vegetation under application lies within soil unit AC1. These soils are associated with a gently sloping to gently undulating plateau or upland, on granites, gneisses, and allied rocks and chief soils of yellow earthy sands, sandy yellow earths or ironstone gravels (Department of Agriculture, 2004). If managed poorly, there is a risk of wind erosion occurring.

The vegetation under application is associated with a groundwater depth of ~40m, an average annual rainfall of ~250mm and evapotranspiration of 2800mm (DAFWA, 2007). Recharge would be expected to increase with the removal of native vegetation.

As a result, there is a medium risk of wind erosion and salinity resulting from the proposed clearing (DAFWA 2007).

Therefore the proposed clearing may be at variance to this Principle.

Methodology References:

- Department of Agriculture (2004)
 - DAFWA (2007) (TRIM Ref. DOC17290)
- GIS database:
- Soils, Statewide - DA 11/99

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

Comments Proposal is at variance to this Principle

The vegetation under application is located in close proximity to two unnamed DEC-managed nature reserves (~1.2kms north east). These two Class A reserves are 9645ha and 4317ha, respectively. The proposed clearing may impact on their environmental values.

The vegetation comprises of Beard Vegetation associations 435 and 536 which currently have only 8.8% and 12.0% in secure tenure respectively (Shepherd et al. 2001).

Given the above, the proposed clearing is at variance to this Principle.

Methodology References:

- Shepherd et al. (2001)
- GIS databases:
- CALM Managed Lands and Waters - CALM 1/07/05
 - Pre-European Vegetation - DA 01/01

(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

The mean annual rainfall is ~250mm and evapotranspiration is 2800mm, with an average groundwater salinity in the local area recorded at 14000-35000 (TDS) mg/L.

There is a medium risk of salinity following the clearing of 599ha of regenerated native vegetation. Therefore, the proposed clearing may cause deterioration in the quality of surface or underground water.

Methodology Reference:

- DAFWA (2007) (TRIM Ref. DOC17290)
- GIS databases:
- Groundwater Salinity, Statewide - 22/02/00
 - Rainfall, Mean Annual - BOM 30/09/01
 - Evaporation Isopleths - BOM 09/98

(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 under application occurs within an area associated with an annual evaporation rate of approximately 2800mm and an annual rainfall of approximately 250mm.

Given the elevation and position of the vegetation under application and surrounding areas of native vegetation, the proposed clearing is not considered likely to cause or exacerbate the incidence of flooding. Furthermore,

DAFWA (2007) advise that there is a low risk of waterlogging and flooding. Therefore, the proposed clearing is not likely to be at variance to this Principle.

- Methodology** Reference:
- DAFWA (2007) (TRIM Ref. DOC17290)
- GIS databases:
- Rainfall, Mean Annual - BOM 30/09/01
 - Evaporation Isopleths - BOM 09/98
 - Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The vegetation under application is within the area defined in EPA Position Statement No. 2 (EPA 2000). There is a presumption against clearing within this area for agricultural purposes.

The vegetation under application was previously cleared in the 1980's as part of a Conditional Purchase Agreement, with the area being cropped in 1988, 1989 and 1990. The property was then leased and used for low stocking rate grazing until the applicants purchased the property approximately 18 months ago. The vegetation has regenerated since the original clearing in the 1980s.

The Shire of Yilgarn has no objections to the clearing of 599.28ha on Location 1470 Turkey Hill Rd, Bullfinch for the purpose of cropping, grazing and pasture (TRIM Ref. DOC16150).

One direct interest submission was received, stating no objections to the proposed clearing (TRIM Ref. DOC16345).

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

- Methodology** Reference:
- EPA (2000)
- GIS databases:
- Native Title Claims - DLI 7/11/05
 - Aboriginal Sites of Significance - DIA
 - RIWI Act, Groundwater Areas - WRC 13/06/00

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Cropping	Mechanical Removal	584.73	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 and the clearing as proposed is at variance to Principles (b), (e) and (h) and may be at variance to Principles (a), (c), (d), (g) and (i).
Grazing & Pasture	Mechanical Removal	14.55	Given the above, the assessing officer recommends that a clearing permit be refused.

5. References

DAFWA (2007) Land degradation assessment report. Advice to Assessing Officer, Native Vegetation Assessment Branch, received 02/03/2007. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia (TRIM Ref. DOC17290).

Department of Agriculture (2004) Soil-landscape mapping, Western Australia Department of Agriculture, Date accessed 21/02/2007.

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.

JANIS Forests Criteria (1997) Nationally agreed criteria for the establishment of a comprehensive, Adequate and Representative reserve System for Forests in Australia. A report by the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee. Regional Forests Agreement process. Commonwealth of Australia, Canberra.

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.

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)