GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number: 3459/1
File Number: DEC13815
Duration of Permit: From 14 February 2010 to 14 February 2012

PERMIT HOLDER
Michael Roy Titherington
Athelie Marree Titherington

LAND ON WHICH CLEARING IS TO BE DONE
Lot 10 on Plan 23035

AUTHORISED ACTIVITY
Clearing of up to 3 hectares of native vegetation the area hatched yellow on attached Plan 3459/1.

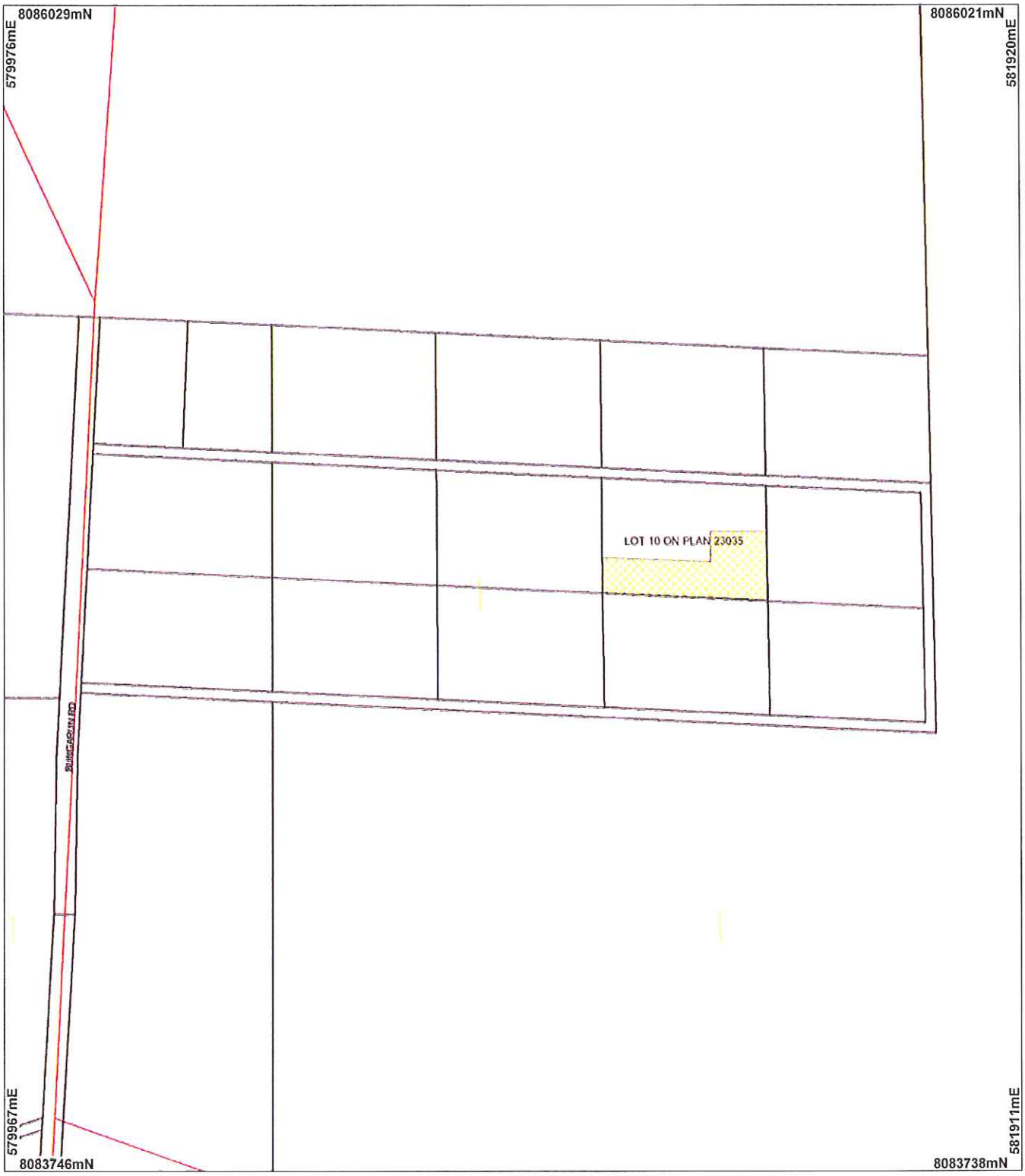
CONDITIONS
Nil.

Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

Officer delegated under Section 20
of the Environmental Protection Act 1986

14 January 2010

Plan 3459/1



LEGEND

Clearing Instruments

- Areas Approved to Clear
- Road Centrelines

- Freehold
- Crown Reserve
- State Forest / Timber Reserve
- Marine Park

N

0 ~300 m

Scale 1:10585
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

Date 16/1/10.

K Faulkner

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowleged by the agency acronym in the legend.

Department of Environment and Conservation

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Department of Environment and Conservation
Our environment, our future

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3459/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Michael Roy and Athelie Marree Titherington**

1.3. Property details

Property: LOT 10 ON PLAN 23035 (Lot No. 10 SAVANNAH DERBY 6728)
LOT 10 ON PLAN 23035 (Lot No. 10 SAVANNAH DERBY 6728)

Local Government Area:

Colloquial name:

1.4. Application

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

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: 755 - Shrublands, pindan; Acacia tumida & A. oimpressa shrubland with scattered low bloodwood & Eucalyptus setosa over ribbon & curly Spinifex (Shepherd 2007; SAC Bio datasets 15/12/2009). 764 - Shrublands, pindan; Acacia eriopoda & A. tumida shrubland with scattered low bloodwood & Eucalyptus setosa over ribbon & curly Spinifex (Shepherd 2007; SAC Bio datasets 15/12/2009).	The proposal is to clear up to 3 hectares of native vegetation in very good condition for the purpose of establishing an orchard (0.5ha) and for pasture (2.5ha) which the applicant advised may be grazed by goats in the future. The vegetation ranges from good to very good condition (Keighery, 1994), with an overall average of very good condition (DEC, 2009a).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The vegetation condition (DEC, 2009a) and clearing description were obtained from aerial orthomosaics and photos provided by the applicant (Titherington, 2009).

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 proposal is to clear 3 hectares of native vegetation in good to very good (Keighery, 1994) condition (DEC, 2009a) for the purpose of establishing an orchard (~0.5ha) and for pasture (~2.5ha). Given the good to very good vegetation condition, the vegetation under application is likely to provide suitable habitat for a range of ground dwelling fauna species such as small mammal species, reptile species and foraging bird species.

There are four priority flora species which have been recorded within the local area (20km radius) including Triodia acutispicula (P3), Goodenia sepalosa var. glandulosa (P3), Eriachne semiciliata (P3) and Nymphoides beaglensis (P2), the closest E.semiciliata (P3) is located approximately 3.4km from the applied area and is found within the same soil type, but within a different vegetation complex as the area under application. Of the identified priority flora, Goodenia sepalosa var. glandulosa (P3) and Nymphoides beaglensis (P2) respectively located approximately 17km southeast and 4.5km southwest from the applied area; are found within the same vegetation complex and soil type to that found on site.

Goodenia sepalosa var. glandulosa is a prostrate to sprawling herb which flowers in January - December and is found within red sand or loam (Western Australian Herbarium, 1998); and it is considered that the vegetation under application may include habitat that is suitable for G.sepalosa var. glandulosa.

Nymphoides beaglensis is an annual aquatic herb which flowers in March - June and is found in shallow freshwater, at the edges of permanent waterholes or in seasonally inundated claypans and depressions (Western Australian Herbarium, 1998). Given the absence of any mapped wetlands or watercourses within the applied area, it is considered unlikely that the vegetation under application would include habitat that is suitable for N. beaglensis.

Although the local area (20km radius) is well vegetated (~90% native vegetation retained) with most of the surrounding vegetation in a similar or better condition than the applied area, given that the vegetation under application has the potential to support a range of native fauna species and that it may provide suitable habitat for priority species, it is considered that the applied area may comprise a high level of biological diversity.

Methodology

References:
- DEC (2009a)
- Keighery (1994)
- Titherington (2009)
- Western Australian Herbarium (1998)

GIS Database:
- Pre European Vegetation - DA 01/01
- SAC Bio Datasets accessed 14/12/2009

(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 two fauna species of conservation significance which have been recorded within the local area (20km radius) including the Australian Painted Snipe (Rostratula benghalensis, Vulnerable) and the Purple Crowned Fairy Wren (Malurus coronatus, P4) which are respectively recorded approximately 13km west of the applied area. Given that the identified bird species inhabit marshland and riparian localities (Simpson & Day, 2004), the upland vegetation under application would not provide suitable habitat for these particular bird species.

The vegetation under application is in very good (Keighery, 1994) condition (DEC, 2009a) overall, and areas comprising woody debris would provide suitable habitat for ground dwelling fauna such as small mammal species, reptiles and foraging bird species. However, given the local area (20km radius) is well vegetated (~90% native vegetation retained) with most of the surrounding vegetation in a similar or better condition than the applied area, the vegetation under application is not considered likely to be significant habitat for native fauna.

Therefore the clearing as proposed is not considered likely to be at variance to this Principle.

Methodology

References:
- DEC (2009a)
- Simpson & Day (2004)
- Titherington (2009)

GIS Databases:
- Derby Orthomosaic - Landgate July 2007
- Pre European Vegetation - DA 01/01
- SAC BIO datasets accessed 14/12/2009

(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 no known records of rare flora species occurring within the local area (20km radius). The closest recorded rare flora species identified as Eucalyptus mooreana is located approximately 155km east of the applied area and is found within a different vegetation complex and soil type to that found within the area under application.

Given this, it is not considered likely that the vegetation under application includes, or is necessary for the continued existence of, rare flora.

Therefore the clearing as proposed is not considered likely to be at variance to this Principle.

Methodology

References:
- Northcote et al. (1968)
- Shepherd (2007)

GIS Databases:
- SAC BIO datasets accessed 14/12/2009
- 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

There are no known records of Threatened Ecological Communities (Tec's) within the local area (20km radius), the closest TEC is located approximately 42km northeast of the area under application. This TEC identified as Assemblages of Big Springs organic mound springs, is found within a different vegetation complex and soil type to that found within the area under application.

Given this, the clearing as proposed is not considered likely to be at variance to this Principle.

Methodology

References:
- Northcote et al. (1968)
- Shepherd (2007)

GIS Databases:
- SAC BIO datasets accessed 14/12/2009
- 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 not likely to be at variance to this Principle

The vegetation under application is described as Beard vegetation associations 755 and 764 of which there is 100% respectively of pre-European extent remaining (Shepherd 2007).

The area under application is located within the Shire of Derby, within which there is 99.53% of pre-European extent remaining.

The Environmental Protection Authority (EPA) supports the retention of remnant native vegetation to a 30% threshold level as recommended in the National Objectives Targets for Biodiversity Conservation below which, species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000). The vegetation types under application retain more than this 30% threshold level.

Given the local area is well vegetated (approximately 90% vegetation retained), it is not considered likely that the vegetation under application is significant as a remnant.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion*				
Dampier Land^	8,345,180	8,316,459	99.66	1.06
Shire of Derby				
West Kimberley*	11,956,106	11,899,459	99.53	
Beard Vegetation complex*				
755	428,287	428,282	100	
764	53,248	53,248	100	

* (Shepherd, 2007)

Methodology

References;
- EPA (2000)
- Shepherd et al (2007)

GIS Databases:
- Derby Orthomosaic - Landgate July 2007
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Local Government Authorities - DLI 8/07/04
- Pre-European Vegetation
- SAC BIO Datasets accessed 14/12/2009
- Western Australia Landsat Mosaic 25m - AGO 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 likely to be at variance to this Principle

There are no wetlands or watercourses mapped within the vegetation under application. However, there are numerous non-perennial water bodies located within a 20km radius of the area under application, the closest a non-perennial swamp is located approximately 1.5km southwest of the applied area.

The nearest watercourse is the May River which is located approximately 15km northeast of the area under application.

Given the distance to the nearest wetland and watercourse, the vegetation under application is not considered likely to be growing in, or in association with, an environment associated with a watercourse or wetland.

Therefore the clearing as proposed is not considered likely to be at variance to this Principle.

Methodology

GIS Databases:
- Hydrography, linear_1
- Hydrography, linear (hierarchy)

(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

The chief soils within the area under application are described as red earthy soils which can be associated with dunes and hummocks or red sands (Northcote et al. 1968). The area under application is also associated with a nil to low risk of salinity.

Given that the local area is well vegetated (approximately 90% native vegetation retained) and that the area under application is not especially prone to erosion (DEC, 2009b), the clearing as proposed is not considered likely to be at variance to this Principle.

Methodology

References:
- DEC (2009b)
- Northcote et al. (1968)
- Shepherd (2007)

GIS Database:
- Hydrogeology, Statewide 05 Feb 2002
- 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 not likely to be at variance to this Principle

There is one area of conservation significance within the local area (20km radius), namely the Derby Laprosarium (an Indigenous Register of National Estate site) which is located approximately 4.2km northwest of the applied area.

Given the distance between the closest area of conservation significance and the area under application, it is not considered likely that the proposed clearing would have a direct or indirect impact on the environmental values of the identified conservation reserve.

Therefore the clearing as proposed is not considered likely to be at variance to this Principle.

Methodology

GIS Databases:
- CALM Managed Lands and Waters - DEC Sept 08
- Register of National Estate - Environment Australia
- System 1 to 5 and 7 to 12 areas - DEC 11/7/06

(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 closest watercourses are the May River which is located approximately 15km northeast of the area under application and a non-perennial swamp is located approximately 1.5km southwest of the applied area. The area under application is situated within the Fitzroy River Catchment, but is not located within a Public Drinking Water Source Area (PDWSA).

Given the distance to the nearest water course and that the vegetation under application is not associated with surface water expression, the clearing as proposed is not considered likely to cause deterioration in surface

water quality.

The area under application has a nil to low risk of salinity. Given the low salinity risk, it is not considered likely that the proposed clearing would cause salinity resulting in the deterioration in the quality of underground water.

Given the above, it is therefore not considered likely that the proposed clearing would cause deterioration in the quality of surface or underground water.

Therefore the clearing as proposed is not considered likely to be at variance to this Principle.

Methodology GIS Databases:
- Hydrographic Catchments - Catchments - DOW - 01/06/07
-Hydrography, linear - DoW 13/7/06
- Hydrography, linear_1
- Public Drinking Water Source Areas (PDWSAs)

(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 area under application is located approximately 15km southwest of the May River and approximately 1.5km northeast of a non-perennial swamp.

Given the distance to the nearest watercourse and the amount (approximately 90%) of retained vegetation in the local area (20 km radius), it is not considered likely that the proposed removal of vegetation would impact on peak flood height or duration.

Therefore the clearing as proposed is not considered likely to be at variance to this Principle.

Methodology GIS Databases:
- Hydrography, linear - DoW 13/7/06
- Hydrography, linear_1

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

Comments

The property is freehold land located within the Birdwood Rise subdivision and is zoned Special Rural under the Shire of Derby/West Kimberley Town Planning Scheme No. 7.

The Shire of Derby/West Kimberley has advised the proposed use for the site (orchard and pasture) would be described as Rural Pursuits which is compatible with Town Planning Scheme No.7. (TPS7). However, the Shire advised that under Part V (5.1.1) Planning Approval is required from the Council prior to the development or use of the land within the Birdwood Rise subdivision. In addition, the Shire advices that the applicant would need to comply with the General Development provisions under Part IV of TPS7 (detailed below). If these matters could be satisfied, the Council would then support the clearing application (TRIM ref: DOC113940).

Under Part IV of the Shire of Derby/West Kimberley Town Planning Scheme No. 7 (TPS7), there are requirements for General Development within the Special Rural zone which apply to Lot 10 including:
- 4.1.9 - Any agricultural use must be in keeping with the principles of sound agricultural practice and in this respect the Council may request the advice of Agriculture WA before determining any application;
- 4.1.10 - No person shall use or permit to be used any lot for grazing of animals at intensity which would adversely affect the pastures of and other vegetation on the lot concerned, the neighbouring lots or be likely to result in soil erosion. Stocking rates shall be in accordance with those specified by Agriculture WA.
- 4.1.11 - In order to conserve the natural beauty of the locality, native trees including White Gums and Boabs are to be left standing. Bauhenia, Woolybutts and Bloodwood trees can be removed only for direct home and outbuilding construction, and are otherwise to be retained. The Wattle Scrub tree may be removed;
- 4.1.14 - The land contained within the Scheme area is located within the proclaimed Canning/Kimberley Groundwater Area and therefore, the establishment of all wells and bores will be subject to the approval and licensing of the Water and Rivers Commission;
- 4.1.15 - The total water draw for each lot shall be subject to the approval of the Water and Rivers Commission and shall not in any case exceed a maximum of 40, 000 litres per day.

The Shire of Derby/West Kimberley further advised that the Shire requires further information from the applicant in relation to the proposed orchard tree species and that advise may be required from Department of Agriculture and Food (DAFWA) to eliminate potential environmental impacts such as excessive water consumption and weed invasion (TRIM ref: DOC113969).

water quality.

The area under application has a nil to low risk of salinity. Given the low salinity risk, it is not considered likely that the proposed clearing would cause salinity resulting in the deterioration in the quality of underground water.

Given the above, it is therefore not considered likely that the proposed clearing would cause deterioration in the quality of surface or underground water.

Therefore the clearing as proposed is not considered likely to be at variance to this Principle.

Methodology GIS Databases:
- Hydrographic Catchments - Catchments - DOW - 01/06/07
-Hydrography, linear - DoW 13/7/06
- Hydrography, linear_1
- Public Drinking Water Source Areas (PDWSAs)

(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 area under application is located approximately 15km southwest of the May River and approximately 1.5km northeast of a non-perennial swamp.

Given the distance to the nearest watercourse and the amount (approximately 90%) of retained vegetation in the local area (20 km radius), it is not considered likely that the proposed removal of vegetation would impact on peak flood height or duration.

Therefore the clearing as proposed is not considered likely to be at variance to this Principle.

Methodology GIS Databases:
- Hydrography, linear - DoW 13/7/06
- Hydrography, linear_1

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

Comments

The property is freehold land located within the Birdwood Rise subdivision and is zoned Special Rural under the Shire of Derby/West Kimberley Town Planning Scheme No. 7.

The Shire of Derby/West Kimberley (2010) has advised that under Part V (5.1.1) Planning Approval is required from the Council prior to the development or use of the land within the Birdwood Rise subdivision.

The area under application is located within a Right in Water Irrigation (RIWI) Act Groundwater Area, Canning Kimberley Groundwater Area.

The Department of Water (DoW) advise that there is no current water licence associated with Lot 10 and that the owners have submitted an application to construct a bore and to take water (~38 Megalitres). DoW advice that they will need to consult with the Shire of Derby and the applicant, as the 38 Megallitres of water applied for exceeds the maximum 40,000 litre daily allocation permitted for Lot 10 under TPS7. (TRIM ref: DOC113891).

There are no Aboriginal Sites of significance within the area under application.

Methodology References:
- Department of Water (2010)
- Shire of Derby/West Kimberley (2010)
-Shire of Derby/West Kimberley Town Planning Scheme No.7 For Special Rural Zone: Birdwood Rise subdivision.

GIS Databases:
- Aboriginal Sites of Significance
- RIWI Act, Groundwater Areas - DoW 13/07/06
- Town Planning Scheme Zones

4. Assessor's comments

Comment

The 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 proposed clearing may be at variance to Principle (a) and is not likely to be at variance to the remaining clearing Principles.

5. References

DEC (2009a) Advice to Assessing Officer, Condition Rating of Vegetation from Photos provided by Applicant, Native Vegetation Assessment Branch from Kimberley Region, Department of Environment (TRIM DOC113215).

DEC (2009b) Advice to Assessing Officer, Native Vegetation Assessment Branch from Kimberley Region Department of Environment and Conservation for CPS2925/1 (TRIM DOC75072).

Department of Water (2010) Advice on water licence application for Lot 10 Savannah Way, Derby, Department of Water (TRIM ref: DOC113891).

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

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. (2007). 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.

Shire of Derby/West Kimberley (2010) Submission, Direct Interest Submission, Shire of Derby/West Kimberley (TRIM ref: DOC113940).

Shire of Derby/West Kimberley (2010) Submission, Direct Interest Submission, Shire of Derby/West Kimberley (TRIM ref: DOC113969).

Shire of Derby/West Kimberley Town Planning Scheme No.7 For Special Rural Zone: Birdwood Rise Subdivision.

Simpson, K. and Day, N. (2004) Field Guide to the Birds of Australia, 7th edition, Penguin Group (Australia), Australia.

Titherington, M. (2009) Photos provided by applicant of the vegetation proposed to be cleared for Clearing Permit Application CPS 3459/1 (TRIM ref: DOC113028).

Western Australian Herbarium (1998~). FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.dec.wa.gov.au/ (Accessed 29/12/2009).

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 (now DEC)
DMP	Department of Mines and Petroleum (ex DoIR)
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)