



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 3831/1

File Number: 2010/004969

Duration of Permit: From 30 October 2010 to 30 October 2012

PERMIT HOLDER

QLDF Development 3 Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

LOT 3 ON DIAGRAM 54730 (House No. 49 HARVEY KARNUP 6176)

LOT 2 ON DIAGRAM 42100 (House No. 29 HARVEY KARNUP 6176)

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 11.1 hectares of native vegetation within the area hatched yellow on attached Plan 3831/1.

CONDITIONS

1. Period in which clearing is authorized

- (a) The Permit Holder shall not clear native vegetation unless actively mining within 3 weeks of the authorised clearing being undertaken.

A handwritten signature in black ink, appearing to read "K Faulkner", written over a horizontal line.

Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

30 September 2010

Plan 3831/1



LEGEND

- Clearing Instruments
-  Areas Approved to Clear
 -  Road Centrelines
 -  Cadastre

Swan Coastal Plain Central
20cm Orthomosaic - Landgate
2009



0 200 m

Scale 1:7491
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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

 Date 28/9/10
K Faulkner

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.: 3831/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: QLDF Development 3 Pty Ltd

1.3. Property details

Property: LOT 4 ON DIAGRAM 54730 (House No. 63 HARVEY KARNUP 6176)
LOT 3 ON DIAGRAM 54730 (House No. 49 HARVEY KARNUP 6176)
LOT 2 ON DIAGRAM 42100 (House No. 29 HARVEY KARNUP 6176)

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
13.1		Mechanical Removal	Extractive Industry

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
<p>The vegetation under application is mapped as being comprised of the following vegetation types:</p> <p>Beard 998: Medium woodland; tuart</p> <p>KARRAKATTA COMPLEX - CENTRAL AND SOUTH: Predominantly open forest of Eucalyptus gomphocephala (Tuart) - Eucalyptus marginata (Jarrah) - Corymbia calophylla (Marri) and woodland of Eucalyptus marginata (Jarrah) - Banksia species.</p> <p>(Shepherd, 2009; Heddle, 1980)</p> <p>The majority of applied area is already cleared and is characterised by isolated Eucalyptus marginata and Eucalyptus gomphocephala over weeds. These areas were not assigned a vegetation unit (ENV, 2010).</p>	<p>The 13.1ha of vegetation under application is predominately cleared and is currently used for horse grazing, horse race track and a residential dwelling.</p> <p>The exposure to livestock grazing, weed invasion, rubbish dumping and land clearing of most of the site has significantly decreased the vegetations health. The vegetation onsite was therefore considered to be in predominately completely degraded to good condition with a small area (located centrally) considered to be in very good condition (ENV, 2010).</p> <p>The application area consisted of one main vegetation unit: Open Woodland of Eucalyptus marginata subsp. marginata, Allocasuarina fraseriana and Banksia menziesii over Hibbertia hypericoides, Jacksonia furcellata and Xanthorrhoea gracilis over Hypochaeris glabra, Bromus sp. and Lupinus cosentinii (ENV, 2010).</p> <p>The vegetation of the applied area is best fit to either Floristic Community</p>	<p>Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)</p>	<p>The description and condition of the vegetation under application was determined via the use of aerial imagery and a flora and vegetation survey conducted by ENV Australia (2008).</p>

Type (FCT) SCP21a
(Banksia attenuata-
Eucalyptus marginata
woodlands) or FCT SCP 28
(Spearwood Banksia
attenuata or Banksia
attenuata-Eucalyptus
marginata) (ENV, 2010).

As above	As above	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	As above
As above	As above	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	As above

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 13.1ha of vegetation under application is predominately cleared and is currently used for horse grazing, horse race track and a residential dwelling. Within the area under application, approximately 3.5ha of native vegetation remains. An area of 1.8ha in the south west corner of Lot 4 has not been included in the application area and will be retained post sand extraction (ENV, 2010).

The exposure to livestock grazing, weed invasion, rubbish dumping and land clearing of most of the site has significantly decreased the vegetations health. The vegetation onsite was therefore considered to be in predominately completely degraded to good (Keighery, 1994) condition with a small area (located centrally) considered to be in very good (Keighery, 1994) condition (ENV, 2010). However the vegetation under application is still considered to be part of a potential ecological stepping stone (ENV, 2010).

The application area consisted of one main vegetation unit: Open Woodland of Eucalyptus marginata subsp. marginata, Allocasuarina fraseriana and Banksia menziesii over Hibbertia hypericoides, Jacksonia furcellata and Xanthorrhoea gracilis over Hypochaeris glabra, Bromus sp. and Lupinus cosentinii (ENV, 2010). A small section of the applied area in the north west corner has been mapped in the Tuart Atlas (CALM, 2002). Within this Atlas the E. gomphocephala are mapped as having a canopy density of 0-9% and a visible understorey which is highly disturbed (CALM, 2002).

The vegetation of the applied area is best fit to either Floristic Community Type (FCT) SCP21a (Banksia attenuata-Eucalyptus marginata woodlands) or FCT SCP 28 (Spearwood Banksia attenuata or Banksia attenuata-Eucalyptus marginata) (ENV, 2010).

A priority ecological community 'Southern Eucalyptus gomphocephala-Agonis flexuosa woodlands' is mapped as occurring within the local area (5km radius). Recorded 4.9km south, this community occurs on the same soil and vegetation type to that of the applied area.

Approximately 79% of the vegetation to be cleared is considered to be in degraded to completely degraded (Keighery, 1994) condition and approximately 16% of the application area is considered to be in good to very good (Keighery, 1994) condition (Submission, 2010).

Thirty five trees of significance were identified during the field survey (ENV, 2010), 15 these trees contained hollows suitable for breeding and nesting and the remaining 23 were considered to be future breeding habitat trees (Submission, 2010). As all but 2 of the identified trees were Tuart, Carnaby's Black Cockatoo (Calyptorhynchus latirostris) is the most likely species to be impacted by the removal of Tuart trees (Submission, 2010).

Given that parts of the application area are considered to be in good or very good (Keighery, 1994) condition (ENV, 2010, Submission, 2010) and nesting and breeding trees suitable for Carnaby's Black Cockatoo's are present throughout the application area, the vegetation under application is of increased importance. Therefore, the proposed clearing may be at variance to this principle.

To reduce the impacts of clearing, no clearing will be permitted within Lot 4, where areas of good or very good (Keighery, 1994) condition vegetation persist. The retention of this area under application, along with the 1.8ha in the south west corner of Lot 4 (outside of the application area), will also ensure that eleven habitat trees remain on the properties under application

- Methodology** ENV (2010)
 Keighery (1994)
 Submission (2010)
 GIS DataSets:
 - Swan Coastal Plain South 20cm Orthomosaic (Landgate 2009)
 - SAC Biodatasets (accessed July 2010)
 - DEC Tenure (DEC 2010)
 - Declared Rare and Priority Flora List - CALM 6/10/08
 - Heddl Vegetation Complexes (DEP 1995)
 - Pre European Vegetation (DA 2001)
 - SAC Biodatasets - accessed July 2010
 - Soils, Statewide DA 11/99
 - Clearing Regulations, Environmentally Sensitive Areas 30 May 2005

(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 application area consisted of one main vegetation unit: Open Woodland of *Eucalyptus marginata* subsp. *marginata*, *Allocasuarina fraseriana* and *Banksia menziesii* over *Hibbertia hypericoides*, *Jacksonia furcellata* and *Xanthorrhoea gracilis* over *Hypochoeris glabra*, *Bromus* sp. and *Lupinus cosentinii* (ENV, 2010). This vegetation type is considered to offer suitable habitat for 5 protected fauna species which include:

- Forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*)
 - Carnaby's black cockatoo (*Calyptorhynchus latirostris*)
 - Baudins black cockatoo (*Calyptorhynchus baudinii*)
 - Western rosella (*Platycercus icterotis xanthogenys*)
 - Peregrine falcon (*Falco peregrinus*)
- (ENV, 2010).

In addition to this the following fauna species were recorded within the local area (5km radius):

- Quenda (*Isodon obesulus fusciventer*) (P5) recorded 2km West
- Lined Skink (*Lerista lineata* (P3) recorded 2.4km SW
- Ctenotus gemmula (Swan Coastal Plain popn) (P3) 4.4km North
- Carpet Python (*Morelia spilota imbricata* (P4) 5.5km NW

As the majority of the vegetation under application is considered to be in degraded to completely degraded condition (Keighery, 1994) and has been used for horse agistment over a long period of time (Submission, 2010), the proposed clearing is unlikely to represent significant habitat for ground dwelling fauna.

Thirty five trees of significance were identified during the field survey (ENV,2010), 15 these trees contained hollows suitable for breeding and nesting and the remaining 23 were considered to be future breeding habitat trees (Submission, 2010) which could be utilized by all three cockatoo species listed above. In addition to this, Carnaby's roost sites are known 860m East and 2.7km North of the applied area. Given that there are potential breeding and nesting trees within the applied area and suitable foraging habitat is located nearby in the adjacent Bush Forever site, the vegetation under application is considered to be of significance.

Further to this, the vegetation under application is part of a potential ecological stepping stone to nearby bushland (i.e. Bush Forever site 278) and therefore may facilitate the movement of fauna between these areas (ENV, 2010).

Given that the vegetation under application is part of a potential ecological stepping stone, Carnaby's are known to roost in the local area, there are presently 15 habitat trees suitable for Carnaby's within the applied area and that Carnaby's foraging habitat is located within close proximity, the proposed clearing is considered to be at variance to this principle.

No clearing will be permitted within Lot 4, where areas of good or very good (Keighery, 1994) condition vegetation persist. Out of a possible thirty five habitat trees located on the properties under application, a total of eleven habitat trees will remain. The section of vegetation under application where clearing will not be allowed contains two habitat trees (ENV, 2010), nine habitat trees will remain within the 1.8 hectare area in the south west corner of Lot 4 (outside of application area) (ENV, 2010). Retaining areas of good and very good vegetation will also allow fauna species to utilise the vegetation as a stepping stone.

- Methodology** ENV (2010)
 Submission (2010)
 GIS DataSets:
 - Swan Coastal Plain South 20cm Orthomosaic (Landgate 2009)
 - SAC Biodatasets (accessed July 2010)

(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

Two rare flora species have been recorded within the vicinity of the application area. *Diuris drummondii* was recorded 5.2km SSW and *Drakaea elastica* was recorded 5.6km south. *D. Elastica* was mapped as occurring on the same soil type to that found on the application area.

No rare or priority flora were recorded within the applied area, however the survey was conducted in June. In order to adequately determine the presence or absence of significant flora a spring survey is required (ENV, 2010). Given that the application area has been exposed to grazing by horses, weed invasion, rubbish dumping, potential nutrient runoff from adjacent market gardens and the vegetation is in mostly completely degraded (Keighery, 1994) condition, it is not anticipated that the vegetation under application is necessary for the continued existence of rare flora, therefore the proposed clearing is not likely to be at variance to this principle.

Methodology

ENV (2010)

Keighery (1994)

GIS DataSets:

- Swan Coastal Plain South 20cm Orthomosaic (Landgate 2009)
- SAC Biodatasets (accessed July 2010)
- Declared Rare and Priority Flora List - CALM 6/10/08
- Heddle Vegetation Complexes (DEP 1995)
- Pre European Vegetation (DA 2001)
- SAC Biodatasets - accessed July 2010
- Soils, Statewide DA 11/99
- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005

(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 known Threatened Ecological Communities (TECs) were recorded within the applied area during a flora and vegetation survey conducted by ENV Australia (2010), however the survey was conducted in June. In order to adequately determine the presence or absence of TECs a spring survey is required (ENV, 2010).

Several TECs are mapped within the local area (5km radius), the closest being 'Woodlands over sedgeland in Holocene dune swales of the southern Swan Coastal Plain,' which was recorded 2.8km WNW. None of the TECs occurring within the area are mapped as occurring within the same vegetation or soil.

Given the mostly completely degraded (Keighery, 1994) condition of the vegetation under application, it is not anticipated that the vegetation under application is composed of a TEC or is necessary for the continued existence of a TEC.

The proposed clearing is therefore considered not likely to be at variance to this principle.

Methodology

ENV (2010)

Keighery (1994)

GIS DataSets:

- Swan Coastal Plain South 20cm Orthomosaic (Landgate 2009)
- SAC Biodatasets (accessed July 2010)
- Heddle Vegetation Complexes (DEP 1995)
- Pre European Vegetation (DA 2001)
- SAC Biodatasets - accessed July 2010
- Soils, Statewide DA 11/99
- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005

(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 majority of applied area is already cleared and is characterised by isolated *Eucalyptus marginata* and *Eucalyptus gomphocephala* over weeds. These areas were not assigned a vegetation unit (ENV, 2010). However there are areas within the application area considered to be in good (Keighery, 1994) condition with a small area (located centrally) considered to be in very good (Keighery, 1994) condition (ENV, 2010).

The application area has two vegetation types mapped. Karrakatta Complex-Central And\South has approximately 29.5% of pre-European levels of remaining (Heddle, 1980), while Beard vegetation association 998 has approximately 38.52% & 36.06% remaining within the Bioregion and Shire respectively (Shepherd, 2009). The Swan Bioregion retains 39.16% (587,889ha) of pre-European levels of native vegetation (Shepherd, 2009) and the

local area (5km radius) has approximately 25% remaining vegetation.

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. Within constrained areas (i.e. areas of urban development in cities and major towns) on the Swan Coastal Plain the target for representation of the pre-clearing extent of a particular native vegetation complex is 10 % (Commonwealth of Australia 2001). As the application area is considered to be within the constrained area, the remaining percentage of native vegetation is above the required 10% threshold.

This being considered, the proposed clearing is not likely to be at variance to this principle.

Methodology ENV (2010)
- Current Extent of Native Vegetation (NLWRA 2001)

(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

There are many wetlands located within the local area (5km radius). The closest mapped wetland, a perennial swamp, is situated 360m north and is known as Churcher Swamp (conservation category wetland). The Serpentine River is situated 2.8km east.

As there is no mapped wetland or watercourse within the application area, the presence of riparian vegetation is unlikely, therefore the proposed clearing is not likely to be at variance to this principle.

Methodology GIS DataSets:
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC 11/04/07
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06

(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 of the application area are brown sands (Northcote et al. 1960 -68) and the site is characterised by gently undulating topography (ENV, 2010). While the applied area is 13.1 hectares, there is only approximately 3.5ha of native vegetation remaining within the applied area and an area of 1.8ha in the south west corner of Lot 4 has been not been included in the application area and will be retained post sand extraction (ENV, 2010).

It is considered unlikely that the proposed clearing will result in any appreciable land degradation. A staged clearing condition will further reduce the risk of land degradation such as wind erosion.

Methodology Northcote et al. (1968)
ENV (2010)
GIS DataSets:
- Topographic contours statewide - DOLA and ARMY 12/09/02

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

Comments Proposal is not likely to be at variance to this Principle

There is an un-named miscellaneous conservation area situated adjacent to the application area. Port Kennedy Scientific Park (Nature Reserve) is located 3.7km West.

Bush Forever site 278 is situated 50m west, Bush Forever site 75 is located 90m NE, Bush Forever site 275 is located 720m NW and there is another 6 Bush Forever sites within the local area. The vegetation under application may contribute to a linkage or act as a stepping stone to Bush Forever site 278, which would aid in the movement of fauna species (ENV, 2010).

To reduce potential impacts to the Bush Forever site, a 40 metre setback is proposed along the eastern boundary of the application area. In addition to this, an area with a similar vegetation type to that of Bush Forever site 278, which is outside of the applied area, will be retained in the south west corner of Lot 4. The vegetation to be retained is considered to be in very good (Keighery, 1994) condition (ENV, 2010).

Given the buffer between the application area and the Bush Forever site, the proposed clearing is unlikely to impact on the environmental values of adjacent conservation areas. Therefore the proposed clearing is not likely to be at variance to this principle.

Methodology ENV (2010)
Keighery (1994)
GIS DataSets:
- Swan Coastal Plain South 20cm Orthomosaic (Landgate 2009)
- DEC Tenure (DEC 2010)
- Heddle Vegetation Complexes (DEP 1995)
- Pre European Vegetation (DA 2001)
- Soils, Statewide DA 11/99
- Bush Forever 2000 - Site Boundaries

(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**
There are many wetlands located within the local area (5km radius). The closest mapped wetland, a perennial swamp, is situated 360m north and is known as Churcher Swamp (conservation category wetland). The Serpentine River is situated 2.8km east and groundwater salinity is mapped at 1000-3000 mg/L.

A total of 1.8 hectares of native vegetation is to be retained within the applied area and the majority of the applied area is already cleared and is characterised by isolated *Eucalyptus marginata* and *Eucalyptus gomphocephala* over weeds (ENV, 2010). This being considered, the proposed clearing of mostly completely degraded vegetation is not likely to impact on surface or groundwater quality.

Methodology ENV (2010)
GIS DataSets:
- Groundwater Salinity Statewide DoW 13/07/06
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06

(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**
An area of 1.8ha in the south west corner of Lot 4 has been not been included in the application area and will be retained post sand extraction (ENV, 2010). The majority of the applied area is already cleared and is characterised by isolated *Eucalyptus marginata* and *Eucalyptus gomphocephala* over weeds (ENV, 2010). This being considered, the proposed clearing of mostly completely degraded (Keighery, 1994) vegetation is not likely to exacerbate flooding.

Methodology ENV (2010)
Keighery (1994)

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

Comments
The Shire of Rockingham has advised that the applicant has obtained a Groundwater licence from the Department of Water. The DoW has confirmed that a Groundwater licence is held over Lots 2, 3 and 4.

The Shire of Rockingham has granted development approval for the proposed sand extraction (DEC Ref: A315830). The Shire has also advised that "The subject land [Lots 2, 3 and 4] are zoned 'Urban Deferred' under the Metropolitan Regional Scheme and 'Development' under the City of Rockingham's Town Planning Scheme No.2. With this zoning, there is every expectation the land will be developed for urban purposes (which includes residential development) at some point in the future. There are, however, a number of planning processes that must first occur. These include:-

- 1) Lifting the Urban Deferment by the Western Australian Planning Commission, demonstrating the land can be appropriately serviced and planning for the area is sufficiently completed;
- 2) Preparation of a District Level Structure Plan, which identifies locations for the road network and high order services (schools, shopping centres etc);
- 3) Local Structure Planning; and
- 4) Subdivision and development."

The Western Australia Planning Commission (WAPC) has advised that no application for subdivision approval has been received. Given that the lifting of the urban deferment and additional planning requirements have not been undertaken, the end land use is considered temporary (sand extraction).

It should also be noted that when considering relevant matters under section 51O(4), DEC will not pre-empt the planning process for developments that do not have approved subdivision plans or an approved outline development plan. Schedule 6, Clause 9 of the EP Act provides an exemption for clearing done in accordance

with a subdivision that is approved under the Planning and Development Act 2005.

Additional information was received on behalf of the applicant in response to DEC's letter dated 2 September 2010. This has been acknowledged and information has been incorporated into the assessment report where relevant. The applicant has stated that the proposal has been 'misrepresented' on the application form. The purpose of the clearing will be solely for sand extraction and no future residential development plans have been applied for, or are intended to be applied for in the short term (Submission, 2010).

The applicant referred the proposal to the Federal Department of Environment, Water, Heritage and the Arts (DEWHA) due to the sites potential for Carnaby's black cockatoo habitat. The referral was submitted 2 June 2010 (ENV, 2010).

Methodology ENV (2010)
Submission (2010)

4. References

- CALM (2002) Department of Conservation and Land Management, An Atlas of Tuart Woodlands on the Swan Coastal Plain in Western Australia.
- ENV Australia Pty Ltd (2010) Lots 2-4 Harvey Road, Karnup, Sand Mining Project, Application For A Native Vegetation Clearing Permit (Area Permit), Supporting Document. DEC Ref: A315830
- 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.
- 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. (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.
- Submission (2010) DEVX Pty Ltd, Sandmining at Lots 2-4 Harvey Road, Karnup. DEC Ref: A333078.

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)