Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2094/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: William Robert Bowman Dixon

1.3. Property details

Property: LOT 1023 ON PLAN 203740 (CORINTHIA 6426)
LOT 1023 ON PLAN 203740 (CORINTHIA 6426)

Local Government Area: Shire Of Yilgarn

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
245		Mechanical Removal	Grazing & Pasture
		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 Associations: - 1413: Shrublands; acacia, casuarina & melaleuca thicket; - 1068: Medium woodland; salmon gum, morrel, gimlet & Eucalyptus sheathiana (Hopkins et al. 2001, Shepherd 2006).	The application is to clear 245ha on a 284ha Lot for cropping and pasture within the Shire of Yilgarn, which has ~23.6% pre-European vegetation extent remaining (Shepherd et al. 2001). The vegetation under application comprises of regenerated local native species. Genus observed within the area under application include, but are not limited to, Hakea sp., Acacia sp., Melaleuca sp., Eremophila sp., Allocasuarina sp., Eucalyptus sp. and Gastrolobium sp.. In addition, several different herb and grass species were seen on site, including Austrostipa elegantissima. The vegetation under application is considered to be in very good condition, with a high level of floristic diversity. A small area in the southernmost corner (~35ha) has previously been cleared for gravel extraction. Other small localised areas of disturbance are present where access to the area	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The vegetation clearing description is based on information obtained during the site inspection undertaken 07/12/2007 (TRIM Ref. DOC41570) and aerial imaging.

has been maintained.

In addition, the vegetation under application is located on the eastern edge of the Avon Wheatbelt Bioregion, with a small portion of the area (~5ha) mapped within the Coolgardie Bioregion.

The area of vegetation under application is situated within the Intensive Land Use Zone (Shepherd et al. 2001), within the area defined under EPA Position Statement No. 2 (EPA 2000). Extensive clearing for cropping and grazing within the local area has resulted in fragmented areas of vegetation. An adjacent lot to the north (~723ha) of the area under application is currently used for cropping by the applicant.

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 at variance to this Principle

The vegetation under application is located within an extensively cleared landscape, with the majority of the area (~240ha) mapped within the Avon Wheatbelt Bioregion which has ~15.4% pre-European vegetation extent remaining (Shepherd 2006).

The vegetation under application comprises of regenerated local native species including, but not limited to, Hakea sp., Acacia sp., Melaleuca sp, Eremophila sp., Allocasuarina sp., Eucalyptus sp., and Gastrolobium sp. An understorey of native grasses and herbs was also observed, and overall the vegetation is considered to be in very good condition (Site Inspection 2007).

The species composition within the vegetation under application closely correlated to adjacent remnant vegetation areas and the descriptions of the associated Beard Vegetation units. Although a predominant Eucalyptus over storey was missing within the applied area, sparse regeneration of Eucalyptus was observed within the applied area with high densities on the perimeter adjacent to surrounding areas of remnant vegetation. Notwithstanding, given the composition of the regeneration and its affinities to the mapped vegetation communities, the vegetation under application is considered to have a high floral diversity.

The vegetation under application is also considered likely to support local indigenous fauna populations within an extensively cleared local and regional context and provides connectivity between the area under application and larger areas of remnant vegetation nearby.

Given the high floral diversity, fauna habitat values and the extensive level of clearing within the landscape, the vegetation under application is considered to have a high level of biological diversity.

Methodology

References:
- Shepherd et al. (2001)
- Shepherd (2006)
- Site Inspection (2007)

GIS Databases:
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Local Government Authorities - DLI
- Pre-European Vegetation - DA 01/01
- Southern Cross Holleton 1.4m Orthomosaic - DOLA99

(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 an extensively cleared landscape, with the majority of the area (~240ha) mapped within the Avon Wheatbelt Bioregion which has ~15.4% pre-European vegetation extent remaining (Shepherd 2006). There are eleven species of conservation significant fauna within the local area

(50km radius). Of these, five species are known to inhabit and utilise similar habitat to the vegetation under application including:
- Chuditch (Dasyurus geoffroii) (Vulnerable);
- Carnaby's Black Cockatoo (Calyptorhynchus latirostris) (Endangered);
- Crested Bellbird (Oreoica gutturalis gutturalis) (Priority 4);
- White-browed Babbler (Pomatostomus superciliosus ashbyi) (Priority 4); and
- Major Mitchell's Cockatoo (Cacatua leadbeateri) (Schedule 4).

The vegetation under application comprises of regenerated local native species including, but not limited to, Hakea sp., Acacia sp., Melaleuca sp, Eremophila sp., Allocasuarina sp., Eucalyptus sp., and Gastrolobium sp. An understorey of native grasses and herbs was also observed, and overall the vegetation is considered to be in very good condition (Site Inspection 2007).

Given the condition, structure and diversity of flora within the applied area (Site Inspection 2007), the vegetation under application is considered to provide suitable habitat for a range of local native species including mammals, insects and reptiles. The regenerated vegetation also comprises floral species and structures, such as dense melaleuca and acacia thickets, suitable for a variety of local indigenous and ground-dwelling fauna.

Extensive clearing within the local and regional area has resulted in substantial habitat loss and fragmentation. In its Position Statement No. 2, the EPA (2000) states that 'Clearing and consequential salinity are having a devastating effect on biodiversity through the direct loss of plant species, and the associated loss of mammals, birds and other animals which depend upon sufficiently large areas of healthy bush for food and shelter'.

Whilst the vegetation is recognised to comprise of regrowth, the vegetation under application comprises and maintains habitat functions. Further, the vegetation under application is linked to larger, more contiguous areas of remnant vegetation to the west, and is considered likely to be utilised by fauna as a linkage and/or stepping stone to other large areas of remnant vegetation.

Given the condition of the vegetation under application, presence of known feeding plants, suitable vegetation cover and linkage to others areas of remnant vegetation nearby, the vegetation under application is considered to comprise significant habitat for indigenous fauna.

Methodology

References:
- DEC Fauna Habitat Notes - February 2007.xls
- EPA (2000)
- Shepherd et al. (2001)
- Shepherd (2006)
- Site Inspection (2007)

GIS Databases:
- Cadastre - DLI
- DEC SAC Bio Datasets, Date accessed 13/12/2007
- EPA Position Paper No 2 Agriculture Region - DEP 12/00
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Local Government Authorities - DLI
- Southern Cross Holleton 1.4m Orthomosaic - DOLA99

(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

There are six species of Declared Rare Flora (DRF) known to occur within the local area, the closest mapped population being an occurrence of Eucalyptus crucis subs. Crucis located ~ 18kms from the vegetation under application.

There are four locally mapped DRF species known to occur within the same vegetation and soil types as the vegetation under application being:
- Eremophila resinosa;
- Eremophila viscida;
- Eucalyptus crucis subs. Crucis; and
- Daviesia microcarpa (Western Australian Herbarium 1998-).

Given the suitability of the vegetation under application as habitat for these species and identification of Eucalypt and Eremophila species within the applied area (Site Inspection 2007), it is considered that the area under application may comprise DRF.

In addition, approximately sixty-two Priority Flora species are known to occur within the local area, with the closest known population being Lissanthe scabra (Priority 2) located ~5.3km from the vegetation under application. Of these, twenty-one species are known to occur within the same vegetation communities and soil types as the vegetation under application (Western Australian Herbarium 1998-).

Given the large area proposed to be cleared (~245ha) and high numbers of Declared Rare or Priority Flora located nearby within the same vegetation complex and soil types, the proposed clearing is considered to be may be at variance to this Principle.

Methodology

References:
- Site Inspection (2007)
- Western Australian Herbarium (1998-)

GIS Databases:
- DEC SAC Bio Datasets, Date accessed 04/12/2007
- Local Government Authorities - DLI
- 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 is not likely to be at variance to this Principle

There are no mapped occurrences of a Threatened Ecological Community (TEC) within the local area, the closest being ~246km from the vegetation under application. Given the distance to this TEC the proposal is considered to be not likely to be at variance to this Principle.

Methodology

GIS Database:
- DEC SAC Bio Datasets, Date accessed 04/12/2007

(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 is at variance to this Principle

The vegetation under application is associated with Beard Vegetation associations 1413 and 1068, of which approximately 74.2% and 50.5% pre-European extent remains respectively (Hopkins et al. 2001, Shepherd 2006). The vegetation under application is also located within the Avon Wheatbelt (~240ha) and Coolgardie Bioregions (~5ha) within the Shire of Yilgarn which have 15.4%, 98.4% and 23.6% pre-European vegetation extent remaining respectively (Shepherd 2006, Shepherd et al. 2001). In addition, the vegetation under application is located within the Intensive Land Use Zone (Shepherd et al. 2001), 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'. 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 native vegetation within the area under application comprises fifteen year old regrowth (DAFWA 2007, Site Inspection 2007) that is representative of Beard Vegetation Associations 1413 and 1068. Whilst it is recognised that representation for both Beard Vegetation associations are above the 30% biodiversity conservation target, the vegetation under application is located within the Avon Wheatbelt Bioregion which has only 15.4% vegetation extent remaining vegetation, and within the Shire of Yilgarn which has only 23.6% vegetation extent remaining (Shepherd et al. 2001).

Aerial photography of the local area shows that the vegetation under application maintains ecological linkage to other remnant vegetation areas nearby, and is considered likely to act as stepping stone and corridor for fauna movement across the landscape.

Although the vegetation under application does not currently display all of the features of surrounding remnant vegetation, given the diversity and condition of the regrowth (Site Inspection 2007) the vegetation under application is considered to be representative of a remnant vegetation community in an extensively cleared area. Therefore the proposed clearing is considered to be at variance to this Principle.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	% In reserves/ CALM managed land
IBRA Bioregions**				
- Avon Wheatbelt	9,517,117	1,468,711	15.4	
- Coolgardie	12,912,208	12,707,623	98.4	
Shire of Yilgarn*	3,067,793	2,512,436	23.6	
Vegetation type**				

- Beard: 1413	1,679,930	1,247,089	74.2	16.5
- Beard: 1068	268,901	135,868	50.5	12.3

* (Shepherd et al. 2001)
** (Shepherd 2006)

Methodology References:
- Commonwealth of Australia (2001)
- EPA (2000)
- Hopkins et al. (2001)
- Shepherd et al. (2001)
- Shepherd (2006)
- Site Inspection (2007)

GIS Databases:
- 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
- Southern Cross Holleton 1.4m Orthomosaic - DOLA99

(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

One minor, non-perennial watercourse is mapped within the vegetation under application. Minor non perennial watercourses are utilised as drainage during high rainfall events. Given that the area of vegetation under application is associated with a low annual rainfall of 300mm (DAFWA 2007), this drainage line is dry for extended periods of time and not considered likely to support riparian vegetation.

The closest major surface hydrological feature is a series of lakes situated approximately 14kms to the east of the vegetation under application. Given the distance to these areas and higher elevation, the proposed clearing is not considered to be growing in association with these wetlands.

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

Methodology Reference:
- DAFWA (2007)

GIS Databases:
- Geodata, Lakes - GA 28/06/02
- Hydrography, linear - DOE 1/2/04
- Rivers, DoW
- 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 is at variance to this Principle

The vegetation under application is associated with undulating plains and lateritic ridges (Northcote et al. 1960-68). Soils observed on site included gravelly clay/lateritic loam and gravelly lateritic sands (Site Inspection 2007).

DAFWA (2007) advise that there is a high risk of wind erosion on the site following clearing, due to the sloping nature of the land, its location at the top of the catchment exposing the area to strong winds and the sandy nature of the soils. Whilst the remnant vegetation surrounding the area will provide some function as a windbreak, given the large area proposed to be cleared wind erosion is considered likely to result from the proposed clearing.

In addition, the vegetation under application is associated with a high groundwater salinity of 14,000-35,000 TDS mg/L. DAFWA (2007) advise that there is a medium to high risk of off-site salinity resulting from increased recharge following the clearing of 245ha of native vegetation. In particular, the removal of vegetation from this sandy upland location may have an impact on recharge of groundwater systems at a local scale, with an area downslope of this site already becoming saline due to its low elevation and location within the catchment (DAFWA 2007).

It is widely recognised that extensive vegetation clearing has lead to increased salinisation resulting from rising groundwater levels (EPA 2000). The clearing of the 245 hectares of native vegetation will contribute to increased groundwater recharge (DAFWA 2007), and although the direct effects of the current proposal may not be quantifiable; any further removal of deep rooted perennials will likely contribute to the long term cumulative effects of clearing, including rising groundwater levels causing a deterioration of groundwater quality

and surface water quality in wetlands through salinity.

Given the high salinity and wind erosion risk, the proposed clearing is considered likely to lead to appreciable land degradation.

Methodology

References:
- DAFWA (2007)
- EPA (2000)
- Northcote et al. (1960-68)
- Site Inspection (2007)

GIS Databases:
- Evaporation Isopleths - BOM 09/98
- Geodata, Lakes - GA 28/06/02
- Groundwater Salinity, Statewide - DOW
- Rainfall, Mean Annual - BOM 30/09/01
- 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 may be at variance to this Principle

There are several conservation areas within the local area (50km radius) surrounding the vegetation under application, including ~16 DEC managed nature reserves, an area covered by a DEC covenant, two Bush Benefits funded sites and two areas registered under a National Trust WA covenant. The closest mapped conservation area is an Un-named Nature Reserve located ~9.5km from the vegetation under application. A chain of lakes to the east and north are mapped as Environmentally Sensitive Areas (ESA), however these lake areas are not considered likely to be impacted by the proposed clearing.

The vegetation under application is located within an extensively cleared landscape, with the majority of the area (~240ha) mapped within the Avon Wheatbelt Bioregion which has ~15.4% pre-European vegetation extent remaining (Shepherd 2006). The vegetation under application is also located within the Intensive Land Use Zone (Shepherd et al. 2001) within the area defined in EPA Position Statement No. 2 (EPA 2000).

In its Position Statement No. 2, the EPA (2000) states that 'Clearing and consequential salinity are having a devastating effect on biodiversity through the direct loss of plant species, and the associated loss of mammals, birds and other animals which depend upon sufficiently large areas of healthy bush for food and shelter. Many of the remaining areas of native vegetation in the wheatbelt are small islands surrounded by farmland, and the fauna are unable to move to other areas of native vegetation when they are too far apart and not linked by stepping stones or corridors'.

Given the extensive clearing within the local and regional area, and condition, size (245ha) and diversity of the vegetation under application (Site Inspection 2007), the vegetation proposed to be cleared is considered to comprise significant habitat for local indigenous fauna. Furthermore the vegetation under application is linked to larger, more contiguous areas of vegetation to the west, and is considered likely to be utilised by local fauna as a linkage and stepping stone to other large areas of remnant vegetation nearby, including local and regional nature reserves and conservation areas. Therefore, the proposal may be at variance to this Principle.

Methodology

References:
- EPA (2000)
- Shepherd et al. (2001)
- Shepherd (2006)
- Site Inspection (2007)

GIS Databases:
- CALM Managed Lands and Waters - CALM 1/07/05
- Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05
- DEC SAC Biodatasets, Date accessed 14/12/2007
- EPA Position Paper No 2 Agriculture Region - DEP 12/00
- Geodata, Lakes - GA 28/06/02
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Southern Cross Holleton 1.4m Orthomosaic - DOLA99

(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

The vegetation under application is associated with a high groundwater salinity of 14,000-35,000 TDS mg/L. DAFWA (2007) advise that there is a medium to high risk of off-site salinity resulting from increased recharge following the clearing of 245ha of native vegetation. In particular, the removal of vegetation from this sandy

upland location may have an impact on recharge of groundwater systems at a local scale, with an area downslope of this site already becoming saline due to its low elevation and location within the catchment (DAFWA 2007).

It is widely recognised that extensive vegetation clearing has lead to increased salinisation resulting from rising groundwater levels (EPA 2000). The clearing of the 245 hectares of native vegetation will contribute to increased groundwater recharge (DAFWA 2007), and although the direct effects of the current proposal may not be quantifiable; any further removal of deep rooted perennials will likely contribute to the long term cumulative effects of clearing, including rising groundwater levels causing a deterioration of groundwater quality and surface water quality in wetlands through salinity.

Given the hydrogeology of the site and presence of low, saline areas nearby, it is likely that the clearing of 245ha of deep rooted regrowth will further contribute to dryland salinity within the local and regional area. Therefore, the proposed clearing is considered to be at variance to this Principle.

Methodology

References:
- DAFWA (2007)
- EPA (2000)
- Northcote et al. (1960-68)
- Site Inspection (2007)

GIS Databases:
- Groundwater Salinity, Statewide - DOW
- Soils, Statewide - DA 11/99
- Topographic Contours, Statewide - DOLA 12/09/02

(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 is associated with undulating plains and lateritic ridges (Northcote et al. 1960-68). Soils observed on site include gravelly clay/lateritic loam and gravelly lateritic sands (Site Inspection 2007). Drainage direction for the area of vegetation under application is to the south and north through a large lake chain system (DAFWA 2007).

DAFWA (2007) advise that the area proposed to be cleared is considered to be small compared to the overall size of the (hydrological) catchment, and therefore its contribution to surface water flow would be minimal. Given this, the high elevation of the site and predominantly sandy soils, the proposed clearing is not considered likely to cause, or exacerbate, the incidence or intensity of flooding.

Methodology

References:
- DAFWA (2007)
- Northcote et al. (1960-68)
- Site Inspection (2007)

GIS Databases:
- Geodata, Lakes - GA 28/06/02
- Soils, Statewide - DA 11/99
- 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 agricultural 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. 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. Given the local and regional clearing and resulting increase in salinisation, the proposed clearing of 245ha is considered likely to further contribute to the cumulative impacts of clearing in the region, including rising groundwater levels and salinisation.

Submission from applicant received regarding clearing assessment process, this issue can not be addressed within clearing principles.

The Shire of Yilgarn has no objections to the proposed clearing of ~245ha of regenerated native vegetation for cropping and pasture (TRIM Ref. DOC38582).

There are no Aboriginal Sites of Significance or Native Title Claims within the area under application.

Methodology

References:
- EPA (2000)

- Shepherd et al. (2001)

GIS Databases:

- Aboriginal Sites of Significance - DIA
- Native Title Claims - DLI

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Grazing & Pasture	Mechanical Removal	245	The assessable criteria have been addressed and the clearing as proposed is at variance to Principles (a), (b), (e), (g) and (i), and may be at variance to Principles (c) and (h).
Grazing & Pasture	Mechanical Removal		

5. References

Commonwealth of Australia (2001). National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.

DAFWA (2007) Land degradation assessment report. Advice to Assessing Officer, Native Vegetation Assessment Branch, Department of Environment and Conservation (DEC), received 21/11/2007. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. TRIM Ref. DOC40065.

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.

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.

Site Inspection Report (2007) TRIM Ref. DOC41570.

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)