



1. Application details

1.1. Permit application details

Permit application No.: 499/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Anthony Leighton Ruse

1.3. Property details

Property: LOT 5432 ON PLAN 206482
Local Government Area: Shire Of Gingin
Colloquial name: Swan Location 5432

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
8		Burning	Fence Line Maintenance

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
Hedde vegetation complex - Mogumber Complex North: open to closed heath of Banksia species, Casuarina humilis (Hedde et al 1980). Beard vegetation association - 1015: mosaic, shrublands, scrub-heath on Swan Coastal Plain, dryandra heath (Shepherd et al 2001, Hopkins et al 2001).	The area under application comprises 8ha of a 1422ha property and is located near the centre of the property towards the north-east boundary (DAWA 2005). Approximately 78% of the property has been previously cleared (DAWA 2005). The vegetation under application is described as low scrub heath with woolly bush, native grass trees, acacias and scattered red gums with Dryandra present on gravelly soil types (DAWA 2005). The vegetation was also described as being in very good to excellent condition (DAWA 2005, Keighery 1994).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The description of the area under application was sourced from the DAWA Land Degradation Assessment Report prepared after a site visit by two DAWA officers to the property (DAWA 2005).

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 consists predominantly of previously cleared and cropped land, in addition to some vegetation that has not been previously cleared. While the larger areas that have been cropped and grazed may not require a clearing permit, (under s51C, Regulation 5, Item 14) other areas under application do require a clearing permit and the assessment has been conducted for both circumstances.

The vegetation that has not been previously cleared is described as being in very good to excellent condition (DAWA 2005). The properties surrounding the area under application are predominantly cleared of native vegetation. There is a large remnant of native vegetation adjacent to the area under application, which is approximately 300ha in size. It is considered that the 300ha remnant would be of higher biodiversity value than the area under application as it has not been previously cropped or grazed. Based on the above, it is considered that the clearing as proposed is not likely to be at variance to this Principle.

Methodology DAWA (2005) Land Degradation Assessment Report (DoE Trim No EI1996)
GIS Databases:
- Gingin 1m Orthomosaic - DLI 03

(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 following Priority Listed Fauna are known to occur in the local area (10km radius):

Native Bee (*Leioproctus contrarius*); and

Mogumber Bush Cricket (*Throscodectes xederoides*) (CALM 2005).

However due to past land-uses, it is unlikely that the area under application which contains regrowth and pasture vegetation would provide significant habitat for any Threatened or Priority Fauna (CALM 2005).

Therefore it is considered that the clearing as proposed is unlikely to be at variance to this Principle.

Methodology CALM (2005) Land Clearing Proposal Advice (DoE Trim No EI 2350)

(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

Dryandra mimica and *Paracaleana dixonii* ms are two Declared Rare Flora (DRF) species that are known to occur within a 10km radius of the area under application (CALM 2005). A number of Priority species are also known to occur in the local area and include:

Dampiera tephrea (P2);

Beaufortia eriocephala (P3);

Dryandra lindleyana subsp. *pollostata* (P3);

Gastrolobium axillare (P3);

Haemodorum loratum (P3);

Isopogon drummondii (P3);

Persoonia rudis (P3); and

Anigozanthos humilis subsp. *chrysanthus* (P4) (CALM 2005).

Some of these DRF and Priority species have been recorded on similar vegetation associations as the area under application (CALM 2005). An orthomosaic of the area indicates that the majority of the landscape of the area under application has been altered, reportedly as a result of cropping and grazing, and contains regrowth and pasture vegetation.

While it is possible that flora of conservation significance could occur in areas that have not been subjected to these particular land uses, they may not constitute sustainable populations as a result of land uses in proximal areas and associated edge effects (CALM 2005).

Methodology CALM (2005) Land Clearing Proposal Advice (DoE Trim No EI2350)

GIS Databases:

Declared Rare and Priority Flora - CALM 13/08/03

Gingin 1m Orthomosaic - DLI 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

There are no known occurrences of Threatened Ecological Communities (TECs) within the local area (10km radius) (CALM 2005). It would be unlikely that any viable TECs would exist within the area under application based on the impact of past land-uses (CALM 2005).

Methodology CALM (2005) Land Clearing Proposal Advice (DoE Trim No EI2350)

GIS Databases:

- Threatened Ecological Communities - 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 not likely to be at variance to this Principle

The area under application consists of Heddle vegetation complex Mogumber Complex North (Heddle et al 1980) and Beard vegetation association 1015 (Shepherd et al 2001, Hopkins et al 2001). The Heddle complex has approximately 44.0% (9368ha) remaining (Heddle et al 1980) and the Beard complex 29.8% (6368ha) remaining (Shepherd et al 2001, Hopkins et al 2001).

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-European (AGIS 2001, Department of Natural Resources and Environment 2002, EPA 2000). In relation to this clearing permit application, the Heddle vegetation complex is above this 30% and the Beard vegetation association is just below this target with 29.8%.

The area subject to the proposal is covered by flora studies conducted by Beard and Heddle. Beard's study is significantly broader than Heddle's which is primarily confined to the Swan Coastal Plain. In this instance, for the same area of native vegetation, they provide a disparity in pre-European vegetation representation (29.8% for Beard and 44.0% for Heddle). If the more comprehensive Heddle Vegetation Complexes were used to the exclusion of Beard's Vegetation Associations in this instance, the proposal would not be at variance to this Principle. Furthermore, a large portion of the area under application has been subject to grazing and cropping. These areas would not be representative of the vegetation of these complexes. Therefore, in real terms, the actual reduction in the amount of vegetation remaining would not be altered substantially.

If the clearing were conducted as proposed, 300ha of the property would remain vegetated (DAWA 2005).

Methodology Heddle et al (1980)
Shepherd et al (2001)
Hopkins et al (2001)
AGIS (2001)
Department of Natural Resources and Environment (2002)
EPA (2000)
DAWA (2005) Land Degradation Assessment Report (DoE Trim Ref EI1996)

(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

There are no wetlands or watercourses within the area under application or the remaining area of the property. There are a number of Resource Enhancement and Multiple Use wetlands and an un-named EPP lake in the local area (10km radius). However, due to their distance from the area under application, it is unlikely that the clearing as proposed would have a significant impact on these waterbodies.

Methodology GIS Databases:
- Geomorphic Wetlands (Mgmt Categories) - Swan Coastal Plain - DOE 15/09/04
- EPP, Lakes - DEP 28/07/03

(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 (2005) have identified a possible risk of wind and water erosion however the proposed clearing is not likely to cause appreciable on site and off site land degradation. Water erosion was identified as a risk if clearing of the breakaway on the property was to be undertaken. The breakaway appears to be south of the area under application and not proposed to be cleared. The risk of wind erosion can be reduced through the use of windbreaks and maintaining adequate ground cover.

Methodology DAWA (2005) (DOE TRIM Ref ND738)

(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

The following conservation areas are known to occur in the local area (10km radius):

Moore River National Park;
Moochamulla Nature Reserve; and
Bundarra Nature Reserve (CALM 2005).

As the area under application is a relatively small area of free-hold land, a majority of which has been altered through grazing and cropping, the clearing as proposed is not considered likely to have an impact on the environmental values or ecological linkages of local conservation areas (CALM 2005).

Methodology CALM (2005) Land Clearing Proposal Advice (DoE Trim No EI2350)
GIS Databases:
- CALM Managed Lands and Waters - 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 not likely to be at variance to this Principle

The area under application is not within a Public Drinking Water Source Area (PDWSA) or within an EPP groundwater protection area. With a groundwater salinity level of 100-300mg/L and with no major watercourses within the local area, it is unlikely that the clearing as proposed would have a significant impact on groundwater or surface water quality.

Methodology GIS Databases:
 - Public Drinking Water Source Areas (PDWSAs) - DOE 29/11/04
 - Groundwater Salinity, Statewide - 22/02/00
 - EPP, Areas - DEP06/95
 - 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**
 As there are no major drainage lines through the area under application and that there are no major waterbodies within the local area, it is unlikely that the clearing as proposed would exacerbate peak flood height or duration. DAWA (2005) do advise however, that the breakaway on the property not be cleared to reduce any risk of water erosion from occurring.

Methodology DAWA (2005) Land Degradation Assessment Advice (DoE Trim Ref ND738)
 GIS Databases:
 - Hydrography, Linear - DOE 01/02/04

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

Comments
 The Gingin Land Conservation District Committee (LCDC) mentions in their submission that the clearing as proposed could possibly be entitled to an exemption under Regulation 5(14) 'clearing to maintain existing cleared areas for pasture, cultivation or forestry' of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 in terms of clearing of land that was lawfully cleared or has been used for pasture or cultivation within the 10years prior to the clearing. While this exemption may apply to some parts of the area under application, other areas have not been cleared. This assessment was conducted on the entire area, giving due consideration that some areas have been cropped and grazed.

The Gingin LCDC also recommends that the risk of off-site salinity and soil erosion from overland surface water flow should be taken into consideration. DAWA (2005b) did not identify salinity as a risk in their advice provided to the Department of Environment. Wind and water erosion was identified as a potential risk by DAWA (2005b) with the advice of implementing appropriate management strategies to control these risks.

The Shire of Gingin originally was not prepared to support the clearing as proposed as the reason for the clearing 'fence line maintenance' would imply linear clearing, which the area under application is not. Upon clarification of the purpose of the clearing with the proponent, a second direct interest letter was sent to the Shire of Gingin. The Shire indicated that as the purpose of the clearing was for paddock re-alignment for the ultimate purpose of stock grazing, the Shire raised no objection to the clearing.

There is no other RIWI Act Licence, Works Approval or EP Act Licence that will affect the area that has been applied to clear.

Methodology Direct interest submission from Gingin LCDC (DoE Trim Ref EI946 and EI2913)
 Direct interest submission from Shire of Gingin (DoE Trim Ref EI897)
 Information from proponent (DoE Trim Ref IN20323)

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Fence Line Maintenance	Burning	8	Grant	The application has been addressed and the clearing as proposed is not likely to be at variance to the Clearing Principles. Therefore, the assessing officer recommends that this permit be granted. The proponent is advised to maintain adequate ground cover and wind breaks to reduce the risk of wind erosion.

5. References

AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.
 CALM (2005) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM ref EI2350.
 DAWA (2005) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture Western Australia. DoE TRIM ref EI1996.
 DAWA Land degradation assessment advice. Office of the Commissioner of Soil and Land Conservation, Department of

- Agriculture Western Australia. DoE TRIM ref ND738.
- 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.
- Hedde, 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.
- 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, BJ (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.

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)