GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 5103/1
File Number: 2012/004094
Duration of Permit: From 14 September 2012 to 14 September 2014

PERMIT HOLDER

Martin Theodore Coufos
Adrian Stanley Coufos
Anastassia Coufos
John Theodore Coufos
Brantoss Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 2 on Diagram 47425, Gabbadah

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 20 hectares of native vegetation within the area hatched yellow on attached Plan 5103/1.

CONDITIONS

1. **Dieback and 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* and *dieback*:
   (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
   (b) shall only move soils in *dry conditions*;
   (c) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
   (d) 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:

dieback means the effect of *Phytophthora* species on native vegetation;

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

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; and

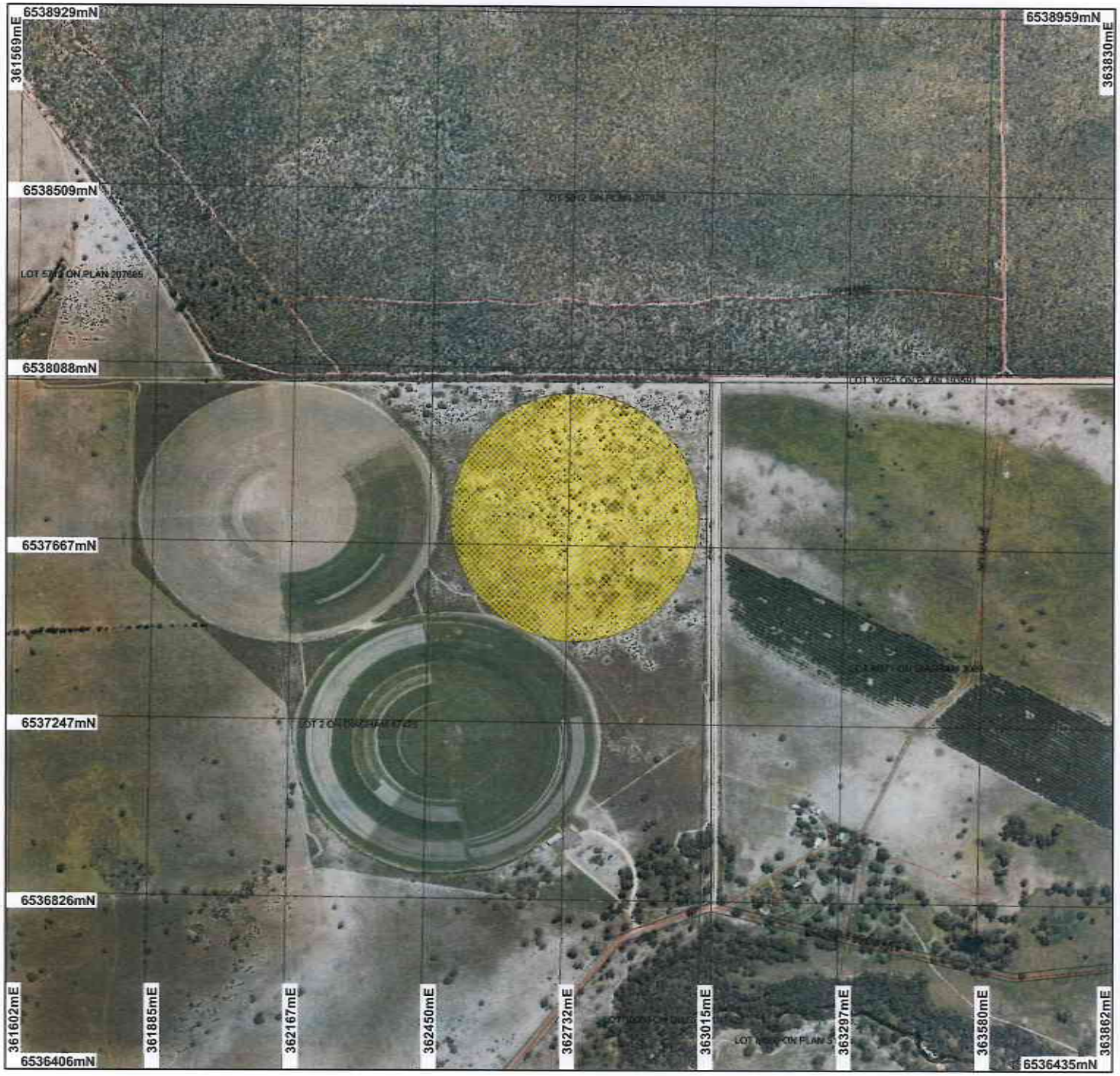
weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.

M Warnock
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

Officer delegated under Section 20
of the Environmental Protection Act 1986

23 August 2012

Plan 5103/1



LEGEND

Cadastre

- Freehold
- Crown Reserve
- State Forest / Timber Reserve
- Marine Park
- Crown Lease
- Lease / Reserve
- Lease on State Forest / Timber Reserve
- Public Roads
- Unallocated Crown Land
- Water

Road Centrelines

Clearing Instruments

Areas Approved to Clear

Gingin 50cm Orthomosaic - Landgate 2008

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

N

0 ~300 m

Scale 1:11909

(Approximate when reproduced at Letter)

Geocentric 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 23/8/12

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

Our environment, our future

Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5103/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Martin Theodore Coufos

1.3. Property details

Property: LOT 2 ON DIAGRAM 47425 (Lot No. 2 INDIAN OCEAN GABBADAH 6041)
Local Government Area: Shire of Gingin
Colloquial name:

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 23 August 2012

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
The vegetation under application has been mapped as Heddle Vegetation Cottesloe Complex North consisting of Low Open Forest and Low Woodland of Banksia attenuata (Slender Banksia), Banksia menziesii (Firewood Banksia), and Eucalyptus todtiana (Pricklybark) (Heddle et al, 1980). Mapped Beard Vegetation Association 949 is described as Low Woodland consisting of Banksia species (Shepherd et al, 2001)	This application proposes to clear up to 20 hectares of native vegetation within Lot 2 on Diagram 47425, for the purpose of pivot irrigation. The vegetation consists of Eucalyptus todtiana and Acacia saligna over scattered Xanthorrhoea preissii, Banksia sp. and an understory consisting of Hibbertia sp, Acacia pulchella and Jacksonia sternbergiana with some grassy weeds. There is evidence of vehicle tracks throughout the application area with significant weed invasion occurring (DEC, 2012).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition of the vegetation was obtained 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 20 hectares of native vegetation within Lot 2 on Diagram 47425, for the purpose of pivot irrigation. The vegetation consists of Eucalyptus todtiana and Acacia saligna over scattered Xanthorrhoea preissii, Banksia sp. and an understorey consisting of Hibbertia sp, Acacia pulchella, and Jacksonia sternbergiana. Vehicle tracks occur throughout the application area which is subject to significant weed invasion (DEC, 2012). The vegetation is in a degraded (Keighery, 1994) condition.

Several priority flora species have been recorded in the local area (10km radius). Of these, two species - Conostylis bracteata and Pimelea calcicola have been recorded within similar vegetation types, soil types and/or topography. Both species have a preference for yellow sandy soils (Western Australian Herbarium, 1998). This soil type is consistent with that of the area under application, however due to the disturbed nature of the application area and the better condition of the surrounding vegetation, it is unlikely that these species occur within the application area.

There are no priority ecological communities mapped within the local area (10km radius).

A Carnaby's Cockatoo confirmed breeding area is mapped within the proposed clearing. This species is

classified as 'rare or likely to become extinct' under the Wildlife Conservation Act 1950. Trees with significant hollows were not observed within the application area and it is unlikely that the vegetation supports nesting habitat for this species. Several Banksia species were observed within the application area, which are known to provide foraging habitat for Carnaby's Cockatoo's and Forest Red-tailed Black Cockatoo's.

The local area (10km) surrounding the application has approximately 60 per cent of its pre-European vegetation remaining.

Given that the local area (10km radius) has a high level of vegetation remaining, and the vegetation under application is in a degraded (Keighery, 1994) condition, with no primary habitat trees, the proposed clearing is not likely to comprise of a high level of biodiversity. Therefore, the application is not likely to be at variance to this Principle.

Methodology

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

GIS Databases:
-NLWRA, Current Extent of Native Vegetation
-SAC Biodatasets (Accessed August 2012)
-NatureMap
-Pre European Vegetation
-Soils, statewide
-Heddle Vegetation

(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

Several fauna species of conservation significance have been recorded within the local area (10km), including Synemon gratiosa (Graceful Sunmoth), Neelaps calonotos (Black-striped Snake), Macropus irma (Western Brush Wallaby), obesulus subsp. fusciventer (Quenda), Calyptorhynchus banksii subsp. naso (Forest Red-tailed Black Cockatoo), and Calyptorhynchus latirostris (Carnaby's Cockatoo).

Black cockatoos were observed flying overhead during a site inspection of the application area. This species has a significant portion of its diet made up of 'seeds of hakeas, banksias, grevilleas and eucalypts' (Burbidge, 2004). Scattered Banksia species were recorded within the application area and may provide feeding habitat for both the Carnaby's Cockatoo and the Forest Red-tailed Black Cockatoo.

A Carnaby's Cockatoo confirmed breeding area is mapped within the application area, however no primary habitat trees were observed during a site inspection. Numerous wallaby and quenda scats and tracks were observed throughout the area of proposed clearing (DEC, 2012).

The application area lies in close proximity to better condition vegetation in the adjacent Gnangara-Moore River State Forest, which is likely to provide greater habitat values. There is approximately 55 per cent vegetation remaining in the Shire of Gingin (Government of Western Australia, 2011) and approximately 60 per cent within the local area (10km radius). Therefore the application area is unlikely to provide significant habitat for indigenous fauna.

Given the above, the proposed clearing is not likely to be at variance to this Principle

Methodology

References:
-DEC (2012)
-Government of Western Australia (2011)
-Burbidge (2004)

GIS Databases:
-SAC Biodatasets - Accessed 13/07/2012
-NatureMap
-NLWRA, Current extent of native vegetation

(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

One known record of rare flora species, Chorizema varium, occurs within the local area. This species has been mapped approximately 8.9km west of the application area on a different soil and vegetation type.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
-Western Australian Herbarium (1998)

GIS Databases:
-Soils, Statewide
-Pre-European Vegetation
-Heddle Vegetation

(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**
One Threatened Ecological Community (TEC) has been mapped approximately 9.3km south of the applied area and is known as SCP26a Melaleuca huegelii acerosa shrublands on limestone ridges.

The application area consists of Eucalyptus todtiana and Acacia saligna over scattered Xanthorrhoea preissii, Banksia sp. and an understorey consisting of Hibbertia sp, Acacia pulchella, and Jacksonia sternbergiana (DEC, 2012).

The vegetation under application is not representative of the mapped TEC and therefore the proposed clearing is not likely to be at variance to this Principle.

Methodology References:
-DEC (2012)

GIS Databases:
-SAC Biodatasets (Accessed August 2012)
-Pre European Vegetation
-Heddle Vegetation

(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 local area (10km) surrounding the application site has approximately 60 percent of its pre-European vegetation remaining.

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 shire and vegetation complexes shown below all retain greater than 40 per cent native vegetation (Government of Western Australia, 2011).

Given the vegetation representation within the local area and the vegetation in better condition located in the adjacent Gnangara-Moore River State Forest, it is unlikely that the vegetation under application is significant as a remnant in an extensively cleared landscape and is therefore not likely to be at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,209	587,889	39.1	33.3
Shire*				
Shire of Gingin	319,671	117,340	55.48	42.95
Beard Vegetation Association in Bioregion				
949	209,983	121,248	57.74	51.63
Heddle Vegetation Complex				
Cottesloe Complex Central and South	44,995	18,474	41.1	8.8

Government of Western Australia (2011)

Methodology References:
-Government of Western Australia (2011)

-Commonwealth of Australia (2001)
GIS Databases:
-NLWRA, Current Extent of Native Vegetation

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

Comments

Proposal is not likely to be at variance to this Principle

The local area (10km radius) has a number of wetlands, the closest being a Resource Enhanced semeniuk sumpland and palusplain mapped 500m and 700m south of the application area respectively. Moore River is located approximately 1km south of the application area.

There are no visible wetlands or watercourses on site, and the vegetation communities within the application area are not representative of vegetation associated with watercourses or wetlands (DEC, 2012).

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:
-DEC (2012)

GIS Databases:
-Geomorphic wetlands (Management Categories)
-Hydrography, linear
-Hydrography, linear (Hierarchy)

(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 at this site have been mapped as bleached sands and light grey sands to a depth of between 90 and 150cm overlaying pale yellow to yellow sand (Commissioner of Soil and Land Conservation, 2012).

The Commissioner of Soil and Land Conservation (2012) advises that the risk of wind erosion is low and can be controlled with good management practices.

The sandy soils within the application area are well drained and therefore water erosion is unlikely.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:
-Commissioner of Soil and Land Conservation (2012)

GIS Databases:
-SAC Biodatasets (Accessed August 2012)
-Soils, Statewide
-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 may be at variance to this Principle

The closest mapped conservation reserve is the Gnangara-Moore River State Forest located 25m north of the proposed clearing area. The vegetation under application may provide an ecological linkage between the State Forest and the Moore River located 1km south. The removal of 20 hectares of native vegetation in a degraded (Keighery, 1994) condition between these two areas has the capacity to fragment this linkage.

The vegetation under application may provide some buffering capacity against the spread of weeds and dieback into the State Forest. Weed and dieback management practices will assist in minimising the effects of clearing on the State Forest.

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

Methodology

Reference:
-Keighery (1994)
GIS Databases:
-DEC Tenure
-Hydrogrpahy, linear (hierachy)

(I) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

Comments

Proposal is not likely to be at variance to this Principle

The closest wetlands to the application area include a Resource Enhanced semeniuk sumpland and palusplain mapped 500m and 700m south of the application area respectively. Moore River is located approximately 1km south of the application area.

It is unlikely the proposed clearing will result in the deterioration of surface water given the soil types present and the lack of surface water flow to the Moore River.

The groundwater salinity on site is considered marginal and ranges from 500 to 1000mg/L. Given the soil types present, and the degraded (Keighery, 1994) condition of the vegetation, it is unlikely that the proposed clearing will cause deterioration in groundwater.

Given the above the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:
-Commissioner of Soil and Land Conservation (2012)

Gis Databases:
-Hydrography linear,
-Groundwater Salinity

(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

Water logging is unlikely due to the well drained soil types present within the application area (Commissioner of Soil and Land Conservation, 2012).

Given the above the removal of native vegetation is not likely to exacerbate the intensity of flooding, therefore the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:
-Department of Agriculture (2012)

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

Comments

The application area is zoned 'rural' under the Town Planning Scheme.

No submissions from the public have been received.

Planning Approval has been granted subject to conditions (Shire of Gingin, 2012).

The Commissioner of Soil and Land Conservation (2012) identified that the risk of eutrophication causing land degradation is low, and no significant change is to be expected if a suitable nutrient monitoring and testing program is employed.

The application area falls within the Priority 2 Sovereign Hill Water Reserve Drinking Water Source Area. The Department of Water has advised that increased fertiliser use may increase the risk of pollution to the water source (DoW, 2012). A suitable Nutrient Irrigation and Plan will minimise the effects of nutrient contamination into the water source area.

As requested by DEC the applicant has provided a Nutrient Irrigation and Management Plan (NIMP).This NIMP was prepared for 2 previous pivot irrigation systems. The same practices outlined in this NIMP will be employed for the newly proposed pivot irrigation.

Methodology

References:
-Department of Water (2012)
-Shire of Gingin (2012)
-Department of Agriculture and Food (2012)

Gis Databases:
-Town Planning Scheme Zones

4. References

Burbidge, A.A., McKenzie, N.L., Kenneally, K.F. (1991) Nature Conservation Reserves in the Kimberley WA, Department of Conservation and Land Management.

Commissioner of Soil and Land Conservation (2012) Site Inspection Report for Clearing Permit Application CPS 5103/1, Lot 2 on Diagram 47425, Gabbadah. Site Inspection undertaken 29/06/2012. DEC Ref A522465

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

DEC (2012) Site Inspection Report for Clearing Permit Application CPS 5103/1, Lot 2 on Diagram 47425, Gabbadah. Site Inspection undertaken 17/07/2012.

Department of Water (2012) Additional Information for CPS 5103/1, Lot 2 on Diagram 47425, Gabbadah. DEC Ref: A519071

Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.

Heddle, 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.

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 Gingin (2012) Additional Information for CPS 5103/1, Lot 2 on Diagram 47425, Gabbadah. DEC Ref: A519588

Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.dec.wa.gov.au/ (Accessed August 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)