



GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 4302/1
File Number: 2011/003045-1
Duration of Permit: From 11 July 2011 to 11 July 2013

PERMIT HOLDER

Todd Fysen Morris
Alison Barbara Morris

LAND ON WHICH CLEARING IS TO BE DONE

Lot 590 on Deposited Plan 69368 (Lagrange 6725)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 1900 hectares of native vegetation within the area hatched yellow on attached Plan 4302/1.

CONDITIONS

Weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

Definitions

The following meanings are given to terms used in this Permit:

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

weeds means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.

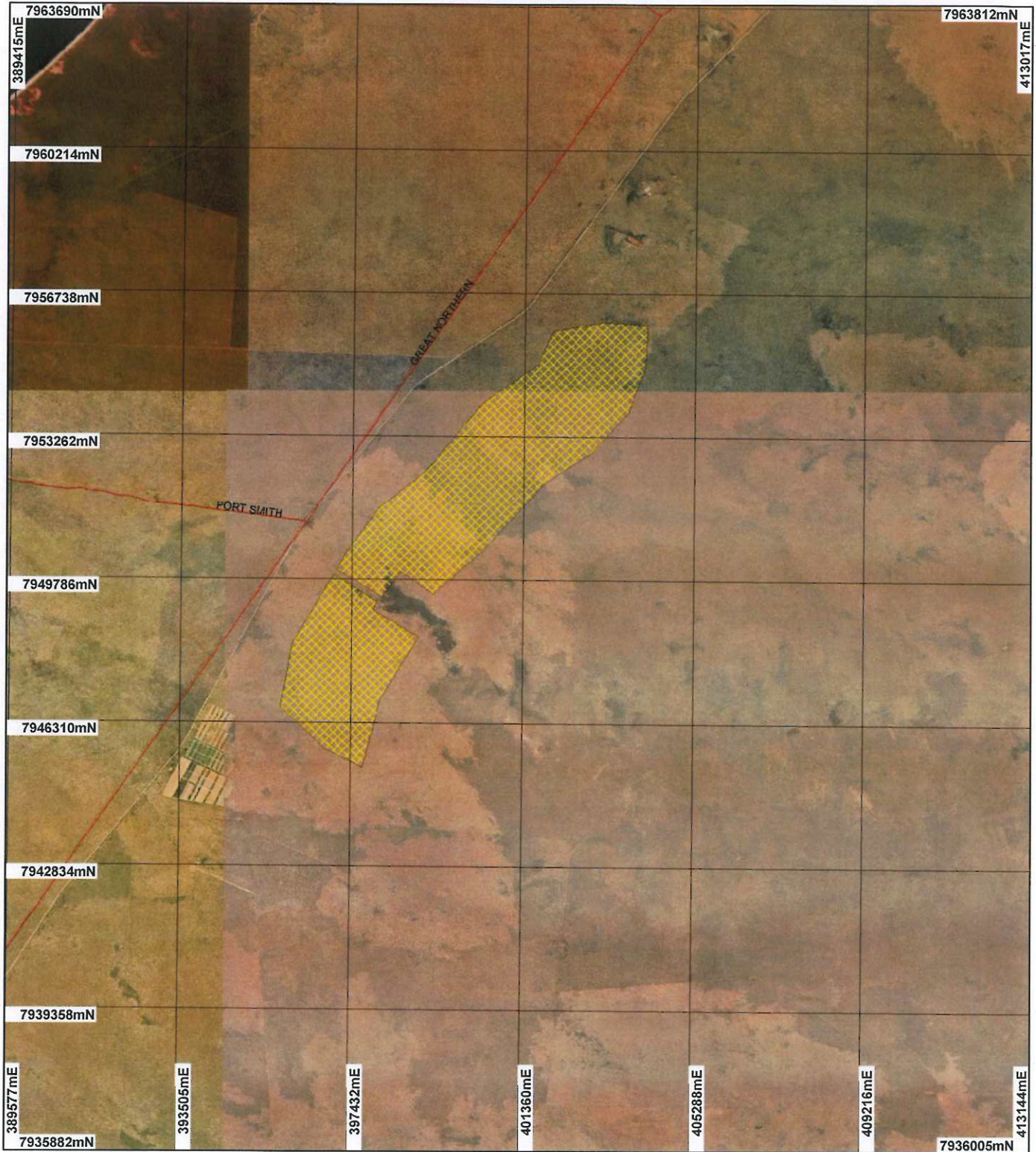


Gordon Wyre
DIRECTOR
NATURE CONSERVATION DIVISION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

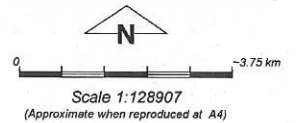
15 June 2011

Plan 4302/1



LEGEND

- | | | |
|---|---|---|
| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Road Centrelines Cadastre | <p>Western Australia ETM 25m
543 - AGO 2002</p> <p>Lagrange 50cm Orthomosaic -
Landgate 2004</p> <p>Villaret 50cm Orthomosaic -
Landgate 2004</p> | <p>Biddles 20cm Orthomosaic -
Landgate 2007</p> |
|---|---|---|



Geocentric Datum Australia 1994

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

G. Wyre
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 acknowledged by the agency acronym in the legend.



Department of Environment and Conservation

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1. Application details

1.1. Permit application details

Permit application No.: 4302/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Todd and Alison Morris

1.3. Property details

Property: LOT 590 ON PLAN 69368 (LAGRANGE 6725)
Local Government Area: Shire of Broome
Colloquial name: Shamrock Pastoral Lease

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1900		Mechanical Removal	Horticulture

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 15 June 2011

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
The vegetation under application has been identified as Beard vegetation association 699 which has been described as 'Shrublands, pindan; Acacia eripoda shrubland with scattered low bloodwood (Eucalyptus dicromophloia) & E. setosa over soft & curly spinifex on sandplain' (Shepherd, 2009).	The proposal is to clear 1900 ha of native vegetation for the purpose of producing non irrigated Sweet Sorghum and Maize crops. The vegetation under application is in a very good (Keighery, 1994) condition although it has been regularly grazed by cattle and displays evidence of previous fire activity (DEC, 2011).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the vegetation under application was determined via a site inspection (DEC, 2011).

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 proposal is to clear 1900 ha of native vegetation for the purpose of producing non irrigated Sweet Sorghum and Maize crops to supply a 15 000 head cattle feedlot. The proposed clearing consists of 20 circular pivots, each measuring 95ha.

The area under application is situated within a pastoral station (Shamrock Station) which has been subjected to historic and current livestock grazing.

Mapped Beard vegetation association 699 covers vast areas, including the area under application, which consists of Acacia eripoda shrubland with scattered low Eucalyptus dicromophloia (bloodwood) & E. setosa over soft & curly spinifex on sandplain (Shepherd, 2009).

There is approximately 99 percent vegetation cover remaining in the local area (50km radius). There is one known priority flora species, Tephrosia andrewii (P1), occurring approximately 9 kilometres north east of the area under application.

The proposed large scale clearing (1900 ha) is likely to reduce the amount of existing habitats available for native flora and fauna however, given that the surrounding area retains approximately 99 percent vegetation cover the proposed clearing is not likely to have a significant impact on biological diversity.

A weed management condition will mitigate the risk of introduced weeds spreading onto adjacent land.

Therefore, the clearing as proposed is not likely to be at variance to this principle.

Methodology References:
Shepherd (2009)

GIS Databases:
- Lagrange 50cm Orthomosaic - Landgate 2004
- SAC Biodatasets - Accessed April 2011

(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 known records of threatened fauna species within the local area (50km radius); *Isoodon auratus auratus* (Golden Bandicoot) and *Macrotis lagotis* (Bilby). The closest record is *Macrotis lagotis* (Bilby) (Declared Threatened Fauna). Four records of this species were recorded within 1km of the proposed clearing.

Other conservation significant fauna known to occur within the local area (50 kilometre radius) include *Mormopterus loriae cobourgiana* (Little North-western Mastiff Bat) (P1), *Lerista separanda* (P2), *Heteromunia pectoralis* (*Pictorella* Mannikin) (P4), *Burhinus grallarius* (Bush Stonecurlew) (P4), *Ardeotis australis* (Australian Bustard) (P4), *Numenius madagascariensis* (Eastern Curlew) (P4), *Polytelis alexandrae* (Princess Parrot) (P4) *Leggadina lakedownensis* (Lakeland Downs Mouse) (P4), *Cacatua leadbeateri* (Major Mitchell's Cockatoo) (Other Specially Protected Fauna) and *Falco peregrinus* (Peregrine Falcon) (Other Specially Protected Fauna)

Compared to the extensive, undeveloped surrounding landscape with approximately 99 percent vegetation remaining, this proposal is not likely to cause significant reduction in habitat availability for fauna indigenous to Western Australia.

Therefore, this proposal is not likely to be at variance to this principle.

Methodology GIS Databases:
- Lagrange 50cm Orthomosaic - Landgate 2004
- SAC Biodatasets - Accessed April 2011

(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 within the local area (50 km radius).

Therefore, this proposal is not likely to be at variance to this principle.

Methodology GIS Databases:
- Lagrange 50cm Orthomosaic - Landgate 2004
- SAC Biodatasets - Accessed April 2011

(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 is one known record of a threatened ecological community (TEC) in the local area (50 kilometre radius) occurring 35.5 kilometres northeast of the area under application. It is known as Roebuck Bay mudflats. This is a species rich faunal community occurring on the coast on a different soil and habitat type.

Given the distance between the TEC and the area under application it is not likely that the proposed clearing will be whole or part of, or is necessary for the maintenance of this TEC.

Therefore, this application is not likely to be at variance to this principle.

Methodology GIS Databases:
- Lagrange 50cm Orthomosaic - Landgate 2004
- SAC Biodatasets - Accessed April 2011

(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 at variance to this Principle**

The vegetation under application has been mapped as Beard vegetation association 699 - Shrublands, pindan; *Acacia eripoda* shrubland with scattered low bloodwood (*Eucalyptus dicromophloia*) & *E. setosa* over soft & curly spinifex on sandplain (Shepherd 2009). This vegetation type is represented by approximately 99.95 percent within

the Dampierland Bioregion.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion				
Dampierland	8,345,179	8,315,458	99.6	1.03
Shire				
Shire of Broome	5,469,433	5,429,693	99.3	
Beard vegetation type				
699	1,985,724	1,984,695	99.95	
Beard vegetation type within Bioregion				
699	1,976,299	1,975,269	99.95	

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

Given the vegetation is represented well above recommended threshold levels, the proposed clearing area is not considered to be a significant remnant.

Therefore, this proposal is not at variance to this principle.

Methodology

References:

Commonwealth of Australia (2001)
Shepherd (2009)

GIS Databases:

- Interim Biogeographic Regionalisation of Australia - EA
- Lagrange 50cm Orthomosaic - Landgate 2004
- Local Government Authorities - DOLA
- SAC Biodatasets - Accessed April 2011

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposal is not likely to be at variance to this Principle

The nearest water feature is the ocean which is situated approximately 13 kilometres west of the area under application. The nearest inland water feature is a minor, perennial watercourse situated approximately 20 kilometres east of the area under application.

The Roebuck Bay RAMSAR wetland is situated 20km north of the area under application.

Due to the distance, the proposed clearing is not likely to have any impact on the environmental values of these aquatic ecosystems.

Therefore, this proposal is not likely to be at variance to this principle.

Methodology

GIS Databases:

- ANCA wetlands - Environment Australia 26/3/99
- EPP Lakes Policy Area - DEP 14/05/97
- Lagrange 50cm Orthomosaic - Landgate 2004
- Hydrography, linear - DoW
- Hydrography, linear (hierarchy) - DoW
- Ramsar wetlands - DEC 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

The chief soil within the area under application is the Pindan soil of the Yeeda land system (Commission for Soil and Land Conservation, 2011). The area under application lies within a region receiving a mean annual rainfall of 450 millimetres, falling mainly between December and April.

The Commissioner for Soil and Land Conservation (2011) has advised that there would be little risk of wind erosion provided that area is cleared shortly before planting at the onset of the wet season. Once the crop has been harvested, stubble of at least 150mm height should be retained to minimise the risk of soil erosion (Commissioner for Soil and Land Conservation, 2011).

The site is located on flat country which generally has a slope less than 0.5%. There is very little overland flow of water due to the porous nature of the soils and the flat topography (Commissioner for Soil and Land Conservation, 2011).

Therefore, this application is not likely to be at variance to this principle.

Methodology References:
Commissioner for Soil and Land Conservation (2011)

GIS Databases:
- Average Annual Rainfall Isohyets - WRC 29/09/98
- Groundwater Salinity, Statewide - DoW
- Salinity Risk LM 25m - DOLA
- Soils, Statewide - DA
- Topographic Contours, Statewide - DOLA

(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 at variance to this Principle**
There are no mapped conservation areas within the local area (50 kilometre radius).

Therefore, this application is not at variance to this principle.

Methodology GIS Databases:
- Lagrange 50cm Orthomosaic - Landgate 2004
- Register of National Estate - EA
- DEC Tenure
- Systems 1-5 and 7-12 Areas - DEC

(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 located above the deep and extensive Broome Sandstone aquifer. The groundwater salinity is less than 500 mg/L TDS.

The proposed clearing should not significantly alter the functioning of the groundwater catchment due to the re-establishment of soil cover when growing fodder and the naturally high infiltration rates of the sandy soils (Commissioner for Soil and Land Conservation, 2011).

Therefore, this application is not likely to be at variance to this principle.

Methodology References:
Commissioner for Soil and Land Conservation (2011)

GIS Databases:
- Lagrange 50cm Orthomosaic - Landgate 2004
- Groundwater Salinity, Statewide - DoW
- Hydrogeology, Statewide
- Hydrographic Catchments - Catchments - DoW
- Hydrography, linear - DoW
- Public Drinking Water Source Areas (PDWSAs) - 07/02/06
- RiWI, Areas - DoW
- Salinity Risk LM 25m - DOLA
- Topographic Contours, Statewide - DOLA

(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 chief soils covering the area under application have been mapped as red earthy sands (Northcote et al. 1960-68). The regional rainfall in this locality is 450 millimetres per annum.

The sandy soils within the application area have good drainage. Seasonal heavy downpours can cause localised flooding however it will drain away quickly (Commissioner for Soil and Land Conservation, 2011).

Therefore, this proposal is not likely to be at variance to this principle.

Methodology References:
Commissioner for Soil and Land Conservation (2011)
Northcote et al. (1960-68)

GIS Databases:

- Average Annual Rainfall Isohyets - WRC 29/09/98
- Hydrographic Catchments - Catchments - DoW
- Hydrography, linear - DoW
- Soils, Statewide - DA
- Topographic Contours, Statewide - DOLA

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

Comments

The Commissioner for Soil and Land Conservation (2011) has advised that the 1900ha of land under application is suitable for fodder production of maize crops provided that minimum tillage cultivation techniques are used, and that stubble at least 150mm high is retained to prevent wind erosion.

A submission has been received from Kimberley Land Council on behalf of the Karajarri Traditional Lands Association (Aboriginal Corporation)(Kimberley Land Council, 2011) who have objected to the proposed clearing on a number of environmental and cultural concerns. The environmental issues raised have been addressed in the above report.

The Karajarri Traditional Lands Association (Aboriginal Corporation) has asked that the applicant consult with them prior to clearing to arrange for a heritage clearance survey to be undertaken.

The Pastoral Land Business Unit, Regional Development and Lands has advised that they have received a diversification application from Mr Morris for this proposal and that it is not far off being finalised.

It is noted that the crop and maize will be used to supply a cattle feedlot. Cattle feedlots may require licensing under Division 3 – Prescribed premises, works approvals and licences, of the Environmental Protection Act 1986.

No public submissions have been received in relation to this application.

Methodology References:
Commissioner for Soil and Land Conservation (2011)
Kimberley Land Council (2011)

GIS database:

- Cadastre - Landgate Dec 07
- Native Title Claims - LA 2/5/07
- Town Planning Scheme Zones - MFP 31/08/98
- Country Area Water Supply Act (Part IIA) Clearing Control Catchments 29/06/2006
- Aboriginal Sites of Significance 26 April 2007

4. References

- Commissioner of Soil and Land Conservation (2011); Land Degradation Advice and Assessment Report for clearing permit application CPS 4302/1 received 3 May 2011; Department of Agriculture and Food Western Australia (DEC Ref: 392967).
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2011) Site Inspection Report for Clearing Permit Application CPS 4302/1, Shamrock Pastoral Station (Pastoral Lease 3114/604). Site inspection undertaken 13 May 2011. Department of Environment and Conservation, Western Australia (DEC Ref: A397734).
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Kimberley Land Council (2011) Submission by Karajarri Traditional Lands Association (Aboriginal Corporation)(DEC Ref: A392889).
- 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. (2009) 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.

5. 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)