GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number: 4885/1
File Number: 2012/000970-1
Duration of Permit: From 8 June 2012 to 8 June 2014

PERMIT HOLDER
Tuanie Paul Galea
Sarah Jane Galea

LAND ON WHICH CLEARING IS TO BE DONE
Lot 10287 on Deposited Plan 203111, CROWEA

AUTHORISED ACTIVITY
The Permit Holder shall not clear more than 4 hectares of native vegetation within the area hatched yellow on attached Plan 4885/1.

CONDITIONS

1. 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*:

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
(b) ensure that no *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
(c) 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:

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;

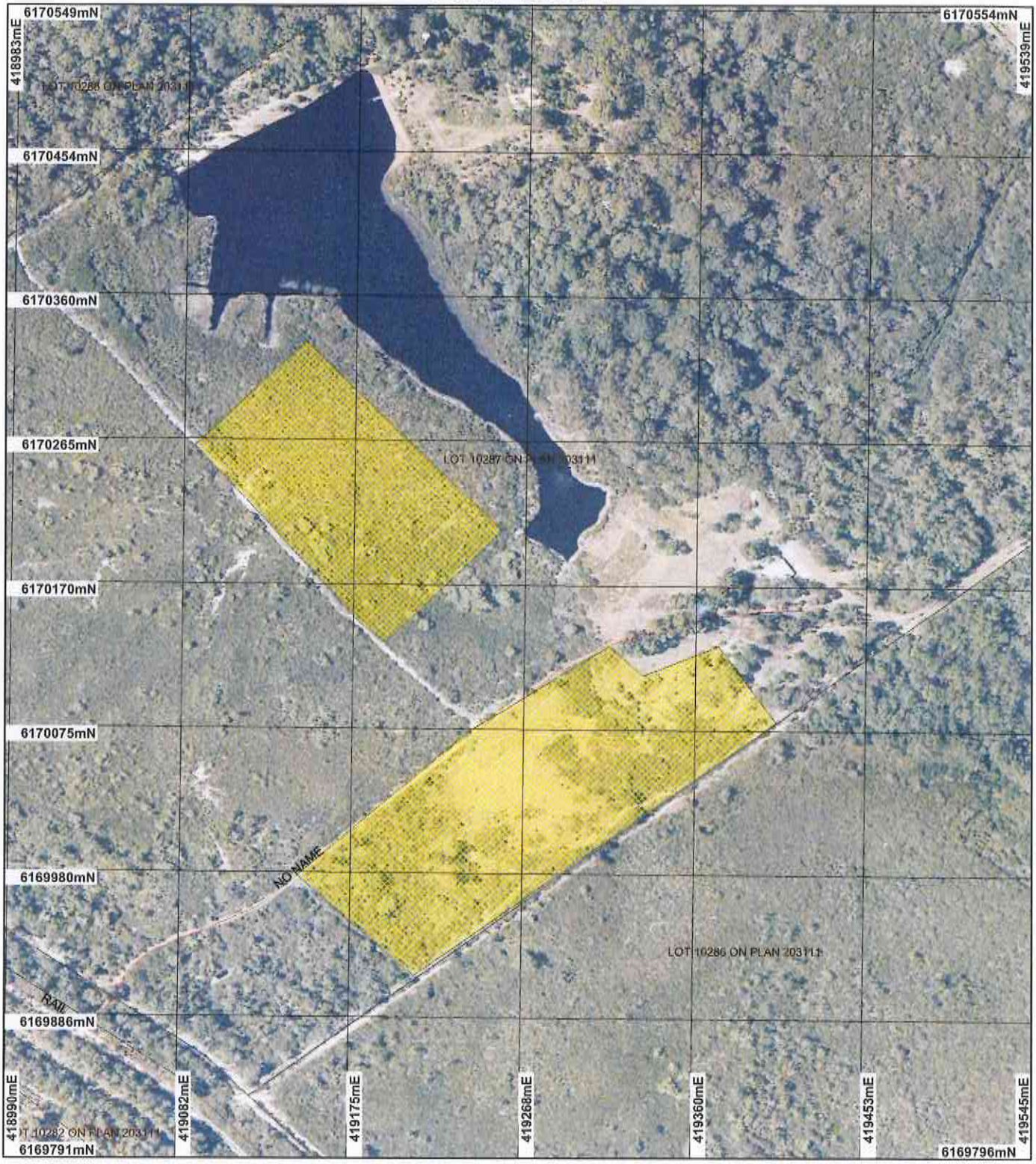
weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.

Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

Officer delegated under Section 20
of the Environmental Protection Act 1986

17 May 2012

Plan 4885/1



LEGEND

- Road Centrelines
- Cadastre for labelling
- Freehold
- Crown Reserve
- State Forest / Timber Reserve (cont)
- Marine Park
- Crown Lease
- Lease / Reserve
- Lease on State Forest / Timber Reserve
- Public Roads
- Unallocated Crown Land (cont)
- Water
- Clearing Instruments
- Areas Approved to Clear
- Northcliffe 50cm Orthomosaic - Landgate 2007

N

0 75 m

Scale 1:3319
(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.

K. Faulkner Date 17/5/12

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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Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4885/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Tuanie Paul and Sarah Jane Galea

1.3. Property details

Property: LOT 10287 ON PLAN 203111 (House No. 177 RAIL CROWEA 6258)
Local Government Area: Shire fo Manjimup
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
		Mechanical Removal	Hazard reduction or fire control
4		Mechanical Removal	Grazing & Pasture

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 17 May 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
Beard vegetation associations: 3 is described as - Medium forest; jarrah-marri 1 is described as -Tall forest Karri 23 is described as - Low woodland; Jarah - Banksia Mattiske vegetation complex A - Open forest of Eucalyptus marginata subsp. marginata-Banksia ilicifolia-Nuytsia floribunda with some Eucalyptus diversicolor on gently sloping sandy terrain in hyperhumid and perhumid zones. Mattiske vegetation complex S1 - Tall open forest of Eucalyptus diversicolor-Corymbia calophylla on slopes with some Eucalyptus patens and Eucalyptus megacarpa on valley floors in hyperhumid and perhumid zones. (Shepherd 2009, 2007).	The proposed clearing of 4 ha is for the purpose a stock paddock and fire hazard reduction. The northern portion (approximately 1.5 ha) of the vegetation under application consists of open heath of tea tree species in an excellent (Keighery 1994) condition (DEC 2012). The southern portion (approximately 2.5 ha) consists of scattered Blackbutt (Eucalyptus patens) regrowth and open heath of tea tree species in a degraded to good (Keighery 1994) condition (DEC 2012).	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994) Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994) To Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition of the vegetation was established through a site visit undertaken by DEC officers on the 12 March 2012 (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 may be at variance to this Principle

The northern portion (approximately 1.5 ha) of the vegetation under application consists of open heath of tea tree species in an excellent (Keighery 1994) condition (DEC 2012). The southern portion (approximately 2.5 ha) consists of scattered Blackbutt (Eucalyptus patens) regrowth and open heath of tea tree species in a

degraded to good (Keighery 1994) condition (DEC 2012).

The proposed clearing area does not provide habitat for rare or priority flora or threatened ecological communities (TEC).

The application area may contain suitable habitat for the Quenda (Isoodon obesulus fusciventer) and Quokka (Setonix brachyurus). However, no evidence of these species was identified during a site visit (DEC 2012). In addition, as the vegetation is well represented (approximately 70%) within 10km of the application area, it is unlikely that the removal of the vegetation will have a significant impact to both the Quenda and Quokka.

The site visit identified wetland vegetation occurring within the northern portion of the vegetation under application consisting of open heath of tea tree species in an excellent (Keighery 1994) condition (DEC 2012). The application area is likely to become seasonally inundated in the winter months.

Given the excellent (Keighery 1994) condition of the wetland dependent vegetation within the application area, it may be considered for the area under application to comprise of a high level of biological diversity. Therefore, the proposed clearing may be at variance to this Principle.

Methodology

References
-DEC (2012)
-Keighery (1994)
-NatureBase (2012)
GIS Databases
-SAC Bio Datasets (3 March 2012)
-Pre-European Vegetation
- NLWRA, Current Extent of Native 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

Twelve conservation significant fauna species have been recorded within the local area including Calamoecia elongata, Baudin's Cockatoo (Calyptorhynchus baudinii), Daphnia occidentalis, Short- nosed snake (Elapognathus minor), peregrine falcon (Falco peregrinus subsp. macropus), Western Mud minnow (Galaxiela munda), Water-rat (Hydromys chrysogaster), Quenda (Isoodon obesulus subsp. fusciventer), Little Bittern (Lxobrychus balstoni) and the Quokka (Setonix brachyuryus) (DEC, 2007-).

The northern portion of the vegetation under application consists of dense heath of tea tree species in an excellent (Keighery 1994) condition (DEC 2012). The southern portion (approximately 2.5 ha) consists of scattered Blackbutt (Eucalyptus patens) regrowth and open heath of tea tree species in a degraded to good (Keighery 1994) condition (DEC 2012).

The application area contains suitable habitat for the Quenda (Isoodon obesulus fusciventer) and Quokka (Setonix brachyurus). However, no evidence of these species was identified during a site visit (DEC 2012). As the vegetation is well represented (approximately 70%) within 10km of the application area, it is unlikely that the removal of the vegetation will have a significant impact to either the Quenda or Quokka.

Given this, the application area is unlikely to consist of significant fauna habitat and therefore the proposed clearing is not likely to be at variance to this Principle.

Methodology

References
- DEC (2007)
-DEC (2012)
-Keighery (1994)

(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 rare flora species was recorded within the local area (10 km radius) being Myriophyllum trifidum. This species was located 5.5 km west of the application area.

The northern portion of the vegetation under application consists of open heath of tea tree species in an excellent (Keighery 1994) condition (DEC 2012). The southern portion consists of scattered Blackbutt (Eucalyptus patens) regrowth in a degraded (Keighery 1994) condition (DEC 2012).

A site visit of the application area did not identify preferred habitat for this species (DEC 2012).

Therefore, it is not considered for the application area to include, or is necessary for the existence of, rare flora.

The proposed clearing is not likely to be at variance to this Principle

Methodology

References
-DEC (2012)
-Keighery (1994)
GIS Databses
-SAC Bio datasets (2 March 2012)

(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

The nearest threatened ecological community (TEC) has been mapped approximately 10km away from the application area.

Given the distance from the TEC to the area under application it is unlikely that removal of the vegetation within the application to have significant impacts to the known TEC, therefore it is not likely to be at variance with this principle.

Methodology

GIS Databses
-SAC Bio datasets (2 March 2012)

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments

Proposal is not likely to be at variance to this Principle

The proposed clearing area occurs within the Warren IBRA bioregion with 80% of pre-European vegetation remaining.

In addition, the Beard and Mattiske vegetation associations/complexes recorded within the application area retain more than the threshold level (30%) of pre-European vegetation extent recommended in the National Objectives Targets for Biodiversity Conservation, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia 2001).

The application area does not occur within an extensively cleared landscape as approximately 70% of remnant vegetation remains in the local area (10 km radius) and 84% remains in the Shire of Manjimup.

Therefore, the proposal is not likely to be at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)
IBRA Bioregion*			
Warren	833982	667165	80
Shire*			
Shire of Manjimup	687371	589249	84
Beard Vegetation Association in Bioregion*			
3	2661088	1862948	70
1	72,204	58,054	80
23	40,827	30,825	76
Mattiske Vegetation Complex **			
A	39,698.49	35,683.22	89.89
S1	25,513.68	22,291.73	87.37
Shepherd 2009*			
Shepherd 2007**			

Methodology

References
-Commonwealth of Australia (2011)
- Shepherd (2009)
- Shepherd (2007)
GIS databses
- Pre-European Vegetation
- 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 at variance to this Principle

A perennial watercourse and an in stream dam occurs 10 to 35 metres to the northwest boundary of the application area.

The site visit identified wetland vegetation occurring within the northern portion of the vegetation under application consisting of open heath of tea tree species in an excellent (Keighery 1994) condition (DEC 2012). The application area is likely to become seasonally inundated in the winter months.

Aerial photography indicates that application area falls within an extensive wetland (~300ha). The clearing of approximately 1.5 ha of wetland vegetation in excellent (Keighery 1994) condition (DEC 2012) (remainder in degraded to good (Keighery 1994) condition), is not likely to impact significantly on the hydrology of the remaining area of the wetland.

Given the above the vegetation under application is growing in, or in association with, a wetland or watercourse and therefore is at variance to this principle.

Methodology

References
-DEC (2012)
-Keighery (1994)
GIS Databases
-Hydrography, linear
- Northcliffe 50cm Orthomosaic - Landgate 2007

(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

Chief soils of the application area consists of hard, and also sandy, neutral, and also acidic, yellow and yellow mottled soils with conspicuous but relatively smaller areas of red earths (Northcote et al. 1960-68).

Site visit photos show sandy clay soils within tea tree vegetation type and white sandy soils within the degraded Blackbutt (Eucalyptus patens) vegetation type (DEC 2012).

The proposed clearing is 10 to 35 m away from the bank of the existing dam. Given this and the relatively small area proposed to be cleared (4ha) it is not considered for the proposed clearing to cause bank instability, sedimentation or soil erosion.

Therefore, the proposed clearing in not likely to be at variance to this Principle.

Methodology

References
-DEC (2012)
-Northcote et al (1960-68)
GIS Databases
-Soils, statewide
-Hydrography, linear

(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

Five conservation areas occur within the local area (10 km radius) of the proposed clearing, including Hawke National Park occurring 2.4 km northwest, Gardner State Forest occurring 1.5 km southeast, Warren State Forest occurring 3.1km northeast, Jane National Park occurring 4.1 km east and Boorara Gardner National Park occurring 7.2km southwest of the application area.

It is not considered for the application area to provide or be a part of an ecological linkage between these conservation areas.

Given this and the distance to the nearest conservation area, it is not considered for the proposed clearing of 4 ha to impact on the environmental values of nearby conservation areas, therefore the proposed clearing is not at variance to this Principle.

Methodology

GIS Databses
-DEC Managed Lands
-CALM Regional Parks
- Northcliffe 50cm Orthomosaic - Landgate 2007

(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

A perennial watercourse occurs 160m north and 650 m southwest of the application area. A dam occurs adjacent to the northwest boundary of the application area.

The site visit identified wetland vegetation occurring within the northern portion of the vegetation under application consisting of open heath of tea tree species in an excellent (Keighery 1994) condition (DEC 2012).

The Department of Water has advised that to protect the riparian vegetation and water quality of the dam/waterway adjacent to the clearing area, a 10 m buffer should be established. If stock access is required, water should be pumped to a trough or a controlled access point should be established (Department of Water 2012). The applicant has provided a buffer of 10 to 35 metres from the dam and will pump water to a controlled access point to prevent potential impacts on water quality of the dam.

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

Methodology

References
-DEC (2012)
-Department of Water (2012)
GIS Databses
-Hydrography, linear

(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

A perennial watercourse occurs 160m north and 650 m southwest of the application area. A dam occurs 10 to 35 m from the northwest boundary of the application area.

The site visit identified wetland vegetation occurring within the western portion of the vegetation under application consisting of open heath of tea tree species in an excellent (Keighery 1994) condition (DEC 2012).

Aerial photography indicates that application area falls within an extensive wetland (~300ha). The clearing of approximately 1.5 ha of wetland vegetation in excellent (Keighery 1994) condition (DEC 2012) (remainder in degraded to good (Keighery 1994) condition), is not likely to impact significantly on the hydrology of the remaining area of the wetland.

The proposed clearing of 4ha of wetland vegetation is not considered to increase the occurrence or intensity of flooding. Therefore the proposed clearing is not likely to be at variance to this Principle.

Methodology

References
-DEC (2012)
GIS Databses
-Hydrography, linear

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

Comments

The proposed clearing is for 4 ha for the purpose of a stock paddock and fire hazard reduction. This has been amended from 10 ha for dam expansion, stock paddock and fire hazard reduction in response to Department of Environment and Conservation's letter dated 12 April 2012 raising concerns regarding impact on water quality and outstanding approvals for the dam.

Shire of Manjimup has advised that no planning approvals are required for the purpose of the clearing (Shire of Manjimup 2012).

The Department of Water has also advised that to protect the riparian vegetation and water quality of the dam/waterway adjacent to the clearing area, a 10 m buffer should be established. If stock access is required, water should be pumped to a trough or a controlled access point should be established (Department of Water 2012). A 10 metre buffer to the existing dam has been provided in the modified area.

The application area is zoned Rural under the Shire of Manjimup's town panning scheme

Methodology

References
-Shire of Manjimup (2012)
-Department of Water (2012)
GIS Databases
-Town Planning Scheme Zones

-RIWI Areas

4. References

DEC (2007) - Fauna Species Profile: . Accessed at http://www.naturebase.net/content/view/840/1288/. Accessed 12 March 2012. Department of Environment and Conservation, Western Australia.

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

DEC (2012) Site Inspection Report for Clearing Permit Application CPS 4885/1, Lot 177 Rail Road, Crowea. Site inspection undertaken 12 March 2012. Department of Environment and Conservation, Western Australia (DEC ref A483133)

Department of Water (2012) Advice regarding clearing application CPS 4885/1 - Tony Galea, Lot 10287 Rail Road, Crowea. DEC ref A482504

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. (2007) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

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.

Shire of Manjimup (2012) Direct interest response to clearing application CPS 4885/1 - Tony Galea, Lot 10287 Rail Road, Crowea. DEC ref A479474

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)