Department of
Environment and Conservation
Our environment, our future

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3309/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Woodsline Pty Ltd**

1.3. Property details

Property: LOT 24 ON DIAGRAM 58109 (PALGARUP 6258)
LOT 23 ON DIAGRAM 58109 (PALGARUP 6258)

Local Government Area: SHIRE OF MANJIMUP

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
9.3	8	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
The vegetation under application is a component of the Beard Vegetation Association 3 - Medium forest; Jarrah-Marri.	The area under application consists of 9.3 hectares and 8 individual native trees and is proposed to be cleared for the purposes of horticultural crops and planting of trees for windbreaks. The vegetation comprises very open Jarrah (Eucalyptus marignata) and Marri (Corymbia calophylla) over weed species, predominantly Avena sp (Wild Oat) (DEC, 2006). The vegetation is in a 'degraded' (Keighery, 1994) condition (DEC, 2006) and has been subject to historic clearing, shown by the open nature of the vegetation, and continual grazing by stock, which is likely to have significantly contributed to the lack of understorey native species recorded during the 2006 site visit (DEC, 2006).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation condition established through aerial photography (Manjimup 50cm Orthomosaic - Landgate 2004) and DEC site visit undertaken for previous clearing application CPS1300 on the 11 October 2006 (DEC, 2006).
The vegetation also comprises two Heddle Vegetation Complexes - Corbalup (CL1) and Yanmah (YN2). Corbalup (CL1) - mosaic of open forest of Eucalyptus marginata subsp. marginata - Banksia spp. on well drained sites with some Eucalyptus decipiens on lower slopes in southern areas, woodland of Eucalyptus rudis - Melaleuca preissiana - Banksia littoralis on depressions in perhumiod and humid zones.		Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	

Yanmah (YN2) - Mixture of tall open forest of Eucalyptus marginata subsp. marginata - Corymbia calophylla on slopes and low woodland of Banksia littoralis - Banksia seminuda on valley floors in the humid zone.

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 vegetation under application consists of 9.3ha and 8 individual native trees comprising very open Jarrah and Marri over weed species, predominantly Avena sp. (Wild Oat). The area under application has had historic clearing and continual grazing and therefore retains very little of its vegetation structure (DEC, 2006).

The vegetation under application is part of a regional ecological linkage (including the most southern portion being a portion of the core linkage) (EPA, 2009 & Molloy et al (2009)) and is therefore important in maintaining ecological processes across the landscape. It is recommended by Molloy et al (2009) that areas of core linkage be retained. Molloy et al (2009) also states that the landscape function of an ecological linkage is considered to be impaired where the proposed clearing changes a level 1 patch of remnant vegetation to a level 2. The removal of this vegetation will result in the removal of a portion of vegetation in a core linkage as well as causing neighbouring patches to the west to be further fragmented from the core linkage (level 1 patches to reduce to level 2) and therefore may impact upon fauna and flora dispersal throughout the landscape.

Eight priority flora species have been recorded within the local area with the closest record being Drosera occidentalis subsp. occidentalis (Priority 4), approximately 1.6km west of the applied clearing area. Given the 'degraded' (Keighery, 1994) condition (DEC, 2006) of the vegetation under application and the heavy historic grazing of this site, it is unlikely that any of the priority species found within the local area inhabit the applied clearing area.

Lots 23 and 24 adjoin properties of highly vegetated freehold land and DEC timber reserves and conservation areas. Appropriate measures to prevent the introduction and spread of dieback would be required to be implemented to prevent the surrounding area with vegetation in good or better condition from being impacted by Phytophthora, should the clearing of native vegetation be granted on the property in the future.

Given the 'degraded' (Keighery, 1994) condition (DEC, 2006) of the vegetation under application and the lack of native understorey species, it is concluded that the vegetation does not comprise a high level of biological diversity in it's own right however, as the removal of this vegetation will further fragment an ecological linkage and reduce landscape function the proposed clearing may be at variance to this principle.

Methodology

References:
- DEC (2006)
- EPA (2009)
- Keighery (1994)
- Molloy et al (2009)

GIS Databases:
- DEC Tenure - DEC
- Manjimup 50cm Orthomosaic - Landgate 2004
- SAC Biodatasets - Accessed 1/10/2009 & 2/10/2009

(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

Fourteen threatened and priority fauna species have been recorded within the local area (10km radius), with the closest record being the Numbat (Myrmecobius fasciatus), approximately 1.0km from the applied clearing area.

Numbats (Myrmecobius fasciatus) are generally restricted to drier parts of the jarrah forest and some Wheatbelt remnants of WA and normally shelter in hollow logs, tree stumps or in tree limbs bearing hollows close to the ground (Burbidge, 2004).

The Forest Red-tailed Black-Cockatoo (Calyptorhnychus banksii naso, Vulnerable) was recorded approximately 2.2 km from the applied clearing area. This species is known to feed upon the seeds of marri, jarrah, blackbutt, karri, sheoak and snottygobble (Johnstone and Storr, 1998) and therefore the vegetation under application is likely to provide foraging habitat for this species.

A DEC Timber Reserve lies approximately 980m east of the applied clearing area as well as the adjoining Palgarup State Forest approximately 1.8km east. There is highly vegetated freehold land directly to the south of the applied clearing area.

Given that there are large vegetated areas neighbouring this property in better condition and that the vegetation lacks an understorey with little opportunity for shelter suitable for Numbats and other ground-dwelling indigenous fauna, the area under application is not likely to be considered significant habitat for fauna nor is considered significant for the Forest Red-tailed Black-Cockatoo.

Photographs taken during the DEC site visit (2006) do not show trees to be at a maturity to bare hollows nor were any reported during the visit. DEC (2006) stated that due the state forest being south-west of the property, the vegetation may be used as a wildlife corridor for fauna. However, given the lack of understorey and overall 'degraded' condition, the value as a linkage between vegetated areas would be considered to be low.

Given the close proximity of the applied clearing area to conservation areas and the adjoining vegetated freehold land, which has vegetation in better condition and would hence provide better habitat for indigenous fauna, it is unlikely that the applied clearing area comprises a whole or a part of, or is necessary for the maintenance of, significant habitat for fauna.

Methodology

References:
- Burbidge (2004)
- DEC (2006)
- Johnstone & Storr (1998)

GIS Databases:
- DEC Tenure - DEC
- Manjimup 50cm Orthomosaic - Landgate 2004
- SAC Biodatasets - Accessed 1/10/2009

(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

Three declared rare flora species have been recorded within the local area (10km radius) of the applied clearing area within similar vegetation and soil types, with the closest being Caladenia harringtoniae, approximately 1.2km west.

Caladenia harringtoniae prefers seasonally inundated habitat consisting of Melaleuca sp. (Paperbark) and Eucalyptus rudis (Flooded Gum) on swamps and flats but has also been recorded along creeklines within Eucalyptus marginata (Jarrah) and Eucalyptus diversicolor (Karri) forest (Brown et al, 1998 & WA Herbarium, 1998-).

As there are no watercourses or wetlands within the applied clearing area and given the 'degraded' (Keighery, 1994) condition (DEC, 2006) of the vegetation, it is unlikely that any flora of conservation significance inhabit the area. It is therefore concluded that it is unlikely that the vegetation includes, or is necessary for the continued existence of, rare flora.

Methodology

References:
- Brown et al (1998)
- DEC (2006)
- Keighery (1994)
- WA Herbarium (1998-)

GIS Databases:
- SAC Biodatsets - Accessed 1/10/2009 & 2/10/2009

(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 within the local area (10km radius) of the applied clearing area.

Given that the vegetation described at the site comprises open forest of Jarrah and Marri and that the vegetation is in a 'degraded' (Keighery, 1994) condition (DEC, 2006) it is unlikely that the vegetation comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

It is therefore concluded that the proposal is not likely to be at variance to this principle.

Methodology References:
- DEC (2006)
- Keighery (1994)

GIS Databases:
- SAC Biodatasets - Accessed 1/10/2009

(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 proposed clearing area is mapped within the Beard Vegetation Association 3 - Medium forest; Jarrah-Marri, of which there is 69.3% of the pre-European extent within the Jarrah Forest IBRA Region remaining (Shepherd, 2007).

The vegetation is also mapped as components of the Mattiske Corbalup Vegetation Complex described as a "mosaic of open forest of Eucalyptus marginata subsp. marginata - Banksia spp. On well drained sites, with some Eucalyptus decipiens on lower slopes in southern areas, woodland of Eucalyptus rudis - Melaleuca preissiana - Banksia littoralis on depressions in perhumid and humid zones" and the Yanmah Complex described as a "mixture of tall open forest of Eucalyptus marginata subsp. marginata - Corymbia calophylla on slopes and low woodland of Banksia littoralis - Banksia seminuda on valley floors in the humid zone" (Mattiske & Havel, 1998).

The property lies within the Shire of Manjimup in the Jarrah Forest IBRA Region which have 85.4% and 54.2% of their pre-European extent remaining respectively.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30% of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001 & EPA, 2000). The vegetation types under application retain more than this 30% threshold level. Given this and the fact that the vegetation under application is considered to be in a 'degraded' (Keighery, 1994) condition (DEC, 2006) it is concluded that the vegetation under application is not considered significant as a remnant in an area that has been extensively cleared.

It is therefore concluded that it is not likely to be at variance to this principle.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion*				
Jarrah Forest	4,506,656	2,440,941	54.2	69.3
Shire				
Shire of Manjimup	697,359	595,561	85.4	92.2
Beard vegetation type*				
3 - Medium Forest; Jarrah-Marri	2,390,590	1,657,275	69.3	79.6
Mattiske				
CL1 - Corbalup	15,179	11,018	72.6	67.5
YN2 - Yanmah	10,726	9,324	86.9	83.1

Methodology References:
- Commonwealth of Australia (2001)
- DEC (2006)
- EPA (2000)
- Keighery (1994)
- Mattiske & Havel (1998)
- Shepherd (2007)

GIS Databases:
- Interim Biogeographic Regionalisation of Australia - EA
- Local Government Authorities - DOLA
- Manjimup 50cm Orthomosaic - Landgate 2004
- Mattiske Vegetation - CALM
- SAC Biodatasets - Accessed 1/10/2009

(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

Two minor, perennial watercourses and tributaries of Wilgarup River, run approximately 115m south and 540m north of the applied clearing area. The Wilgarup River is the closest major watercourse, approximately 570m south and runs east of the applied clearing area.

There are no mapped wetlands for this location within the local area (10km radius).

Given the distance from watercourses and wetlands within the local area (10km radius), it is unlikely that the proposed clearing is growing in association with an environment associated with a watercourse or wetland and therefore it is concluded that the proposal is not likely to be at variance to this principle.

Methodology

GIS Databases:
- Hydrographic Catchments - Catchments - DoW
- Hydrography, linear - DoW
- Hydrography, linear (hierarchy) - DoW

(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 applied clearing area have been mapped by Northcote et al (1960-68) as being hard acidic yellow mottled soils with some hard acidic red mottled soils and brown earths, all containing ironstone gravels.

The salinity risk is mapped at this site as low with a groundwater salinity ranging between 500 -1000mg/L total dissolved solids. The area under application ranges in topography from 250 - 270m AHD and is of a medium but hilly relief.

The Commissioner of Soil and Land Conservation (2006) advised DEC that the proposal to clear the vegetation on Lots 23 and 24, Palgarup is unlikely to cause appreciable land degradation. It was concluded that the risk of causing salinity and wind and water erosion as a result of the clearing of native vegetation is low (Commissioner of Soil and Land Conservation, 2006). The advice from the Commissioner also stated that "the risk of eutrophication will increase with the clearing of native vegetation and the establishment of the land for agricultural use" however, the risk of causing eutrophication is still low (Commissioner of Soil and Land Conservation, 2006).

The proposal is therefore not likely to be at variance to this principle.

Methodology

References:
- Commissioner of Soil and Land Conservation (2006)
- Northcote et al (1960-68)

GIS Databases:
- Groundwater Salinity, Statewide - DoW
- Salinity Risk LM 25m - DOLA 00
- Soils, Statewide - DA
- Topographic Contours, 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

There are a number of conservation areas within the local area (10km radius) of the area under application, including seven different DEC managed lands and three registered areas on the Register of National Estate. The closest conservation area to the applied clearing area is Palgarup State Forest approximately 1.8km east, which directly adjoins a DEC Timber Reserve approximately 980m east of the applied clearing area.

The area proposed to be cleared does not lie within or adjacent to areas set aside for conservation.

Given that the application area is in a 'degraded' (Keighery, 1994) condition (DEC, 2006), with an understorey consisting of weed species, predominantly Avena sp (Wild Oat), it is not expected that the vegetation under application would provide ecological linkages or impact on the environmental values of these conservation areas.

The proposal is therefore not likely to be at variance to this principle.

Methodology References:
- DEC (2006)
- Keighery (1994)

GIS Databases:
- DEC Tenure - DEC
- Register of National Estate
- Manjimup 50cm Orthomosaic - Landgate 2004

(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**

The vegetation under application lies within the Warren River Hydrographic Catchment within the Warren River Basin.

Two minor, perennial watercourses and tributaries of the Wilgarup River, run approximately 115m south and 540m north of the applied clearing area. The Wilgarup River is the closest major watercourse, approximately 570m south and runs east of the applied clearing area.

The salinity risk is mapped at this site as low with a groundwater salinity ranging between 500 -1000mg/L total dissolved solids. The area under application ranges in topography from 250 - 270m AHD and is of a medium but hilly relief.

The mean annual rainfall for this site is 900mm with an annual evapotranspiration rate of 800mm.

The Commissioner of Soil and Land Conservation (2006) advised that the risk of salinity causing land degradation both on the property and in the local vicinity of the applied clearing area is low.

The area under application has been identified as falling within the Warren River Water Reserve, declared as a Public Drinking Water Source Area under the Country Areas Water Supply Act 1947 (CAWS). These areas require protection to maintain the quality of raw water used to supply public drinking water schemes and to prevent salinisation of water resources in these designated catchments. The land on which clearing is proposed has been classified as 'Zone B,' a high salinity risk part within this catchment, where clearing may be approved subject to the statutory limitation that 10% of the land in question remains uncleared. Relative to this, it has been confirmed that 11.4% of native vegetation remains on the current holding and therefore only 2.6ha of the proposed clearing would be allowable (DoW, 2009).

The clearing of 9.3ha of deep-rooted vegetation and 8 native trees, will result in less than 10% of native vegetation remaining on the holding. The cumulative impacts of such clearing on a catchment scale within a high salinity risk portion of the catchment could result in an increase in groundwater levels and subsequently a rise in salinity across the catchment.

Given that the clearing of 9.3ha and 8 native trees will result in less than 10% of native vegetation being retained on the holding, the proposed clearing may cause deterioration in the quality of surface or underground water as a result of cumulative clearing on a catchment scale and therefore the proposal may be at variance to this principle.

Methodology References:
- Commissioner of Soil and Land Conservation (2006)
- DoW (2009)

GIS Databases:
- CAWSA Part IIA Clearing Control Catchments - DoW
- Groundwater Salinity, Statewide - DoW
- Hydrographic Catchment, Catchment - DoW
- Hydrography, linear - DoW
- Hydrography, linear (hierarchy) - DoW
- Public Drinking Water Source Areas (PDWSAs) - DoW
- Rainfall, Mean Annual - BOM

(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**

Two minor, perennial watercourses and tributaries of Wilgarup River run approximately 115m south and 540m north of the applied clearing area. The Wilgarup River is the closest major watercourse, with the closest point to the river being approximately 570m south and runs east of the applied clearing area.

The area under application ranges in topography from 250 - 270m AHD and is of a medium but hilly relief.

There are no mapped wetlands for this location within the local area (10km radius).

The Commissioner of Soil and Land Conservation (2006) advised that the area under application occupies the upper and midslope positions in the landscape and that the further clearing of vegetation in this landscape could increase surface water runoff which could contribute to stream flows, but is unlikely to cause extensive flooding due to the size of the catchment, landslope lengths and soil types.

It is concluded that the proposal is not likely to cause, or exacerbate, the incidence or intensity of flooding and is therefore not likely to be at variance to this principle.

Methodology

References:
- Commissioner of Soil and Land Conservation (2006)

GIS Databases:
- Hydrography, linear - DoW
- Hydrography, linear (hierarchy) - DoW
- Topographic Contours, Statewide

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

Comments

The property under application is zoned 'Rural' under the Town Planning Scheme.

The Shire of Manjimup has advised in previous correspondence dated 24 May 2006 in relation to the clearing of native vegetation that "any vegetated buffer of at least 20 metres either side of any recognized watercourse on the property should be retained." There are no watercourses associated with the area under application. The Shire, in 2009, requested that the proponent be advised that they are to "confer with the Shire of Manjimup with respect to the need to comply as relevant with all requirements relating to its Town Planning Scheme, local laws and legislation relating to the movement of heavy vehicles and the repair of road damage resultant from the use of those vehicles."

The applied clearing area lies within the Warren River Water Reserve (Zone B) managed under the Country Areas Water Supply Act (CAWS) administered by the Department of Water (DoW). DoW has provided advice with regards the clearing at this property (DoW, 2009) stating that only 11.4% of the holding retains native vegetation and consequently only 2.6ha of the proposed clearing would be allowable without clearing below the 10% statutory limit outlined within the CAWS Act 1947, this has been further detailed within principle (i). The applicant was advised by DEC of the CAWS matter on the 12 November 2009 however, no advice on addressing the issue was received from the applicant by the due date.

The vegetation lies within two interim listed Aboriginal Sites of Significance. Should a clearing permit be granted in the future, the landowner will be notified that they should seek advice from the Department of Indigenous Affairs to ensure that the clearing and horticulture will not impact upon any sites of significance and so that the landowner is aware of the responsibilities under the Aboriginal Heritage Act 1972.

Methodology

References:
- DoW (2009)
- Shire of Manjimup (2006)
- Shire of Manjimup (2009)

GIS Databases:
- Aboriginal Sites of Significance
- CAWSA Part IIA Clearing Control Catchments - DoW
- Town Planning Scheme Zones

4. Assessor's comments

Comment

The assessable criteria have been addressed and the proposed clearing may be at variance to Principles (a) and (i) and is not likely to be at variance to all other principles.

5. References

Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.

Burbidge, A. (2004) Threatened Animals of Western Australia, Department of Conservation and Land Management, Perth, Western Australia.

Commissioner of Soil and Land Conservation (2006); Land Degradation Advice and Assessment Report for clearing permit application CPS 1053/1 received 29/05/2006; Department of Agriculture and Food Western Australia (TRIM Ref. CRN219802).

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
DEC (2006) Site Inspection Report for Clearing Permit Application CPS 1300/1, Lots 23 and 24 on Diagram 58109, Palgarup. Site inspection undertaken 11/10/2006. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC6959).
DoW (2009) CAWS Advice Re: CPS3309/1 - Lot 23 and 24 on Diagram 58109, Palgarup - Woodsline Pty Ltd - Native Vegetation Clearing Application. Department of Water, Perth, Western Australia. TRIM ref DOC104363.
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, Western Australia.
EPA (2009) Environmental Protection Bulletin No. 8: South West Regional Ecological Linkages, Environmental Protection Authority, Perth Western Australia.
Johnstone, R.E. and Storr, G.M. (1998) Handbook of Western Australian Birds. Volume 1 - Non-passerines (Emu to Dollarbird). Western Australian Museum pp. 275-276.
Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
Molloy et al (2009) South West Regional Ecological Linkages Technical Report. Western Australian Local Government Association (WALGA) and the Department of Environment and Conservation (DEC), West Perth, 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 Manjimup (2006) Direct Interest Submission - Application to Clear Native Vegetation - Lots 23 and 24 South West Highway, Palgarup. Shire of Manjimup, Manjimup, Western Australia. TRIM ref SWD47079.
Shire of Manjimup (2009) Direct Interest Submission - Application to Clear Native Vegetation - Lots 23 and 24 South West Highway, Palgarup. Shire of Manjimup, Manjimup, Western Australia. TRIM ref DOC104482.
Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.dec.wa.gov.au/ (Accessed 2/10/2009).

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
EPA	Office of the Environmental Protection Authority
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DoW)