



1. Application details

1.1. Permit application details

Permit application No.: 2084/1
 Permit type: Area Permit

1.2. Proponent details

Proponent's name: Robert Henry Chester

1.3. Property details

Property: LOT 4869 ON PLAN 224502 (House No. 2556 GREAT SOUTHERN ST RONANS 6302)
 Local Government Area: Shire Of York
 Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
5		Mechanical Removal	Dam construction or 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
Beard Vegetation Association 4: Medium woodland; marri & wandoo. (Shepherd, 2006)	The area under application (5.0ha) is located within Lot 4869, which is an 1152.7ha property (Zoned farming). The clearing is for the construction of a dam and a roaded catchment.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the native vegetation under application was sourced from the Site Inspection (2007).
Mattiske Vegetation Complexes: - Coolakin: Woodland of Eucalyptus wandoo with mixtures of Eucalyptus patens, Eucalyptus marginata subsp. thalassica and Corymbia calophylla on the valley slopes in arid and perarid zones. - Yalanbee: Woodland of Eucalyptus wandoo-Eucalyptus accedens, less consistently open forest of Eucalyptus marginata subsp. thalassica-Corymbia calophylla on lateritic uplands and breakaway landscapes in arid and perarid zones. (Mattiske Consulting, 1998)	The vegetation within the area under application includes: wandoo (Eucalyptus wandoo), sedges (Mesomelaena sp.), Balga (Xanthorrhoea sp.), rock sheoak (Allocasuarina huegeliana), Hibbertia sp., poison pea (Gastrolobium sp.), Dryandra sp., Conostylis sp. and daisies (Site Inspection, 2007). The vegetation has an intact herb layer (lower storey); areas with an intact tree layer (upper storey), and a sparse shrub layer (middle storey) with no weed species observed (Site Inspection, 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**
 A site inspection (2007) of the area under application identified the vegetation under application, being predominantly Wandoo woodland with some areas having an understorey consisting of Mesomelaena sp. The overall condition of the vegetation is considered to be very good (Site Inspection, 2007). The vegetation has an intact herb layer (lower storey); areas with an intact tree layer (upper storey), and a sparse shrub layer (middle storey) with no weed species observed (Site Inspection, 2007). Further, eight species conservation significant fauna have been recorded within the local area (10km radius).

Given the overall very good condition of the vegetation under application with areas of minimal disturbance, and the potential habitat value of the vegetation, the vegetation under application is considered to may be comprise a high level of biological diversity. However, given similar vegetation is reserved within the adjacent Wandoo National Park (44,000ha), it is not considered the area under application would have a higher level of biodiversity than that of the remaining native vegetation of that ecological community in the local area.

Methodology Reference:
- Site Inspection (2007)
GIS Databases:
- DEC Managed Lands and Waters - CALM 1/07/05
- SAC Bio Datasets 18/10/2007

(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 may be at variance to this Principle**

Eight species conservation significant fauna have been recorded within the local area (10km radius). These include: Chuditch (*Dasyurus geoffroii*) (Vulnerable), Carpet Python (*Morelia spilota imbricata*) (Priority 4), White-browed Babbler (*Pomatostomus superciliosus ashbyi*) (Priority 4), Western Brush Wallaby (*Macropus irma*) (Priority 4), Western Rosella (*Platycercus icterosis xanthogenys*) (Vulnerable), Numbat (*Myrmecobius fasciatus*) (Vulnerable), Bush Stonecurlew (*Burhinus grallarius*) (Priority 4) and Crested Shrike-tit (*Falcunculus frontatus leucogaster*) (Priority 4).

A site inspection (2007) of the area under application identified the vegetation under application, being predominantly Wandoo woodland in an overall condition of very good (Site Inspection, 2007). The vegetation has an intact herb layer (lower storey); areas with an intact tree layer (upper storey), and a sparse shrub layer (middle storey) with no weed species observed (Site Inspection, 2007). Further, a Western Brush Wallaby was observed within the area under application during the site inspection (2007). DEC Fauna Habitat Notes (2007) indicate this species occurs in areas of forest and woodland supporting a dense shrub layer.

Given the number of fauna species recorded within the local area and the areas of native vegetation in an overall very good condition, the vegetation under application (5.0ha) is considered part of significant habitat necessary for the maintenance of native fauna, and therefore may be at variance to this Principle.

Methodology Reference:
- Site Inspection (2007)
GIS Databases:
- DEC Fauna Habitat Notes.xls February (2007)
- SAC Bio Datasets 18/10/2007

(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**

Four Declared Rare Flora (DRF) species are known to occur within the local area (10km radius), being *Tetraria australiensis*, *Lechenaultia loricata*, *Dryandra aurantia*, *Acacia aphylla* and *Thomasia montana*. The closest known population of DRF is *Lechenaultia loricata*, located approximately 1.3kms from the area under application.

Lechenaultia loricata and *Tetraria australiensis* are known to occur within 6kms of the area under application on the same soil type and within the same vegetation associations as the vegetation applied to be cleared.

In addition, 14 Priority flora species are known to occur within the local area (10km radius), the closest being a population of *Calothamnus rupestris* located approximately 630m from the applied area. Of these species *Lechenaultia hortii* (Priority 2), *Acacia pulchella* var. *reflexa acuminata bracteole variant* (Priority 3), *Thelymitra yorkensis* (Priority 3), *Asterolasia grandiflora* (Priority 4), *Cyanicula ixioides* subs. *ixioides* (Priority 4), *Wurmbea drummondii* (Priority 4), *Hibbertia montana* (Priority 4), *Calothamnus rupestris* (Priority 4), *Darwinia thymoides* subs. *bella* (Priority 4), *Acacia cuneifolia* (Priority 4) and *Eucalyptus latens* (Priority 4) are known to occur within the same vegetation associations and on the same soil type as the vegetation under application.

Given the nearest records of Declared Rare Flora, *Lechenaultia loricata* and *Tetraria australiensis*, occur on the same soils and within the same vegetation associations as those of the area under application, the clearing is considered may be at variance to this Principle.

Methodology GIS Databases:
- Mattiske Vegetation - CALM 24/3/98
- Pre-European Vegetation - DA 01/01
- SAC Bio Datasets 18/10/2007
- 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

There are no Threatened Ecological Communities (TECs) located within the local area (10km radius). The nearest recorded Ecological Communities, being a Priority Ecological Community (PEC), is located approximately 18.7km north-east of the area under application. This PEC has been identified as being Deep pools of the Avon Botanical District.

However, a portion of the vegetation under application can be described as Wandoo woodland with some areas having an understorey consisting of Mesomelaena sp. (Site Inspection, 2007), which may represent the PEC Wandoo woodland over dense low sedges (Wandoo woodland over dense low sedges of Mesomelaena preisii).

Given the vegetation applied to be cleared may represent a Priority Ecological Community, Wandoo woodland over dense low sedges, the clearing as proposed is considered may be at variance to this Principle.

Methodology

Reference:

- Site Inspection (2007)

GIS Database:

- SAC Bio Datasets 18/10/2007

(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 may be at variance to this Principle

The area under application is located within the Intensive Land-use Zone (Shepherd et al, 2001) and is located in the area defined in EPA Position Statement No. 2 (EPA, 2000). Significant clearing of native vegetation has already occurred in this area and any further reduction through clearing for agriculture is not supported, unless exceptional circumstances apply (EPA, 2000).

The vegetation under application is identified as Beard vegetation type 4 and Matiske Coolakin and Yalanbee complexes, of which there is 23.3% (Shepherd, 2006), 42.9% and 51.4% (Matiske Consulting, 1998) of native vegetation remaining, respectively. In addition, the Beard vegetation type is identified as having 26.3% (Shepherd, 2006) representation within secure tenure, which is above the recommended JANIS Forests Criteria (1997) of 15% representation in secure tenure.

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 Beard vegetation type in the area under application is below the recommended minimum of 30% representation.

The vegetation within the area under application is identified as Matiske complexes, of which there is 42.9% and 51.4% of Pre-European extent remaining (Matiske Consulting, 1998). Further, aerial imagery and vegetation mapping of the local area (5km radius) shows approximately 50% remnant vegetation to be remaining.

Given the area under application is located within the EPA Position Statement No. 2 Agricultural Region and there is 23.3% of Pre-European extent remaining of the Beard vegetation type, the clearing as proposed is considered may be at variance to this Principle.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion**				
Jarrah Forest^	4,506,674	2,426,079	53.8	-
Shire of York*	214,963	66,264	30.8	-
Beard vegetation type**				
4	1,054,316	245,361	23.3	26.3
Matiske vegetation complexes***				
- (Ck)Coolakin***	1,338,992	573,908	42.9	-
- (Y6)Yalanbee***	1,583,884	814,609	51.4	-

* (Shepherd et al, 2001)

** (Shepherd, 2006)

*** (Matiske Consulting, 1980)

^ Area within Intensive Land Use Zone

- Methodology** **References:**
- Commonwealth of Australia (2001)
 - EPA (2000)
 - Janis Forests Criteria (1997)
 - Mattiske Consulting (1998)
 - Shepherd et al (2001)
 - Shepherd (2006)
- GIS Databases:**
- EPA Position Paper No 2 Agriculture Region - DEP 12/00
 - Interim Biogeographic Regionalisation of Australia - EA 18/10/00
 - NLWRA, Current Extent of Native Vegetation - DA 30/01/01
 - Northam 1m Orthomosaic - DLI 12/03
 - SAC Bio Datasets 07/03/2008

(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 mapped within the area under application with the closest water body being a minor non-perennial river (13 Mile Brook) located approximately 500m east of the applied area. Further, a site inspection (2007) of the area under application did not identify any wetland dependant vegetation.

Given the distance to the nearest watercourse from the area under application, the clearing as proposed is considered unlikely to be at variance to this Principle.

- Methodology** **Reference:**
- Site Inspection (2007)
- GIS Databases:**
- Geodata, Lakes - GA 28/06/02
 - Hydrography, linear - DOE 1/2/04
 - Rivers, DoW

(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 landform of the area under application and its surrounds can be described as a dissected plateau having a gentle to moderately undulating relief, and with broad swampy drainage-ways and basins (Northcote et al, 1960). The chief soils are ironstone gravels with sandy and earthy matrices overlying duricrusts of ironstone gravels (Northcote et al, 1960). These soils are not considered to be at risk of wind erosion and may be at risk to water erosion.

Contour mapping identifies gentle relief (~8% gradient) (Wells, 1998) with the area under application located upper to mid slope in the landscape. The clearing as proposed may result in an increase in surface water runoff causing erosion gullies.

In addition, a Soil Conservation Notice (2003) has been issued for a portion of Lot 4869, 196.8ha or 17% of Lot 4869, and includes the area under application (5.0ha). The reason the notice was served was that as a result of clearing vegetation, degradation in the form of salinity is liable or likely to become liable to occur on the land and elsewhere.

DAFWA (2007) advised that salinity risk would be low onsite and low offsite, wind erosion risk will be low and that water erosion risks will be low.

Given the gravel in the surface horizons and the associated water erosion risk and the potential salinity risk, the clearing as proposed is considered to may be cause appreciable land degradation.

- Methodology** **References:**
- DAFWA (2007)
 - Northcote et al (1960)
 - Soil and Land Conservation (2003)
 - Wells (1998)
- GIS Databases:**
- Soils, Statewide - DA 11/99
 - Topographic Contours, Statewide - DOLA 12/09/02

(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 four conservation reserves within the local area (5km radius), namely Wandoo National Park adjacent to the south-west boundary of Lot 4869 (~400m south-west of area under application); St. Ronan's Nature Reserve (also listed on the Register of National Estate) 1.4km north-east; Cullen Nature Reserve 1.9km north-west; and Wambyn Nature Reserve 4.6km east of the area under application. Further, a 96.9ha area of native vegetation, located approximately 700m south-east of the area under application, has been retained and protected by an Agreement to Reserve (TRIM Ref DOC34361). Aerial mapping of the local area confirms limited connectivity from the area under application to the conservation area.

Given the distance of the area under application to the reserves and the limited connectivity it is unlikely that the clearing of the vegetation under application will impact on the environmental values of the conservation areas.

Methodology GIS Databases:
- DEC Managed Lands and Waters - CALM 1/07/05
- Northam 1m Orthomosaic - DLI 12/03
- 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 at variance to this Principle

There are no wetlands or watercourses mapped within the area under application with the closest water body being a minor non-perennial river (13 Mile Brook) located approximately 500m east of the applied area.

The area under application is not located in a Public Drinking Water Source Area with the Mundaring Weir Catchment Area located approximately 700m south-west.

DoW (2007) advised that the clearing as proposed will release salt into the streamflow, but any groundwater will already be saline and not considered a resource. In addition, DoW (2008) advised that clearing even small areas (just outside the Mundaring Catchment) is mobilising salt through increased saline groundwater discharge, into runoff.

Given the high salinity risk with the increase of streamflow salinity and salt load, the clearing as proposed is considered likely to cause deterioration in the quality of surface water.

Methodology References:
- DoW (2007)
- DoW (2008)
GIS Databases:
- Geodata, Lakes - GA 28/06/02
- Hydrography, linear - DOE 01/02/04
- Public Drinking Water Source Areas (PDWSAs) - DOW
- Soils, Statewide - DA 11/99

(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

There are no wetlands or watercourses mapped within the area under application with the closest water body being a minor non-perennial river (13 Mile Brook) located approximately 500m east of the applied area, and as such it is considered that the clearing as proposed is unlikely to cause or increase the incidence or intensity of localised flooding. Therefore, this clearing proposal is not likely to be at variance to this Principle.

Methodology GIS Databases:
- Geodata, Lakes - GA 28/06/02
- Hydrography, linear - DOE 01/02/04

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

Comments

The area under application is located within the Environmental Protection Authority's Position Statement No. 2, Environmental Protection of Native Vegetation in Western Australia ? Clearing of Native Vegetation, with particular reference to the agricultural area. Given significant clearing has already occurred in this area from an environmental perspective any further reduction in native vegetation through clearing for agriculture can not be supported, unless in exceptional circumstances (EPA, 2000).

EPA Position Statement No. 2 requires that in exceptional circumstances the proponent provide information in

relation to alternative mechanisms for protecting biodiversity that would see an overall environmental benefit as a result of the proposal (EPA, 2000). Furthermore justification should be sought that outlines why the proposal can not be situated in an already cleared area (EPA, 2000).

The area under application is within the Proclaimed Surface Water Area of Mundaring Weir Surface Water Area and Avon River Catchment. Therefore any abstraction of surface water above the riparian rights (>1,500kL) would require a licence. However, this application is for a dam and roaded catchment and therefore is not associated with surface water abstraction. Further, a licence for the dam is not required as surface water will not be extracted from a defined drainage line or stream.

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

The applicant advised the Department during the Site Inspection that the dam is to provide water for domestic purposes. However, DoW (2008) advised that the clearing of even small areas is mobilising salt through increased saline groundwater discharge, into runoff; water salinity may be suitable for stock.

The Shire of York (2007) advised that the issuing of a clearing permit for the purpose of dam construction is not opposed, providing that the area applied for is appropriate to the intended land use. Further, there is no requirement by the Shire of York for planning consent for dam construction on land zoned agriculture, which applies to this property (Lot 4869).

A Soil Conservation Notice (SCN) was issued to Robert Chester on the 03/04/2003. The area subject to the SCN is 196.8ha or 17% of Lot 4869 and includes the area under application (5.0ha). The reason the notice was served was that as a result of clearing vegetation, degradation in the form of salinity is liable or likely to become liable to occur on the land and elsewhere.

The Deputy Commissioner (Soil and Land Conservation, 2007) sent a letter, dated 27 August 2007, to Mr Chester (Applicant), stating that if Mr Chester submits a plan showing the exact location of the proposed works then the Soil Conservation Notice will be amended to enable the dam and roaded catchment to be constructed. The total area of the dam and catchment should not exceed five hectares. The matter will be finalised once the Deputy Commissioner receives a copy of the plan and a copy of the clearing permit.

Lot 4869 on Plan 224502 is zoned Farming under Town Planning Scheme No 2.

Mr Chester (2008) sent a response to the 30-day letter, which the Department sent on 24 January 2008. The response provided comment on flora and fauna and information on DAFWA agreement to amend the soil conservation area by removing approximately 5 hectares. The submission did not provide adequate information on which to amend the variance of clearing principles.

Methodology

References:

- Chester (2008)
 - DoW (2008)
 - EPA (2000)
 - Shire of York (2007)
 - Soil and Land Conservation (2003)
 - Soil and Land Conservation (2007)
- GIS databases:
- RIWI Act, Groundwater Areas - WRC 13/06/00
 - RIWI Act, Surface Water Areas - WRC 18/10/02
 - Town Planning Scheme Zones - MFP 8/98
 - Hydrography, linear - DOE 1/2/04

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Dam constructional or maintenance	Mechanic Removal	5	The assessable criteria have been addressed and the clearing as proposed is at variance to Principle (i) and may be at variance to Principles (b), (c), (d), (e) and (g).

5. References

- Chester, R.H. (2008) Response to 30-day letter from Mr R.H. Chester. TRIM Ref DOC46760
- Commonwealth of Australia (2001). National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.
- DAFWA (2007) Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. TRIM Ref DEC4598

- DoW (2007) DoW advice, Department of Water. TRIM Ref DOC42964
- DoW (2008) Additional DoW advice, Department of Water. TRIM DOC42966
- 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.
- 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.
- Mattiske Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- 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.
- Shire of York (2007) Direct Interest Submission, Shire of York. TRIM Ref DOC37721
- Site Inspection (2007) Site Inspection Report, Department of Environment and Conservation (DEC), Western Australia. TRIM Ref ED2037
- Soil and Land Conservation (2003) Soil Conservation Notice, Commissioner Soil and Land Conservation. TRIM Ref DOC34361
- Soil and Land Conservation (2007) Letter from the Deputy Commissioner Soil and Land Conservation to Mr Chester, Commissioner Soil and Land Conservation. TRIM Ref DOC33977
- Wells (1998) A method of assessing water erosion risk in land capability studies - Swan Coastal Plain & Darling Range, Resource Management Technical Report No. 73, Department of Agriculture, 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)

