



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 4163/1
File Number: 2011/000204-1
Duration of Permit: From 11 April 2011 to 11 April 2017

PERMIT HOLDER

Gregory Ross Mader
Irene Therese Mader

LAND ON WHICH CLEARING IS TO BE DONE

Lot 8295 on Deposited Plan 201621

AUTHORISED ACTIVITY

- (a) The Permit Holder shall not clear more than 6 hectares of native vegetation within the area cross-hatched yellow on attached Plan 4163/1.
- (b) Clearing shall be conducted from north to south

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.

2. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the area(s) shall be inspected by a *fauna specialist* who shall identify tree(s) that contain hollows suitable to be utilised as *habitat tree(s)* by fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice 2010(2)*.
- (b) Prior to clearing, any *habitat tree(s)* identified by condition 2(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in the *Wildlife Conservation (Specially Protected Fauna) Notice 2010(2)*.
- (c) Within one week prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna clearing person* to remove and relocate fauna identified under condition 2(b).

3. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) Within twelve months of clearing any area authorised under this Permit, the Permit Holder must *revegetate* and *rehabilitate* the area cross-hatched red on attached Plan 4163/1 by:
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
 - (ii) ripping the ground on the contour to remove soil compaction; and
 - (iii) ripping the pit floor and contour batters within the extraction site; and
 - (iv) deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area; and

- (v) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.
- (b) Within twelve months of undertaking *revegetation* and *rehabilitation* in accordance with condition 3(a) of this Permit, the Permit Holder must:
 - (i) determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 3(b)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, the Permit Holder must undertake additional *planting* or *direct seeding* of native vegetation in accordance with the requirements of condition 3(a)(i) and (ii) of this Permit.
- (c) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 3(b)(ii) of this permit, the Permit Holder shall repeat condition 3(b)(i) and 3(b)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
- (d) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 3(b)(i) and (ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 3(b)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 3(b)(ii).

4. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to fauna management pursuant to condition 2 of this Permit:
 - (i) the location of each tree that contains hollows, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) the species name of fauna reasonably likely to utilise, or that have been observed utilising, the trees that contain hollows;
 - (iii) the location of surrogate trees for relocation with vacant hollows, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
 - (iv) the location and date where relocated fauna was released, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees.
- (b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 3 of this Permit:
 - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
 - (v) a copy of the environmental specialist's report.

5. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
 - (i) of records required under condition 4 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 11 January 2017 the Permit Holder must provide to the CEO a written report of records required under condition 4 of this Permit where these records have not already been provided under condition 5(a) of this Permit.

DEFINITIONS

The following meanings are given to terms used in this Permit:

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

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

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

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

fauna clearing person means a person who has obtained a licence from the Department, issued pursuant to the *Wildlife Conservation Regulations 1970* authorising them to take fauna;

fauna specialist means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

fill means material used to increase the ground level, or fill a hollow;

habitat tree(s) means trees that have a diameter, at average adult human chest height, of greater than 70cm, healthy but with dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna, or where these are not present then healthy but with the potential to contain hollows and roosts;

local provenance means native vegetation seeds and propagating material from natural sources within 20 kilometres of the area cleared.

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;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as natural *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.

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*.

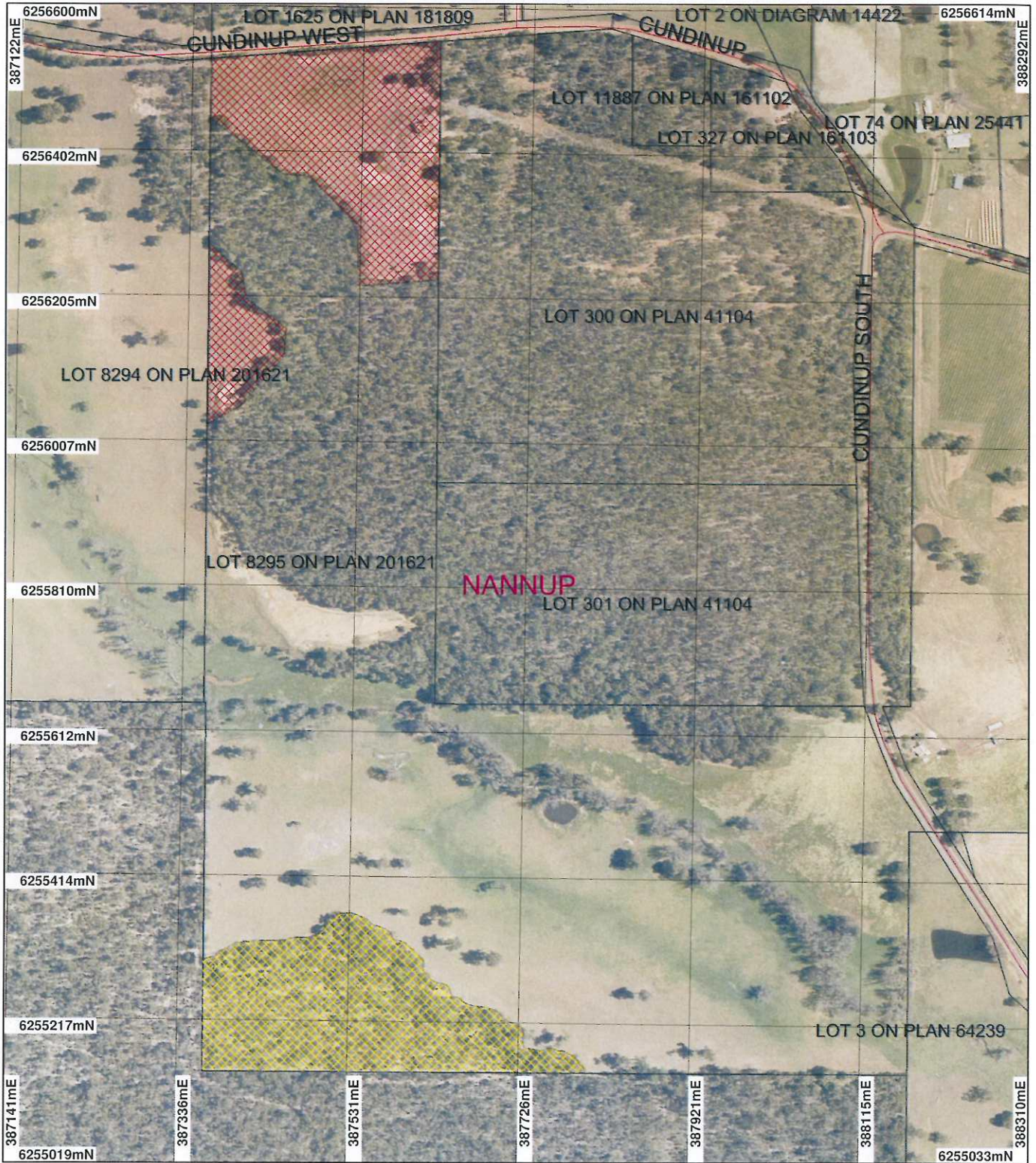


Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

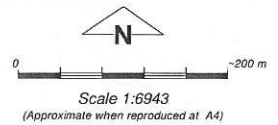
17 March 2011

Plan 4163/1



LEGEND

- Cadastre Clearing Instruments
- Areas Subject to Conditions
- Areas Approved to Clear
- Local Government Authorities
- Road Centrelines
- Donnybrook 50cm Orthomosaic - Landgate 2004



Geocentric Datum Australia 1994

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

[Signature]
Date 27/3/11

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.



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1. Application details

1.1. Permit application details

Permit application No.: 4163/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Gregory Ross and Irene Therese Mader

1.3. Property details

Property: LOT 8295 ON PLAN 201621 (CUNDINUP 6275)
Local Government Area: Shire of Nannup
Colloquial name:

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 17 March 2011

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: Beard 3: Medium forest; jarrah-marri (Shepherd, 2009)	The vegetation under application is described as mature marri/jarrah forest.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994)	Vegetation condition was determined from aerial imagery (Donnybrook 50cm Orthomosaic - Landgate 2004) and photographs provided by the applicant (Mader, 2011).
Mattiske Vegetation Complex: Blackwood (Bk) - Open forest of <i>Corymbia calophylla</i> - <i>Eucalyptus marginata</i> subsp. <i>marginata</i> on the variable slopes in perhumid and humid zones. Telarah (TL) - Low open woodland of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Corymbia calophylla</i> - <i>Allocasuarina fraseriana</i> - <i>Xylomelum occidentale</i> - <i>Banksia illicifolia</i> on slopes in perhumid and humid zones. (Mattiske and Havel, 1998)	The application area has been historically grazed (Mader, 2011) and is considered to be in degraded (Keighery, 1994) condition. Photographs supplied by the applicant indicate the vegetation under application retains little to no native understorey.		
Heddle Vegetation Complex: Kingia Complex (Heddle et al., 1980)	The proposal is to expand the farming area in the southern portion of the property, where there is high quality soil suitable for many types of intensive agriculture, and rehabilitate an area of approximately 6 hectares on the northern part of the block which has been previously used for gravel extraction (Mader, 2011).		

3. Assessment of application against clearing principles

Comments

The proposal is to clear 6 hectares of remnant vegetation from Lot 8295 on Deposited Plan 201621, Cundinup for the purpose of increasing the availability of quality farming land.

The vegetation is described as mature Jarrah-Marri over storey in degraded (Keighery, 1994) condition with little to no native mid or under storey species remaining due to historical grazing.

The local area (10km radius) is approximately 70% vegetated and the vegetation to be cleared is well represented in the Jarrahwood and Mullalyup State Forests within the local area.

There are records of five threatened or priority fauna species recorded within a 10km radius.

The vegetation under application is likely to provide feeding and roosting habitat to Carnaby's black cockatoo (*Calyptorhynchus latirostris*) (Endangered, Wildlife Conservation Act 1950; Endangered, Environment Protection and Biodiversity Conservation Act 1999), Forest Red-tailed black cockatoo (*Calyptorhynchus banksii*

naso) (Vulnerable, Wildlife Conservation Act 1950; Vulnerable, Environment Protection and Biodiversity Conservation Act 1999) and Baudin's black cockatoo (*Calyptorhynchus baudinii*) (Endangered, Wildlife Conservation Act 1950; Vulnerable, Environment Protection and Biodiversity Conservation Act 1999). Photographs of the application area supplied by the applicant (Mader, 2011) indicate the presence of some large, mature Jarrah and Marri trees within the application area, which may also provide potential nesting habitat for the three black cockatoo species.

The Brush-tailed Phascogale (*Phascogale tapoatafa tapoatafa*) (Vulnerable, Wildlife Conservation Act 1950) is primarily arboreal and generally inhabits dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover (DEC, 2006). The vegetation under application may provide suitable habitat for this species.

The applicant has provided a 6.96 hectare area for rehabilitation in order to mitigate potential impacts of the clearing on fauna. Fauna management conditions will minimise the impact of the proposed clearing.

Due to the degraded (Keighery, 1994) condition and lack of native understorey the vegetation under application is unlikely to provide significant habitat for local ground dwelling fauna such as Chuditch and Western brush wallaby.

The application area is in close proximity to large areas of higher quality vegetation in the adjacent Jarrahwood State Forest and is not considered to be significant as habitat for indigenous fauna at the local or regional scale. Conditions to conduct clearing activities in such a way that the animals have an opportunity to disperse into the adjacent State Forest will reduce the impact of the proposed clearing on local fauna, as will taking care when removing large hollow logs on the ground

The Jarrahwood State Forest adjoins the application area to the west and south and to the north also extends to within 2km of the application area. The loss of the vegetation under application would expand the area of alienated land and make a larger habitat gap between forested areas to the west and south and the remaining patchwork of remnant forest to the north and northeast.

The proposed clearing is not likely to impact on flora of conservation significance, nor is it likely to impact on water quality, increase the risk or intensity of flooding.

The removal of native vegetation may slightly increase the risk of eutrophication, wind erosion and water logging on the property, however appreciable land degradation is unlikely to occur due to the soil types present and the lack of sufficient land slope (DAFWA, 2011). The area proposed to be cleared is also protected by existing vegetation of the western and southern sides (DAFWA, 2011).

Soil disturbance and removal of native vegetation increases the risk of weeds and pathogens, such as dieback (*Phytophthora cinnamomi*), being introduced or spread to the application area and surrounding environment. As the application area is in a high (1000mm) rainfall area, soil disturbance and the movement of machinery pose a high risk of introducing or spreading dieback to the area under application, as well as the surrounding environment which includes the neighbouring Jarrahwood State Forest. Maintaining an adequate buffer of vegetation adjacent to the Jarrahwood State Forest would lessen the impacts of weeds from the cleared area into the forest. In addition, weed and dieback management conditions will contribute to minimising this risk.

There are no known threatened ecological communities in the local area.

Considering the above, the proposed clearing may be at variance to Principles (b) and (h) and is unlikely to be at variance to the remaining clearing principles.

Methodology

References:

DAFWA, 2011

DEC, 2006

Keighery, 1994

Mader, 2011

GIS Databases:

- Acid Sulfate Soils Risk Map - DEC 02/07/10
- ANCA, Wetlands - 26/03/99
- DEC Managed Lands & Waters - DEC 28/10/09
- Donnybrook 50cm orthomosaic - Landgate 2004
- Evapotranspiration, Area Actual - BOM 30/09/01
- Groundwater Salinity, statewide - DoW 13/07/06
- Hydrogeographic Catchments, Catchments - DoW 01/06/07
- Hydrogeology, statewide - DoW 13/07/06
- Hydrography, linear DoW 13/7/06
- Rainfall, Mean Annual - BOM 30/09/01
- Pre-European vegetation - DA 01/01
- RAMSAR, Wetlands - 15/10/09
- SAC Biodatasets - 04/02/11
- Soils, Statewide - 30/11/99

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

Comments

The applicant intends to rehabilitate an area of approximately 6.96 hectares at the northern part of the property in order to mitigate the proposed removal of 6 hectares of remnant vegetation (Mader, 2011). This area appears to be open farming land and the applicant has advised that it has also been degraded by gravel extraction (Mader, 2011). Rehabilitation will include levelling the site, tidying the debris by raking and burning, and then by covering with topsoil. The site will then be replanted with a variety of plant species (trees and shrubs) native to the region (Mader, 2011).

The application area is zoned rural.

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

Methodology

References:

Mader, 2011

GIS Databases:

- Aboriginal Sites of Significance - DIA 02/10
- Cadastre - Landgate 12/09
- Country Area Water Supply Act (Part IIA) Clearing Control Catchments - DoW 29/06/06
- Environmental Impact Assessments - EPA 08/03/05
- Native Title Claims - LA 02/5/07
- Public Drinking Water Source Areas (PDWSAs) - DoW 07/02/06
- RIWI Act, Areas - DoW 05/04/02
- RIWI Act, Groundwater Areas - DoW 13/07/06
- RIWI Act, Irrigation Districts - DoW 13/07/06
- Town Planning Scheme Zones - MFP 31/08/98

4. References

- DAFWA (2011) Land degradation assessment report for application for a clearing permit for Lot 8295 on Deposited Plan 201621, Cundinup. Commissioner of Soil and Land Conservation. Department of Agriculture and Food Western Australia. Received 14/03/2011. DEC Ref: A379664
- DEC (2006) NatureBase - Fauna Species Profile: Brush-tailed Phascogale. Department of Environment and Conservation, Western Australia. Available at <http://www.naturebase.net/content/view/840/1288/>. Accessed 21/02/2011.
- 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.
- Mader (2011) Clearing permit application CPS 4163/1 - Supporting information. DEC Ref: A361050; A367918
- 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.
- 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.

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)