



1. Application details

1.1. Permit application details

Permit application No.: 1427/1
 Permit type: Area Permit

1.2. Proponent details

Proponent's name: Justin & Lynda Blinman

1.3. Property details

Property: LOT 6823 ON PLAN 167215
 Local Government Area: City Of Swan
 Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3.35		Burning	Horticulture

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Vegetation Association 1949 - Low woodland; banksia on low sandhills, swamps in swales with tea-tree and paperbark.	The vegetation within the area under application can be separated into three different vegetated areas. The majority of the vegetation within the area under application (~2.35ha) is in excellent condition.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The condition of the vegetation within the area under application was determined during a site inspection (16/11/2006. TRIM Ref. DOC11050)
Beard Vegetation Association 1018 - Mosaic; medium forest; jarrah/marri/ low woodland; banksia/ Low forest; teatree/ Low woodland Casuarina obesa (Shepherd et al. 2001, Hopkins et al. 2001).	The upper storey comprises Banksia ilicifolia, Nuytsia floribunda, Kunzea glabrescens, Melaleuca spp., Banksia attenuata, Jacksonia furcellata, Woolly Bush (Adenanthos sp.). Species present in the lower storey includes Dasypogon bromeliifolius, Patersonia occidentalis, Dampiera linearis, Xanthorrhoea preissii, Petrophile linearis, Hypocalymma angustifolium, Eremaea pauciflora, Davesia triflora, Thysanotus sp., Pimelea sp., Stylidium sp., Acacia sp., Tricoryne tenella, Melaleuca seriata and Leucopogon sp.		
Hedde Vegetation Complex - Bassendean Complex - North - Vegetation ranges from a low open forest and low open woodland of Banksia species E. todtiana to low woodland of Melaleuca species and sedgelands which occupy the moister sites (Hedde et al. 1980)	A second vegetated area (~0.7ha) on the northern side of the area under application adjacent to the residence is in good condition. Kunzea glabrescens dominates the middle/upper storey, with some patchy areas. Lower storey species present in this area include Patersonia occidentalis, Xanthorrhoea preissii and Dasypogon bromeliiflorus.		

The third area of vegetation (~0.3ha) lies on the northern side of the area under application extending from the front of the residence to the eastern edge of the property. This area is in a completely degraded condition with a weed dominated understorey, and a few scattered *Xanthorrhoea preissii* and *Banksia* sp. (Site inspection 16/11/2006).

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 a 12.79ha parcel of land owned by the applicants. The surrounding land use is rural, with one Bush Forever site (Kirby Road Bushland) located adjacent to the property.

The majority of the vegetation under application (~2.35ha) is in an excellent condition with a high level of floral diversity. The vegetation structure is intact, with a few small areas of localised disturbance.

A second area (~0.7ha) on the northern side of the area under application adjacent to the residence is in good condition. *Kunzea glabrescens* dominates the upper storey, with some patchy areas and fewer floral species in the lower storey.

The third area of vegetation lies on the northern side of the area under application extending from the front of the residence to the eastern edge of the property. This area (~0.3ha) is in a completely degraded condition with a weed dominated understorey, and a few scattered *Xanthorrhoea preissii* and *Banksia* sp. (Site inspection 16/11/2006).

Given this, the excellent condition and high biological diversity of the majority of the vegetation under application, the proposed clearing is at variance to this Principle.

Methodology Site inspection 16/11/2006 (TRIM Ref. DOC11050)
GIS database:
- Swan Coastal Plain North 1m Orthomosaic - DLI 01/04
Department of Natural Resources and Environment (2002)

(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 agricultural area.

The vegetation under application can be separated into three vegetated areas. The majority of the vegetation under application (~2.35ha) is in an excellent condition and comprises of a high level of biological diversity. Kangaroo scats, mammal diggings and a variety of insects, including wasps, bees and ants were observed within this area during the site inspection (16/11/2006).

The second (~0.7ha) and third (~0.3ha) areas of vegetation on the northern side are in a good to completely degraded condition respectively. A variety of insects were seen within the second area during the site inspection (16/11/2006). Evidence of rabbits were observed within both areas. Although the vegetation cover was moderate in the second area, the homogenous nature of the vegetation is not considered to provide significant habitat for indigenous fauna. The vegetation within the third area is sparse and not considered to provide significant habitat to indigenous fauna.

Notwithstanding, the majority of the vegetation (~2.35ha) is in an excellent condition and is not considered to provide significant habitat for indigenous fauna.

Furthermore, the majority of the vegetation under application is likely to have a significant intrinsic conservation value by providing fauna habitat not well represented in secure tenure. Therefore, the proposed clearing is at variance to this Principle.

Methodology Site inspection 16/11/2006 (TRIM Ref. DOC11050)
GIS database:
- Swan Coastal Plain North 1m Orthomosaic - DLI 01/04

(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 no known populations of Declared Rare Flora or Priority Flora recorded in the area under application. There are 4 known populations of Declared Rare Flora (*Grevillea curviloba* subs. *curviloba*) within a 5km radius, with the closest being approximately 4.5kms east of the vegetation under application.

Florabase describes this species as a prostrate to erect shrub, which varies in height from 0.1 to 2.5 metres. This species flowers white or cream during the month of October, and is known to grow in association with grey sand, in winter-wet heath. This species is not known to be present within the same Heddl complex (Heddl et al. 1980) or Beard vegetation association (Hopkins et al. 2001) as that within the vegetation under application.

There are several other known Declared Rare Flora Species populations within a 5-10km radius from the vegetation under application, including:

- *Caladenia huegelii*,
- *Eleocharis keighyi*,
- *Centrolepis caespitosa*,
- *Acacia anomala*,
- *Verticordia plumosa* var. *pieiobotrya*,
- *Grevillea althoferorum*; and
- *Darwinia foetida*

Of these species *Caladenia huegelii* occurs within the same Heddl vegetation complex, and is described by Florabase as a tuberous perennial herb, which varies in height from 0.25 to 0.8 metres. This species flowers green and cream between the months of September and October. Preferred soil types vary, including grey or red-brown sand, clay loam over laterite, and littered soils.

From the above information, it is considered that *Caladenia huegelii* may be present within the area under application, due to similar soils and vegetation community structure.

While no DRF Species were identified during the site inspection (16/11/2006), it is recognised that the timing of the inspection was sub-optimal for the identification of *Caladenia* sp. As such, it is considered that the proposed clearing may be at variance to this Principle.

Methodology Site inspection 16/11/2006 (TRIM Ref. DOC11050)
GIS database:
- Declared Rare and Priority Flora List - CALM 01/07/05
- Threatened Plant Communities - DEP 06/95
- Heddl Vegetation Complexes - DEP 21/06/95
- Pre-European Vegetation - DA 01/01
- Shepherd et al. (2001)
- Hopkins et al. (2001)

(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 may be at variance to this Principle

BCS (2006) confirm that there are two known occurrences of Threatened Ecological Communities (TEC) within a 5km radius. These two TECs are located within Bush Forever site 97 (Kirby Rd Bushland, Bullsbrook). These TECs are the critically endangered Communities of Tumulus Springs (Government of Western Australia, 2000).

The closest TEC is located approximately 400m east of the area under application. The vegetation under application is located within the buffer area for these two adjacent TECs.

There are 15 known occurrences of TECs within a 5-10kms radius. Twelve of these occurrences are within Bush Forever sites including:

- 2 occurrences within BF site 292 (Bullsbrook Nature Reserve and Adjacent Reserve, Bullsbrook);
- 9 occurrences within BF site 294 (Pearce Aerodrome and Adjacent Bushland, Bullsbrook);
- 1 occurrence within BF site 89 (Maroubra Avenue Bushland, Bullsbrook).

Three of the TEC occurrences are located outside of BF sites.

At this stage of the assessment, the hydrological impacts of the proposed clearing on the adjacent TECs is unknown. Given the close proximity of the vegetation under application to the TECs and the critically

endangered status of the TECs, the proposed clearing may be at variance to this Principle (BCS, 2006)

Methodology BCS (2006) (TRIM Ref: DOC 11995)
 Site inspection 16/11/2006 (TRIM Ref. DOC11050)
 Government of Western Australia (2000)
 GIS databases:
 - Threatened Ecological Communities - CALM 12/4/05
 - Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05
 - Bushforever - MFP 07/01

(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 a component of Beard Vegetation Associations 1949 and 1018 (Hopkins et al. 2001) of which 25.6% and 21.3% of Pre European extent remain respectively. The vegetation under application is also a component of Heddle: Bassendean Complex - North (Heddle et al. 1980) of which 72.0% of Pre European extent remains (Shepherd et al. 2001).

The vegetation within Beard Vegetation Association 1949 can be described as low woodland and banksia on low sandhills. The majority (approx. 2.35ha) of the vegetation under application associated with this vegetation unit is in an excellent condition. A smaller area adjacent to the residence is in a good condition.

The majority of the vegetation within Beard Unit 1018 is in a completely degraded condition. Beard Vegetation Association 1018 can be described as a mosaic; medium forest; jarrah/marri/ low woodland; banksia/ Low forest; teatree/ Low woodland Casuarina obesa).

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents a clearance of ecological communities with an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment 2002, EPA 2000).

reserves/CALM	Pre-European (ha)*	Current extent (ha)*	Remaining (%)*	Conservation** status	% In managed land
IBRA Bioregions					
Swan Coastal Plain	1,498,297	626,512	41.8	Depleted	
City of Swan	104,220	46,043	44.2	Depleted	
Vegetation type:					
Beard: Unit 1949	132,958	34,012	25.6	Vulnerable	0.0
Unit 1018	14,087.698	3,007.700	21.3	Vulnerable	0.9
Heddle					
Bassendean Complex: North	74,147	53,384	72.0	Least concern	

* (Shepherd et al. 2001)

** (Department of Natural Resources and Environment 2002)

Both of the Beard vegetation units associated with the area under application (Units 1949 and 1018) are below the State Governments biodiversity conservation target of 30% (Department of Natural Resources and Environment 2002, EPA 2000).

Furthermore, both Beard Vegetation Associations are poorly represented in secure tenure (0% for 1949 and 0.9% for 1018). JANIS Forests Criteria (1997) recommends that at least 15% pre-1750 distribution of each vegetation ecosystem should be protected in a comprehensive, adequate and representative reserve system.

The vegetation within the area assessed as being in completely degraded condition is no longer representative of the vegetation association and is therefore not considered significant as a remnant of native vegetation.

However, the vegetation assessed as excellent to good condition within Beard Vegetation Association 1949 is considered significant as a remnant of native vegetation. Therefore the proposed clearing is at variance to this Principle.

Methodology Site inspection 16/11/2006 (TRIM Ref. DOC11050)
 JANIS Forests Criteria (1997)
 GIS databases:
 - Heddle Vegetation Complexes - DEP 21/06/95
 - Pre-European Vegetation - DA 01/01

- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Shepherd et al. (2001)
- Hopkins et al. (2001)
- Department of Natural Resources and Environment (2002)

(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 may be at variance to this Principle

The area under application is surrounded to the north, east and south by the Gngangara Mound, an Environmental Protection Policy area. At its closest point, the EPP area boundary is approximately 400m to the NW of the vegetation under application.

There are also twelve EPP Lakes within a 5km radius of the vegetation under application, with the closest being approximately 1km SE.

There are several wetland areas within a 5km radius of the vegetation under application, including Resource Enhancement, Multiple Use and Conservation Category wetlands. The closest Conservation Category Wetland (CCW) is approximately 300m ESE of the vegetation under application.

Wetland and hydrological mapping does not identify any wetland areas within the property under application. In addition, the description of the vegetation reflects an upland vegetation community. Despite this, given the unknown hydrological impacts associated with the proposed clearing, the close proximity of the vegetation under application to the wetland and its associated critically endangered TECs, it is considered that the proposed clearing may be at variance to this Principle.

Methodology Site inspection 16/11/2006 (TRIM Ref. DOC11050)

GIS databases:

- ANCA, Wetlands - CALM 08/01
- EPP, Areas - DEP 06/95
- EPP, Lakes - DEP 1/12/92
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC
- Hydrography, linear - DOE 1/2/04

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments Proposal may be at variance to this Principle

The soils within the area under application are associated with a subdued dune-swale landscape with leached sands (Department of Agriculture, 2004).

Acid Sulphate Soil (ASS) risk mapping identifies Lot 6823 Kirby Road, Bullsbrook as having a Class 2 risk of ASS or potential ASS occurring. This classification is defined as a moderate to low ASS disturbance risk at depths less than three metres from the surface. As the proposed clearing is unlikely to influence the soil profile at this depth, it is considered unlikely that ASS or potential ASS would be impacted.

DAFWA (2006) advice indicates that there is a low risk of land degradation caused by salinity and eutrophication resulting from clearing the vegetation under application. DAFWA (2006) have also identified a low to nil risk of land degradation resulting from water erosion, and a low risk of waterlogging and flooding.

DAFWA (2006) have advised that the area under application has a very high risk of wind erosion and that the risk of wind erosion causing land degradation is high during establishment of the plantations, with the risk being reduced once horticultural crops are established. Therefore, DAFWA (2006) have concluded that the proposed clearing may be at variance to this Principle.

Methodology DAFWA (2006) Advice (DEC TRIM Ref. DOC 6418)

Department of Agriculture (2004)

GIS databases:

- Acid Sulfate Soil Risk Map, Swan Coastal Plain - DEC
- Soils, Statewide - DA 11/99

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

Comments Proposal is at variance to this Principle

The vegetation under application falls within an Environmentally Sensitive Area (ESA). This ESA is associated with two known occurrences of the critically endangered Threatened Ecological Community (TEC) 'Communities of Tumulus Springs' located within close proximity to the vegetation under application (the closest being approximately 400m to the east).

The vegetation under application is located within the 1000m buffer associated with the adjacent TEC. Hydrological impacts associated with the clearing of 3.35ha on the adjacent TECs and conservation area is unknown.

There are five Bush Forever sites within a 5kms radius of the vegetation under application. They are:
BF 462 - Department of Defence - Muchea Air Weapons Range Bushland, Pinjar; approximately 400m NW of the vegetation under application.
BF 97 - Kirby Road Bushland, Bullsbrook; approximately 300m east of the vegetation under application.
BF 100 - Neaves Road Creek, Bullsbrook; approximately 1.7kms east of the vegetation under application.
BF 6 - Cooper Road Water Reserve and Adjacent Bushland, Bullsbrook; approximately 4.2kms SE of the vegetation under application.
BF 399 - Melaleuca Park and Adjacent Bushland, Bullsbrook/Lexia; approximately 2.3kms SW of the vegetation under application.

There are also two DEC managed lands within a 5km radius. They are:
- Neaves Road Nature Reserve, approximately 270m SE of the vegetation under application
- State Forest 65, lies to the NW-S of the vegetation under application. At its closest point it is 2.3kms SW of the vegetation under application.

In addition, the majority of the vegetation is in an excellent condition and is associated with Beard Vegetation Associations 1949 and 1018 (Hopkins et al. 2001) which currently have only 0.0% and 0.9% in secure tenure, respectively. This is well below the 15% recommended by JANIS Forests Criteria (1997).

Given this and the excellent condition of the majority of the vegetation under application, the vegetation applied to be cleared is considered to provide fauna habitat and vegetation communities not well represented on conservation land and provides a buffer to two conservation areas, and is therefore at variance to this Principle.

Methodology JANIS Forests Criteria (1997)
Hopkins et al. (2001)
Department of Natural Resources and Environment (2002)
GIS databases:
- Bushforever - MFP 07/01
- Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05
- CALM Managed Lands and Waters - CALM 1/07/05

(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 is not located within a Public Drinking Water Source Area (PDWSA).

DAFWA (2006) have identified a low to nil risk of land degradation resulting from water erosion, and a low risk of waterlogging and flooding.

DAFWA (2006) advise that 'the risk of eutrophication will increase with the clearing of native vegetation and the establishment of the land for horticultural use', however 'the risk of eutrophication causing land degradation is low'.

Notwithstanding, the hydrological impact on the nearby critically-endangered groundwater-dependent TECs as a result of the clearing of 3.35ha of vegetation is unknown. Therefore, the proposed clearing may be at variance to this Principle.

Methodology DAFWA (2006) Advice (TRIM Ref. DOC6418)
GIS database:
- Public Drinking Water Source Areas (PDWSAs) - DOE 07/02/06

(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**
DAFWA (2006) have identified a low risk of flooding as a result of the proposed clearing.

Furthermore, the vegetation under application occurs within an area associated with an annual evaporation rate of approx. 2000mm and an annual rainfall of approx. 800mm.

Therefore, the clearing as proposed is unlikely to cause, or exacerbate the incidence or intensity of flooding.

Methodology DAFWA (2006) Advice (TRIM Ref. DOC6418)

GIS database:

- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC
- Rainfall, Mean Annual - BOM 30/09/01
- Evaporation Isopleths - BOM 09/98

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

Comments

The vegetation under application is located within the buffer area for the nearby critically-endangered groundwater-dependent Threatened Ecological Communities. The hydrological impacts of the proposed clearing on these TECs is currently unknown.

Furthermore, the proposed land use of a nursery is not conducive to the protection of groundwater quality, particularly in relation to the nearby TECs. The Department of Environment (2004) advises that 'the highest risk of contaminants leaching from nurseries into water bodies occurs where there are sandy or gravelly soils overlaying a water table less than 10 metres below the ground surface'. A groundwater monitoring site located approximately 515m north west of the vegetation under application has a static level of 3.580m from the top of casing (as at 22/9/2006). Given this and the transmissive nature of the soils, the proposed land use of a nursery is not compatible within the TEC buffer area.

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

Lot 6823 Kirby Road, Bullsbrook is not part of a Native Title claim, therefore the clearing as proposed does not fall under the future acts process of the Native Title Act 1993.

The vegetation under application lies within a Rights in Water and Irrigation Act 1914 (RIWI) groundwater area. A water licence has previously been granted for this property.

Development Approval (DA) is required for this activity. The City of Swan have advised that DA has not yet been sought for this activity.

There is no other RIWI Act Licence, Works Approval or EPA Act Licence that affects the area under application.

Methodology

Department of Environment (2004)

GIS databases:

- WIN Groundwater Sites, Monitoring - DEWCP (Current)
- Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05
- Native Title Claims - DLI 7/11/05
- Aboriginal Sites of Significance - DIA
- RIWI Act, Groundwater Areas - WRC 13/06/00
- RIWI Act, Areas - WRC 05/04/02

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Horticulture	Burning	3.35	<p>The application has been assessed and the clearing as proposed has been determined to be at variance to Principles (a), (b), (e) and (h) and may be at variance to Principles (c), (d), (f), (g) and (i). In particular:</p> <ul style="list-style-type: none">- For Principle (a) the majority of the vegetation within the area proposed to be cleared is in an excellent condition with a high level of biological diversity.- For Principle (b) the excellent condition of the majority of vegetation within the area under application provides significant habitat for fauna in an area that has been extensively cleared.- For Principle (c) nearby Declared Rare Flora species are located within similar soils and vegetation community structures and may therefore occur within the vegetation under application.- For Principles (d) and (i) the proposed clearing occurs within the TEC buffer area and may impact on the hydrology of the nearby critically endangered, groundwater dependent Threatened Ecological Communities.- For Principle (e) and (h) the Beard vegetation associations are below the State Governments 30% conservation target and are poorly represented in secure tenure.- For Principle (f) the hydrological changes associated with the proposed clearing may impact on the relatively close CCW (300m ESE), and its associated Mound Spring TEC.- For Principle (g) there is a high risk of wind erosion resulting from the clearing of vegetation prior to horticultural establishment. <p>Furthermore, the proposed land use of a nursery is not conducive to the protection of groundwater quality, particularly in relation to the nearby TECs. The Department of Environment (2004) advises that 'the highest risk of contaminants leaching from nurseries into water bodies occurs where there are sandy or gravelly soils overlaying a water table less than 10 metres below the ground surface'. A groundwater monitoring site located approximately 515m north west of the vegetation under application has a static level of 3.580m from the top of casing (as at 22/9/2006). Given this and the transmissive nature of the soils, the proposed land use of a nursery is not compatible within the TEC buffer area.</p> <p>Given the above, the assessing officer therefore recommends that a clearing permit be refused.</p>

5. References

- BCS (2006) Clearing Assessment Unit's biodiversity advice for land clearing application. Advice to Director General, Department of Environment and Conservation (DEC), Western Australia. DEC TRIM ref: DOC11995
- DAFWA Land degradation assessment report. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DEC TRIM Ref. DOC 6418
- Department of Agriculture (2004) Soil-landscape mapping, Western Australia Department of Agriculture, Date accessed 01/12/2006.
- Department of Environment (2004) Water Quality Protection Note: Nurseries and Garden Centres
- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Government of Western Australia (2000) Bush Forever Volumes 1 and 2. Western Australian Planning Commission, Perth WA.
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- JANIS Forests Criteria (1997) Nationally agreed criteria for the establishment of a comprehensive, Adequate and Representative reserve System for Forests in Australia. A report by the Joint ANZECC/MCFFA National Forest Policy Statement Implementation Sub-committee. Regional Forests Agreement process. Commonwealth of Australia, Canberra.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- 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.

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)