



## CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

<b>Purpose Permit number:</b>	CPS 5313/1
<b>Permit Holder:</b>	FMR Investments Pty Ltd
<b>Duration of Permit:</b>	From 28 June 2013 to 28 June 2018

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

### PART I – CLEARING AUTHORISED

**1. Purpose for which clearing may be done**

Clearing for the purpose of constructing diversion channels and a tailing storage facility.

**2. Land on which clearing is to be done**

Lot 102 on Deposited Plan 40393 (Karramindie 6429).

**3. Area of Clearing**

The Permit Holder must not clear more than 70 hectares of native vegetation within the area hatched yellow on attached Plan 5313/1.

**4. Application**

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

### PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

**5. Avoid, minimise etc clearing**

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- reduce the impact of clearing on any environmental value.

**6. 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*:

- clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- 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;

*riparian vegetation* has the meaning given to it in Regulation 3 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004;

*watercourse* has the meaning given to it in section 3 of the *Rights in Water and Irrigation Act 1914*;

*weed/s* means any plant -

- (a) that is declared under the section 22 of the *Biosecurity and Agriculture Management Act 2007*;  
or
- (b) published in the Department of Environment and Conservation Regional Weed Assessments, regardless of ranking; or
- (c) not indigenous to the area concerned.

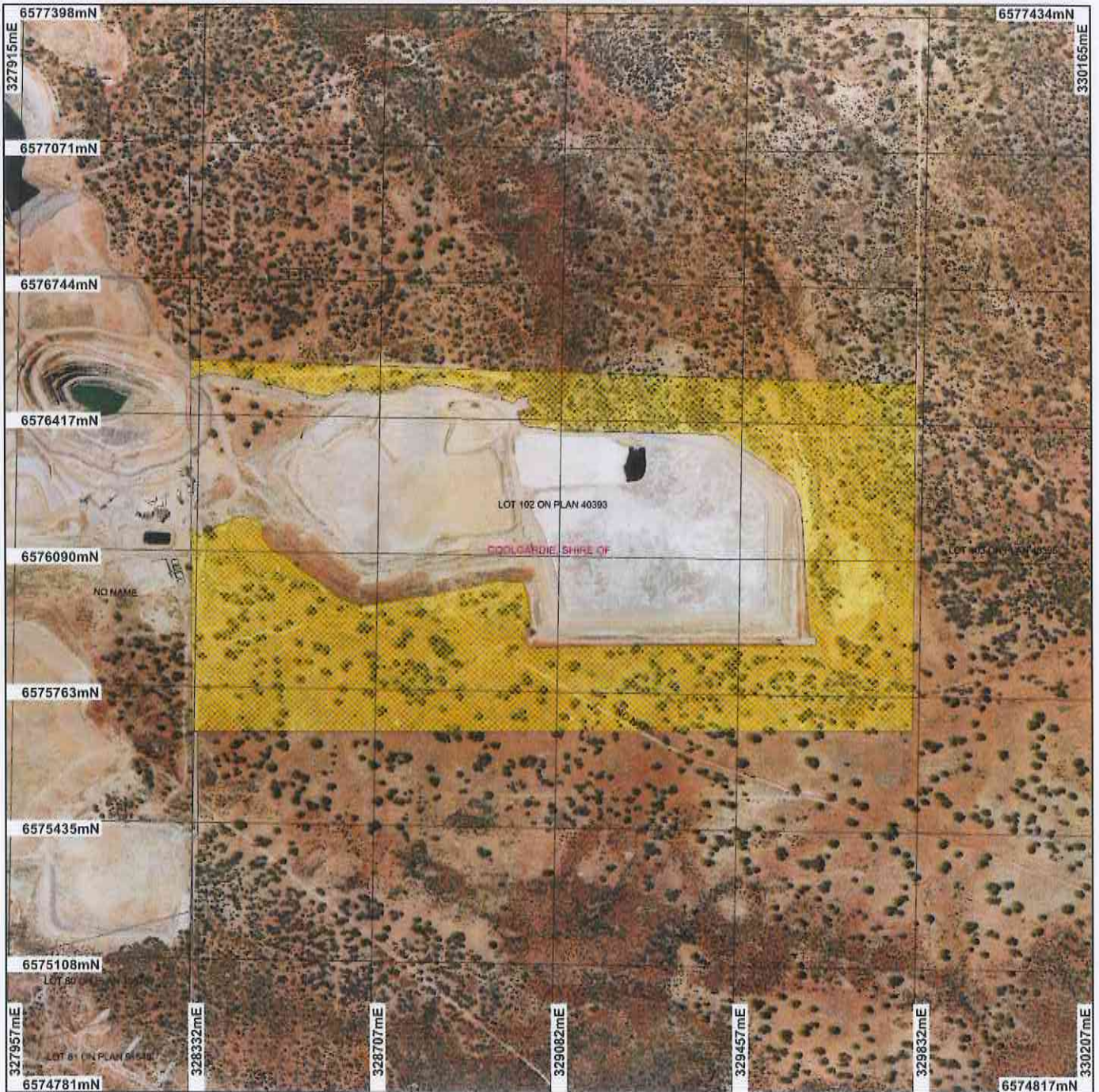


M Warnock  
MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

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

6 June 2013

# Plan 5313/1



## LEGEND

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Local Government Authorities  | <input type="checkbox"/> Crown Lease                            | <input checked="" type="checkbox"/> Road Centrelines        |
| <input type="checkbox"/> Cadastre                      | <input type="checkbox"/> Lease / Reserve                        | <input checked="" type="checkbox"/> Clearing Instruments    |
| <input type="checkbox"/> Freehold                      | <input type="checkbox"/> Lease on State Forest / Timber Reserve | <input checked="" type="checkbox"/> Areas Approved to Clear |
| <input type="checkbox"/> Crown Reserve                 | <input type="checkbox"/> Public Roads                           |   |
| <input type="checkbox"/> State Forest / Timber Reserve | <input type="checkbox"/> Unallocated Crown Land                 |   |
| <input type="checkbox"/> Marine Park (cont)            | <input type="checkbox"/> Water                                  |   |



Scale 1:12571  
(Approximate when reproduced at Letter)

Gocentric Datum Australia 1994

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

*M. Warnock* Date 6/6/13  
M. Warnock

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



\* Project Data. This data has not been quality assured. Please contact map author for details.



## 1. Application details

### 1.1. Permit application details

Permit application No.: 5313/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: FMR Investments Pty Ltd

### 1.3. Property details

Property: LOT 102 ON PLAN 40393 (KARRAMINDIE 6429)  
Local Government Area: Shire of Coolgardie

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
70		Mechanical Removal	Mineral Production

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 6 June 2013

## 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
Mapped Beard Vegetation Association 9 consists of Medium woodland of coral gum ( <i>E. torquata</i> ) & goldfields blackbutt ( <i>E. le souffii</i> ) (Shepherd et al, 2001).	This application proposes to clear up to 70 hectares of vegetation within Lot 102 on Deposited Plan 40393, Karramindie, for the purpose of constructing diversion channels and a tailings storage facility. The application area has been heavily impacted upon by historical mining disturbance. The vegetation consists of an open Eucalypt woodland with little to no understorey species (DEC, 2012).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition of the vegetation was established through a site inspection (DEC, 2012).

## 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**

This application proposes to clear up to 70 hectares of native vegetation within Lot 102 on Deposited Plan 40393, Karramindie, for the purpose of constructing diversion channels and a tailings storage facility. The vegetation under application consists of an open Eucalypt woodland with little to no understorey species (DEC, 2012). The application area has been heavily impacted upon by historical mining activities and is in a degraded (Keighery, 1994) condition.

Two priority flora species have been recorded within 4 kilometres of the application area. One of these species is a shrub that has a preference for low lying areas and the other species is an annual herb with a preference for clay and loam soils (Western Australian Herbarium, 1998- ). Given that the application area contains little to no understorey species, and a site inspection identified no priority flora species (DEC, 2012), it is unlikely that these species occur within the area of proposed clearing.

No priority ecological communities have been mapped within the local area (20 kilometre radius).

Wallaby scats were observed on site (DEC, 2012), however due to the highly disturbed condition of the vegetation it is unlikely that the application area provides significant habitat for indigenous fauna.

The Shire of Coolgardie is extensively vegetated with 98 per cent of pre-European vegetation remaining.

The disturbance caused by the proposed clearing will increase the likelihood of weeds spreading into adjacent vegetated areas. Weed management practices will assist in mitigating this risk.

Given that the Shire of Coolgardie has a high level of vegetation remaining, and the vegetation under application is in a degraded (Keighery, 1994) condition, the proposed clearing is not likely to comprise of a high level of biodiversity. Therefore, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** References:  
-Keighery (1994)  
-DEC (2012)  
-Western Australian Herbarium (1998-)

GIS Databases:  
-SAC Biodatasets (accessed December 2012)

**(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**

Three fauna species of conservation significance have been recorded within the local area (20 kilometres), being *Leipoa ocellata* (Malleefowl), *Morelia spilota* subsp. *imbricata* (Carpet Python) and *Hylacola cauta* subsp. *whitlocki* (Shy Heathwren (western)) (DEC, 2007-).

The Malleefowl has a preference for light soils and areas with an abundance of leaf litter, used in the construction of nesting mounds (DSEWPAC, 2012). Given the degraded (Keighery, 1994) condition of the vegetation on site and the high level of disturbance associated with adjacent mining activities, it is unlikely that the application area provides significant habitat for Malleefowl.

Suitable habitat may be present for the Carpet Python and Shy Heathwren (western), however, given that the fauna habitats within the application area are better represented elsewhere within the local and regional area, no loss of significant habitat for these species is expected.

The proposed clearing is not likely to be at variance to this Principle.

**Methodology** References:  
-DEC (2007-)  
-Keighery (1994)  
-DSEWPAC (2012)

**(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**

The closest rare flora has been mapped 4.1 kilometres from the application area and has a preference for sandy loams and margins of granite outcrops along drainage lines (Western Australian Herbarium, 1998- ). A site inspection identified no rare flora species within the application area (DEC, 2012).

Given that this species has been mapped over 4 kilometres from the application area, the application area has been extensively disturbed by mining activities and the preference for margins of granite outcrops is not met on site, it is not likely that the vegetation under application includes or is necessary for the continued existence of rare flora, known to exist in the local area (20 kilometre radius).

The proposed clearing is not likely to be at variance to this Principle.

**Methodology** References:  
-Western Australian Herbarium (1998)  
-DEC (2012)

GIS Databases:  
-SAC Biodatasets (accessed December 2012)

**(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**

No threatened ecological communities are mapped within the local area (20 kilometre radius).

The proposed clearing is not likely to be at variance to this Principle.

**Methodology** GIS Databases:  
-SAC Biodatasets (accessed December 2012)

**(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 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). The Region, Shire and Beard Vegetation Association shown below all retain greater than 95 per cent native vegetation.

The vegetation under application contains vegetation in a degraded (Keighery, 1994) condition and given the vegetation representations outlined below, it is not likely to be a significant remnant in an extensively cleared area.

The proposed clearing is not likely to be at variance to this Principle.

	Pre-European (ha)	Current Extent (ha)	Remaining Extent in DEC Managed Lands (%)	Remaining Extent in DEC Managed Lands (%)
<b>IBRA Bioregion</b>				
Coolgardie	12,912,204	12,677,932	98.2	15.8
<b>Shire</b>				
Shire of Coolgardie	3,029,733	3,017,748	99.6	13.7
<b>Beard Vegetation Association in Bioregion</b>				
9	240,442	235,101	98	8

Government of Western Australia (2011)

**Methodology** References:  
-Government of Western Australia (2012)  
-Commonwealth of Australia (2001)  
-Keighery (1994)

**(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 at variance to this Principle**  
There are no permanent watercourses within the application area, however several minor non perennial watercourses occur within the application area. These minor watercourses drain towards Lake Brown located 5.9 kilometres south-east of the application area.

Given the presence of several minor non perennial watercourses on site, the proposed clearing is at variance to this Principle.

**Methodology** GIS Databases:  
-Hydrography, linear  
-Hydrography, hierachy

**(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 soils within the application area have been mapped by Northcote et al (1960-68) as rocky ranges and hills of greenstones and basic igneous rocks with chief soils of calcareous loams with shallow brown and grey-brown calcareous earths below which weathered rock occurs at shallow depths.

A site inspection revealed weathered sandstone plain as the dominant landform within the application area (DEC, 2012).

Given the soil type, landform, low rainfall (300 millimetres annually) and degraded (Keighery, 1994) condition of the vegetation on site, it is unlikely that the proposed clearing will cause appreciable land degradation.

The proposed clearing is not likely to be at variance to this Principle.

**Methodology** References:  
-Northcote (1960-1968)  
-Keighery (1994)  
-DEC (2012)  
  
GIS Databases:  
-Salinity, Statewide

**(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.**

**Comments** **Proposal is not likely to be at variance to this Principle**  
The closest conservation area is Kurrawang Nature Reserve which occurs 15.1 kilometres north east of the application area.  
  
Given the distance to this reserve, the proposed clearing is not likely to be at variance to this Principle.

**Methodology** GIS Databases:  
-DEC Tenure

**(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 may be at variance to this Principle**  
There are no permanent watercourses within the application area, however several minor non perennial watercourses occur within the application area. These minor watercourses drain towards Lake Brown located 5.9 kilometres south-east of the application area.

These watercourses are likely to flow after major rainfall events, therefore the proposed clearing may cause short term issues with surface water sedimentation. However, these issues are likely to be minimal given the degraded condition (Keighery, 1994) of the vegetation, sparse understorey and non-perennial nature of the watercourses.

Groundwater Salinity within the application area ranges between 14000-35000 milligrams per litre (highly saline). Despite this, it is not likely that the proposed clearing of sparse vegetation in a degraded (Keighery, 1994) condition will result in the deterioration of surface or groundwater through salinity.

Given the above the proposed clearing may be at variance to this Principle.

**Methodology** References:  
-Keighery (1994)  
  
GIS Databases:  
-Salinity, Statewide  
-Topographic Countours, Statewide  
-Rainfall, Mean Annual  
-Hydrography, linear

**(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**  
Given the soil type, low rainfall (300 millimetres annually) and degraded condition (Keighery, 1994) of the vegetation on site, the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding.

The proposed clearing is not likely to be at variance to this Principle.

**Methodology** References:  
-Keighery (1994)

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

**Comments**  
A submission (2012) has been received objecting the proposed clearing. The submission advises that the total area of clearing is unnecessary and drainage channels should be built without excessive clearing.  
  
The proposed tailings storage facility (TSF) will consist of three cells and is an extension of two existing TSF's located within Lot 102. The three cells will cover approximately 61 hectares, with associated works including access roads, a stormwater drain and a water return dam to account for the other 9 hectares under application. The 70 hectare area proposed to be cleared includes large areas where vegetation is absent, therefore the total amount of vegetation to be cleared will be significantly less than 70 hectares.  
  
Works approval for the proposed TSF has been issued by the Department of Environment and Conservation's Industry Regulation section. The TSF cells will be constructed in stages, with works approval issued for stage one only, which includes the starter embankments of each cell (DEC, 2013).  
  
The Shire of Coolgardie has advised that as the application area falls 3 kilometres outside of the Coolgardie Townsite boundary, the Shire has no objection to the proposed clearing. The Shire further advises that the

related works will require significant haulage operations for entry onto the highway, and Main Roads Western Australia will need to give specific permission for entry on to the highway prior to the start of operations (Shire of Coolgardie, 2013).

The proposed clearing falls within the Goldfields Groundwater area which is an area proclaimed under the Rights in Water and Irrigation Act 1914. The Department of Water were notified of the proposed clearing and advised that they had no comment.

The application area is zoned 'rural/mining' under the town planning scheme.

**Methodology**    **References:**  
-Submission (2012)  
-Shire of Coolgardie (2013)  
-DEC (2013)

**GIS Databases:**  
-Town Planning Scheme Zones

#### 4. References

- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2007 - ) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/> (Accessed December 2012).
- DEC (2012). Site Inspection Report for Clearing Permit Application CPS 5313/1. Site inspection undertaken 26/11/2012. Department of Environment and Conservation, Western Australia (DEC Ref A574527).
- DEC (2013). Environmental Impact Assessment for Works Approval. Additional Information for CPS 5313/1. DEC Ref: A636834
- DSEWPAC (2012) Leipoa ocellata Malleefowl. URL:<http://www.environment.flov.au/cflibin/sprat/public/publicspecies.pl-taxonid=934>, viewed December 2012. Department of Sustainability, Environment, Water, Population and Communities.
- Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.
- 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., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Shire of Coolgardie (2013) Additional information for CPS 5313/1. DEC Ref: A603763.
- Submission (2012). Direct Interest Submission for CPS5313/1. DEC Ref: A565320.
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.dec.wa.gov.au/> (Accessed December 2012).

#### 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)