GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number: 5076/1
File Number: 2012/003715-1
Duration of Permit: From 3 August 2012 to 3 August 2014

PERMIT HOLDER
Wedgetail Investments Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE
Lot 4590 on Deposited Plan 213253, Karridale.

AUTHORISED ACTIVITY
The Permit Holder shall not clear more than 0.22ha within the area hatched yellow on attached Plan 5076/1.

CONDITIONS
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) ensure that no *dieback* or *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:

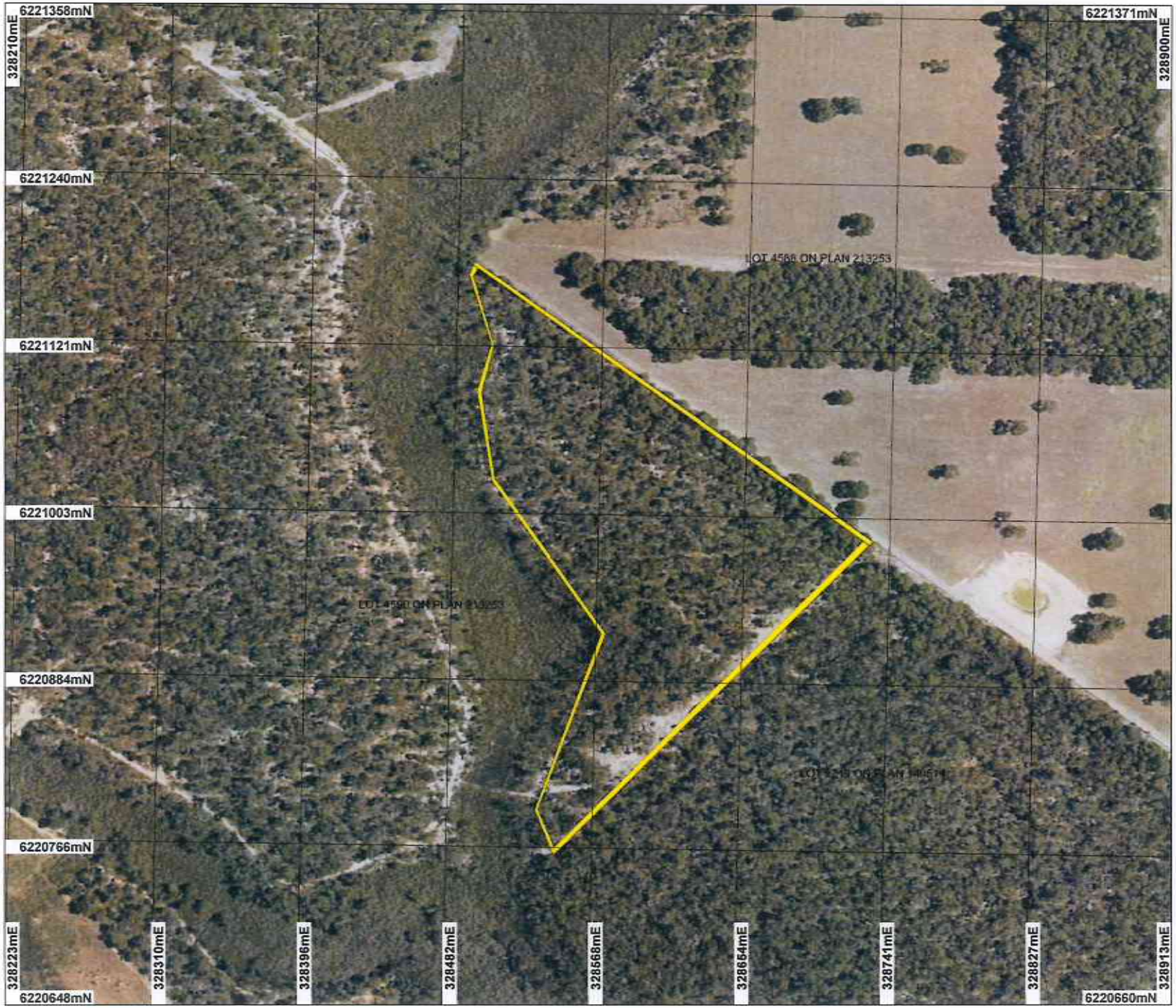
dieback means the effect of *Phytophthora* species on native vegetation
fill means material used to increase the ground level, or fill a hollow;
mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;
weed/s means a species 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

12 July 2012

Plan 5076/1



LEGEND

Cadastre

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

Road Centrelines
Clearing Instrument

Areas Approved to Clear

Leeuwin 50cm Orth 2004

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

N

0 100 m

Scale 1:3374
(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 12/7/12.

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.: 5076/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Wedgetail Investments Pty Ltd**

1.3. Property details

Property: LOT 4590 ON PLAN 213253 (House No. 156 GEOCRINIA KARRIDALE 6288)
Local Government Area: Shire of Augusta-Margaret River
Colloquial name:

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 12 July 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 is mapped as Mattiske Vegetation Glenarty Hills complex (H), consisting of open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla-Banksia grandis with some Eucalyptus diversicolor on upland and slopes in hyperhumid and perhumid zones (Mattiske and Havel, 1998). Mapped Mattiske Vegetation Glenarty Hills complex (Hw) consists of a mixture of open forest of Eucalyptus diversicolor-Callistachys lanceolata, woodland of Eucalyptus patens-Corymbia calophylla and woodland of Eucalyptus rudis-Melaleuca rhaphiophylla on depressions in hyperhumid and perhumid zones (Mattiske and Havel, 1998). Beard Vegetation Association 3 is described as medium forest consisting of jarrah and marri (Shepherd et al, 2001).	This application proposes to clear 0.22ha of native vegetation within Lot 4590 on Plan 213253, Karridale, for the purpose of constructing a firebreak. Previous clearing of the area in 1998 to construct a firebreak and fencing was undertaken for the protection of the Endangered White Bellied Frog (Geocrinia alba) (DEC, 2012).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994) To Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The condition of the vegetation was obtained through aerial imagery (Leeuwin 50cm Orthomosaic-Landgate 2004).

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

The application proposes to clear 0.22 hectares of native vegetation for the purpose of constructing a firebreak. The vegetation is good to degraded (Keighery, 1994) in condition. Previous clearing of the area occured in 1998 to construct a firebreak and fencing was undertaken for the protection of the Endangered (*Environmental Protection Biodiversity Act 1999*) White Bellied Frog (Geocrinia alba) (DEC, 2012).

There are 23 priority flora species occurring within the local area (10km radius). The closest of these is Astroloma Sp. Nannup (Priority 4) which has been recorded 1.6km south of the application area on a different soil and vegetation type.

The Reedia Swamps - Blackwood Plateau Priority 1 Ecological Community (PEC) occurs directly adjacent to the proposed clearing. This PEC consists of Reedia spathacea, Empodisma gracillimum, and Sporodanthus rivularis dominated floodplains and paluslopes of the Blackwood Plateau. The disturbance caused by the proposed clearing will increase the risk of weed and dieback passing into this PEC. Weed and dieback management practices will assist in mitigating this risk.

Rare flora species Reedia spathacea has been mapped within 30m of the application area. Reedia spathacea will not be impacted by the clearing (DEC, 2012).

Several fauna of conservation significance occur within the local area (10km radius) including the White Bellied Frog (Geocrinia alba) which has been recorded within close proximity to the application area. The proposed clearing for a firebreak around the existing fencing is for the protection of this species.

The local area (10km radius) retains approximately 50% native vegetation much of which is within DEC managed lands.

Given that the local area (10km) has a high level of vegetation remaining and the application is to re-instate a firebreak that has been previously cleared to protect the White Bellied Frog, the proposed clearing is not likely to comprise of a high level of biodiversity, or impact upon the biological diversity of the area. Therefore, the application is not likely to be at variance to this Principle.

Methodology

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

GIS Databases:
-DEC Tenure
-NLWRA, Current Extent of Native Vegetation
-SAC Biodatasets (Accessed July 2012)
-NatureMap
-Pre European 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

Thirteen threatened fauna species have been recorded within a 10 km radius of the application area including the Bettongia penicillata subsp. ogilbyi (Woylie), Calyptorhynchus banksii subsp. naso (Forest Red-tailed Black-Cockatoo), Calyptorhynchus baudinii (Baudin's Cockatoo), Calyptorhynchus latirostris (Carnaby's Cockatoo), Dasyurus geoffroii (Chuditch), Diomedea exulans subsp. Exulans, Geocrinia alba (White-bellied Frog), Petrogale lateralis subsp. lateralis (Black-flanked Rock-wallaby), Potorous gilbertii (Gilbert's Potoroo), Pseudocheirus occidentalis (Western Ringtail Possum), Pseudomys fieldi (Shark Bay Mouse), Pseudomys shortridgei (Heath Mouse), and Setonix brachyurus (Quokka).

The White Bellied Frog was previously mapped within the application area, which prompted clearing for a firebreak and fencing in 1998 for protection of this species. The firebreak has not been maintained since this time. The proposed clearing for a firebreak is to restore the effectiveness of the firebreak in protecting this species.

There is 77% and 63% vegetation remaining in the Warren Region and Shire of Augusta-Margaret River respectively (Government of Western Australia, 2011). The vegetation under application has been previously cleared and it is in a degraded to good (Keighery, 1994) condition, therefore vegetation in a better condition occurs directly adjacent to the application area.

Given the above it is unlikely the aforementioned fauna will be impacted upon by the clearing activity, therefore the proposed clearing is unlikely to be at variance to this Principle.

Methodology

References:
-Keighery (1994)
-Government of Western Australia 2011

GIS Databases:
-SAC Biodatasets (Accessed July 2012)
-NatureMap

(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

There are 3 known populations of rare flora Reedia spathacea occurring within a 3km radius of the application area. The closest of these populations occurs within 30m of the north west portion of the proposed area that runs adjacent to the creek line vegetation. This population includes approximately 550 individuals and is estimated to occupy an area of up to 2.1ha.

Spatial data indicates that none of these individuals occur within the proposed clearing area as the firebreaks run parallel to, but outside of the riparian habitat occuppied by Reedia spathacea (DEC, 2012).

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

Methodology

References:
-DEC (2012)

GIS Databases:
-SAC Biodatasets (Accessed July 2012)
-Western Australian Herbarium (1998-)

(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

There is one Threatened Ecological Community (TEC) occurring in the local area (10km radius). The Aquatic Root Matt Community Number 3 of Caves of the Leeuwin Naturaliste Bridge occurs approximately 9.7km west of the application area.

Given the distance to the TEC and that the application does not impede on the buffers of any threatened ecological communities, it is not likely that the proposal is at variance to this principle.

Methodology

GIS Databases:
-SAC Biodatasets (Accessed July 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 local area (10 km radius) retains approximately 50% native vegetation much of which is within DEC managed lands.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Warren Region	833,982	664,123	77	83
Shire*				
Augusta-Margaret River	211,681	133,600	63	74
Beard Vegetation Association in Bioregion*				
3	250,263	198,873	79	85
Mattiske Vegetation Complex				
Glenarty Hills (H)	7,706	2,737	36	8
Glenarty Hills (Hw)	2,736	1,076	39	8

* Government of Western Australia (2011)

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 Region, Shire and Vegetation complexes shown above all retain greater than 30% native vegetation.

Considering the above the vegetation under application is not considered to be a significant remnant in an area that has been extensively cleared. Therefore the proposed clearing is not likely to be at variance to this principle.

Methodology References
-Government of Western Australia (2011)
-Commonwealth of Australia (2001)

GIS Databases:
-NWLRA, Curent Extent of Native Vegetation
-Pre-European Vegetation
-Mattiske 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 minor perennial watercourse branching off McLeod Creek runs directly adjacent to the application area. This watercourse forms part of a seasonally inundated floodplain listed as a Geomorphic Wetland from Augusta to Walpole. The area under application partially falls within this Wetland and from analysing the aerial imagery it appears that a portion of the vegetation proposed to be cleared is growing in association with this wetland.

The application area also falls within a draft proposed RAMSAR wetland, known as Spearwood Creek.

Given the above the proposed clearing is at variance to this principle. Weed and dieback management practices will assist in minimising the effects of clearing.

Methodology GIS Databases:
-Hydrography linear
-Hydrography linear (hierarchy)
-Geomorphic Wetlands Augusta to Walpole
-Ramsar wetlands

(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 within the local area (10km radius) consist of leached sands in well drained marginal areas and acid peats in flatter, wetter sites overlying block laterite (Northcote, 1960-1968). The area under application occurs in a relatively flat, wet site and consists largely of acid peats.

Given the close occurrence of the proposed clearing area to the inundated floodplain, water erosion has the potential to occur. The application area has a slope of 6.25 per cent rising 12.5 m over 200m from the west to the east of proposed clearing. Therefore the slope rises from the floodplain to the application area, thus reducing the potential for land degradation.

Given the above, and the small application area, it is unlikely the proposed clearing will cause appreciable land degradation.

Methodology GIS Databases:
-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 is not likely to be at variance to this Principle**
Approximately 25 per cent of the local area is within DEC tenure. The closest conservation reserve is the Forrest Grove National Park which is located 500m north of the application area.

It is unlikely that the small area of vegetation under application will have an impact on the abovementioned conservation area.

Methodology GIS Databases:
-DEC Tenure
-NLWRA, Current Extent of Native Vegetation

(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**
Despite the close proximity of the application area to the inundated floodplain, it is unlikely the proposed clearing will cause deterioration in the quality of surface or groundwater.

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

Methodology GIS Databases:
-Hydrography linear (hierarchy)
-Geomorphic Wetlands Augusta to Walpole
-NLWRA, Current Extent of Native Vegetation

(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

The application area partially falls within an inundated floodplain, described as low lying and poorly drained (Northcote, 1960-1968). Rainfall in the area is approximately 1200mm per annum, exceeding the annual rate of evaporation.

Given the small size of the application area the proposed clearing is not likely to be at variance to this principle.

Methodology References:
-Northcote (1960-1968)

GIS Databases:
-Soils, statewide
-Rainfall, annual
-Evaporation
-Hydrography linear
-Hydrography linear (hierarchy)
-Geomorphic Wetlands Augusta to Walpole

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

Comments

No submissions from the public have been received.

DEC (2012) South West Region has recommended the following:

- woody clearing debris is not pushed into the riparian habitat but rather placed randomly on the upslope side of the firebreaks away from the creeks and outside the fenced areas
- non mulched debris is not left in a windrow running parallel and immediately adjacent to the firebreak.
- Clearing is undertaken in dry soil conditions to allow time for the soil to settle down and firm up to avoid potential erosion.
- A firefighting unit (water tank and pump) should accompany the hoe when in use during the hotter months
- all machinery to be "clean on entry" to reduce the risk of disease spread.

The property is zoned priority agriculture under the Town Planning Scheme. The Shire of Augusta-Margaret River has advised they have no objection to the proposed clearing provided it follows the exact alignment of the firebreak that was created in 1998 (Shire of Augusta-Margaret River, 2012).

An EPBC Act referral was undertaken for the proposed action of re-instating firebreaks at McLeod Creek. It was concluded that the proposed action is not a controlled action (SEWPAC, 2012).

Methodology References:
-DEC (2012)
-Shire of Augusta-Margaret River (2012)
-SEWPAC (2012)

GIS Databases:
-Town Planning Scheme Zone
-RIWI Act areas

4. References

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

DEC (2012) Regional advice for Clearing Permit Application CPS 5076/1, Lot 4590 on Deposited Plan 213253. Department of Environment and Conservation, Western Australia (DEC Ref. A519866).

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

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

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.

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.

SEWPAC (2012) EPBC Act referral. Re-instating of Firebreaks at McLeod Creek, South West WA. Department of Sustainability, Environment, Water, Population and Communities (DEC Ref A518077).

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 Augusta-Margaret River (2012) advice for Clearing Permit Application CPS 5076/1 DEC Ref A521306

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)