GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number: 6927/1
File Number: DER2016/000152-1
Duration of Permit: From 4 June 2016 to 4 June 2018

PERMIT HOLDER
Christopher Alan Norton
Pauline Esma Norton

LAND ON WHICH CLEARING IS TO BE DONE
Lot 1 on Diagram 84442, Narrikup

AUTHORISED ACTIVITY
The Permit Holder shall not clear more than 6.93 hectares of native vegetation within the area cross hatched yellow on attached Plan 6927/1.

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) 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 any plant -
(a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
(b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
(c) not indigenous to the area concerned.

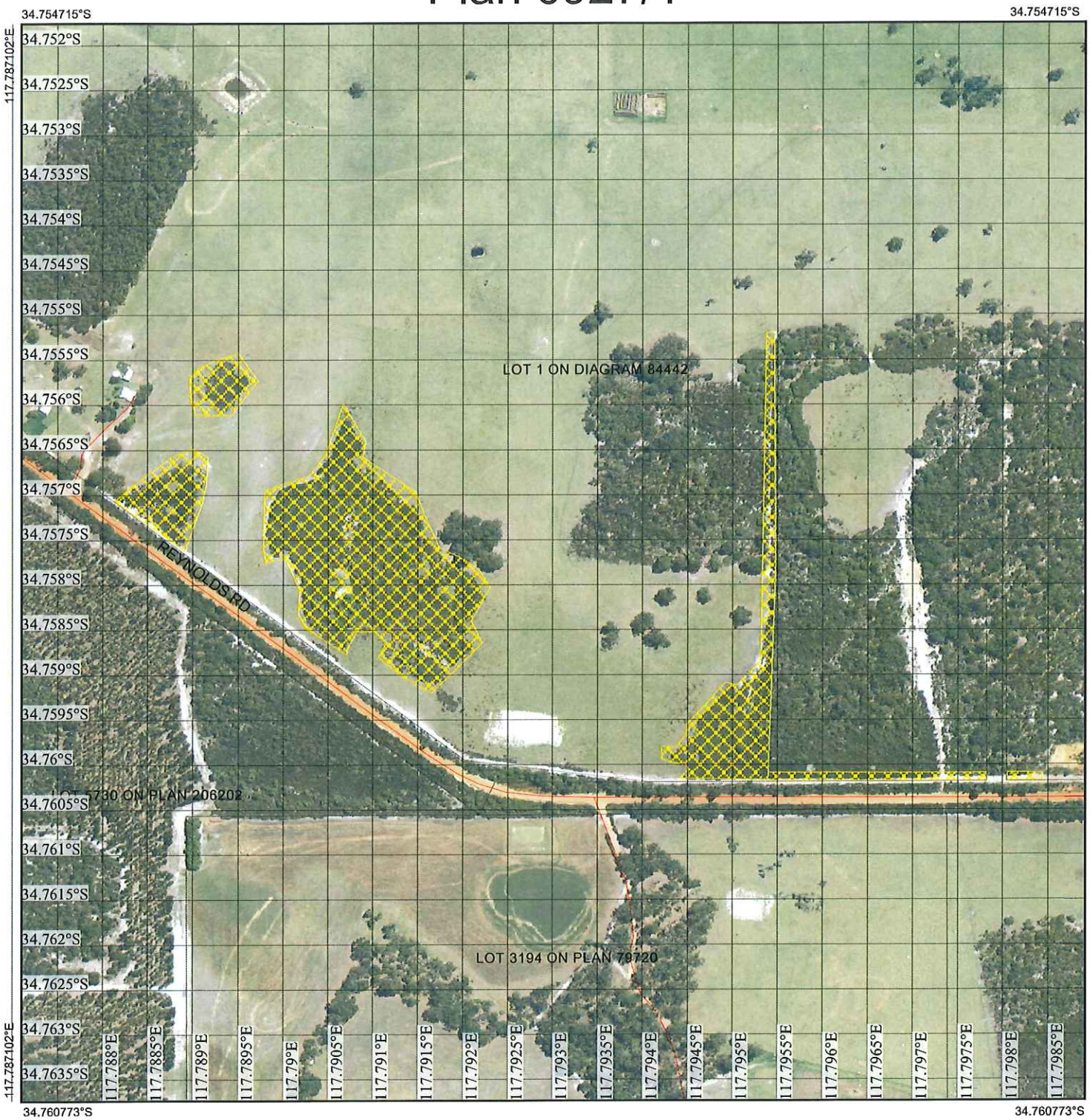
S. Weighell

Simon Weighell
A/MANAGER
CLEARING REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

5 May 2016

Plan 6927/1



Legend

- Roads
- Imagery
- Clearing Instruments Activities

N

0 200m

1:5,724

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

S. Weighell Date 5/5/16

Simon Weighell

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

GOVERNMENT OF WESTERN AUSTRALIA

Government of Western Australia
Department of Environment Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6927/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Mrs Pauline Esma Norton
Mr Christopher Alan Norton

1.3. Property details

Property: LOT 1 ON DIAGRAM 84442, NARRIKUP
Colloquial name:
Local Government Authority: PLANTAGENET, SHIRE OF
DER Region: South Coast
DPaW District: ALBANY
LCDC:
Localities: NARRIKUP

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 5 May 2016
Reasons for Decision: The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the *Environmental Protection Act 1986*, and has concluded that the proposed clearing may be at variance to Principle (f) and is not likely to be at variance to any of the remaining clearing principles.

Through assessment it has been determined that the clearing of 6.93 hectares of vegetation that is predominantly in a completely degraded to degraded (Keighery, 1994) condition is unlikely to have any significant environmental impacts. State policies and other relevant policies have been taken into consideration in the decision to grant a clearing permit.

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 Beard vegetation association 3 which is described as medium forest; jarrah-marri (Shepherd et al. 2001).	The application for the clearing of 6.93 hectares of native vegetation within Lot 1 on Diagram 84442, Narrikup, is for the purpose of pasture, bush fire hazard reduction and fence line maintenance.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994). To Good; Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994).	The description and condition of the vegetation under application was determined by a site inspection undertaken by the Department of Environment Regulation (DER 2016). The two most western application areas (0.37 hectares and 0.64 hectares) predominantly consist of Kunzea sp, with some native sedges in patches in a degraded to completely degraded (Keighery 1994) condition (DER 2016). The largest application area (4.19 hectares) located within the centre of the application predominantly consists of Kunzea sp, with some scattered Melaleuca sp. and native sedges throughout. This area is predominantly in a degraded to completely degraded (Keighery 1994) condition (DER 2016).

The most eastern application area (1.48 hectares) consists predominantly of Kunzea sp in a degraded (Keighery 1994) condition (DER 2016).

The strip of vegetation (0.26 hectares) along the southern boundary of the property has been previously cleared, however has a defined structure including a native understorey including Xanthorrhoea sp. midstorey of native shrubs and overstorey including regenerating Jarrah, this area is in a good (Keighery 1994) condition (DER 2016).

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments

Proposed clearing is not likely to be at variance to this Principle

The application for the clearing of 6.93 hectares of native vegetation within Lot 1 on Diagram 84442, Narrikup, is for the purpose of pasture, bush fire hazard reduction and fence line maintenance.

The application area predominantly consists of Kunzea sp. with scattered Melaleuca sp. and sedges throughout in a degraded to completely degraded (Keighery 1994) condition. The most south eastern area proposed to be cleared for bush fire hazard reduction has previously been cleared and contains vegetation in good (Keighery 1994) condition.

Six fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10 kilometre radius) (Parks and Wildlife 2007-). Given that the application area is predominantly in a completely degraded to degraded (Keighery 1994) condition as a result of previous clearing and the adjacent land use, the application area is not likely to comprise significant habitat for fauna indigenous to Western Australia.

Nine rare flora and 24 priority flora species have been recorded within the local area (10 kilometre radius). The closest recorded, being a rare flora species, is located approximately 3.4 kilometres from the area under application. This species is found within seasonally waterlogged flats of brown sandy clay loams where it grows with swamp tea-tree, hakeas, melaleucas and sedges (Brown et al. 1998). The soils within the application area are not suitable for this species. Furthermore the application area has been cleared previously and is predominantly in a completely degraded to degraded (Keighery 1994) condition. Therefore the application area is unlikely to contain priority or rare flora species.

No threatened ecological communities have been recorded within the local area (10 kilometre radius). One priority ecological community (PEC) has been recorded within the local area being Banksia coccinea Shrubland/Eucalyptus staeri/Sheoak Open Woodland. The vegetation within the application area is not representative of this PEC.

Given the above the application area is not likely to comprise a high level of biodiversity. The proposed clearing is not likely to be at variance to this Principle.

Methodology

References:
Brown et al. (1998)
DER (2016)
Keighery (1994)
Parks and Wildlife (2007-)

GIS Databases:
SAC Bio Datasets – accessed April 2016

(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

Proposed clearing is not likely to be at variance to this Principle

Six fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the local area (10 kilometre radius) being: forest red-tailed black cockatoo (Calyptorhynchus banksii subsp. naso), Baudin's cockatoo (Calyptorhynchus baudinii), Carnaby's cockatoo (Calyptorhynchus latirostris), numbat (Myrmecobius fasciatus), western ringtail possum (Pseudocheirus occidentalis) and western archaeid spider (Zephyrarchaea mainae) (Parks and Wildlife 2007-).

The abovementioned conservation significant black cockatoos have a preference for feeding habitat that includes jarrah and marri woodlands and forest heathland and woodland dominated by proteaceous plant species such as Banksia sp. Hakea sp. and Grevillea sp (Commonwealth of Australia 2012). The application area is not likely to provide significant habitat for these species.

Within the south coast near Albany, the western ringtail possum is found in coastal heath, jarrah/marri woodland and forest, peppermint tree woodland, myrtaceous heaths and shrublands, bullich (Eucalyptus megacarpa) dominated riparian zones and karri forest (Parks and Wildlife 2014). The application area is not likely to provide significant habitat for this species.

The western archaeid spider is found in suspended leaf litter in low, dense vegetation, especially in coastal Agonis heathland or wet eucalypt forest (Atlas of Living Australia 2016). The application area is not likely to provide significant habitat for this species.

The numbat has a limited distribution currently within two remnant native populations at Dryandra and Perup and several reintroduced populations including Boyagin Nature Reserve, Tutanning Nature Reserve, Batalling block and Karroun Hill Nature Reserve (Department of the Environment 2016). Therefore, this species is not likely to be present within the application area.

Given the above and that the application area is predominantly in a completely degraded to degraded (Keighery 1994) condition which has been previously cleared, the application area is not likely to comprise, or be necessary for the maintenance of, significant habitat for fauna indigenous to Western Australia.

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

Methodology

References:
Atlas of Living Australia (2016)
Commonwealth of Australia (2012)
Department of the Environment (2016)
Keighery (1994)
Parks and Wildlife (2007-)
Parks and Wildlife (2014)

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments

Proposed clearing is not likely to be at variance to this Principle

Nine rare flora species have been recorded within the local area (10 kilometre radius), the closest being recorded 3.4 kilometres from the application area. This species is found within seasonally waterlogged flats of brown sandy clay loams where it grows with swamp tea-tree, hakeas, melaleucas and sedges (Brown et al. 1998). The soils within the application area are not suitable for this species.

In addition the application area has been previously cleared and the majority is in a completely degraded to degraded (Keighery 1994) condition. Therefore the application area is not likely to provide suitable habitat for rare flora species.

One rare flora species is defined as a shrub or small tree growing up to six metres high. This species grows in a variety of soils, including shallow sand over laterite, sandy loam over granite and shallow sand over schist on slight rises, gullies or mountain tops (Brown et al 1998)

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

Methodology

References:
Brown et al. (1998)
Keighery (1994)

GIS Databases:
SAC Bio Datasets – accessed April 2016

(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

Proposed clearing is not likely to be at variance to this Principle

No threatened ecological communities (TEC) have been recorded within the local area (10 kilometre radius). The application area has been previously cleared and the majority is in a completely degraded to degraded (Keighery 1994) condition.

Given this, the application area is not likely to comprise or be necessary for the maintenance of a TEC.

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

Methodology

GIS Databases:
SAC Bio Datasets – accessed April 2016

(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

Proposed clearing is not likely to be at variance to this Principle

The application area is located within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 54 per cent of its pre-European vegetation extent remaining (Government of Western Australia 2014).

The application area is mapped as Beard vegetation association 3, of which there is approximately 67 per cent of its pre-European vegetation extent remaining within the Jarrah Forest bioregion (Government of Western Australia 2014).

The application area is located within the Shire of Plantagenet, within which there is approximately 45 per cent pre-European vegetation extent remaining (Government of Western Australia 2014).

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 local area (10 kilometre radius) retains approximately 10 per cent native vegetation.

Given that the local area retains approximately 10 per cent native vegetation the application area is located within an extensively cleared area.

However, the majority of the application area is in a completely degraded to degraded (Keighery 1994) condition and is not considered to comprise a high biological diversity, or contain significant habitat for fauna. Therefore the application area is not considered to be a significant remnant.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion				
Jarrah Forest	4,506,660	2,425,551	54	69
Shire				
Shire of Plantagenet	487,973	218,862	45	66
Beard Vegetation Association in Bioregion				
3	2,390,591	1,613,658	67	80

Methodology

References:
Commonwealth of Australia (2001)
*Government of Western Australia (2014)
Keighery (1994)

GIS Databases:
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

Proposed clearing may be at variance to this Principle

No watercourses or wetlands have been mapped within the application area. The closest major watercourse is located approximately 2.7 kilometres east of the application area. Two areas subject to inundation are located approximately 35 metres east and 151 metres south west of the application area.

A site inspection undertaken by DER (2016) identified riparian vegetation including Kunzea sp., Melalecua sp. and native sedges within the application area. Given the presence of these species, the application area may contain vegetation growing in association with a wetland. However, given the degraded to completely degraded (Keighery 1994) condition of the majority of the application area and surrounding land use, the proposed clearing is not likely to result in significant environmental impacts.

The proposed clearing may be at variance to this Principle.

Methodology References:
DER (2016)
Keighery (1994)

GIS Databases:
Hydrography, linear

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments

Proposed clearing is not likely to be at variance to this Principle

The application area has been mapped by the Department of Agriculture and Food (DAFWA) to be Boulongup subsystem map unit 242Mm1. The map unit is described as having broad poorly drained depressions, low lateritic rises, lunettes with unconsolidated clays and aeolian sands over weathered Pallinup siltsone. The soils are mixed wet grey deep sand duplex, duplex sandy gravel and pale deep sand (Commissioner of Soil and Land Conservation 2016).

Given the soil types present wind and water erosion is unlikely (Commissioner of Soil and Land Conservation 2016).

The risk of eutrophication is possible on the soil type present within the application area, especially if low areas become inundated and waterlogged during extreme wetter periods. Drainage from the application area is towards the south east and possibly south west into drainage lines that eventually flow into Oyster Harbour. Given the application area is located approximately five kilometres upstream of a defined drainage line, the risks associated with nutrient export are likely to be significantly reduced. In addition, the nutrient export risk is associated with land use after the intended clearing rather than a direct result of the proposed clearing (Commissioner of Soil and Land Conservation 2016).

Given the above the proposed clearing is not likely to cause appreciable land degradation. The proposed clearing is not likely to be at variance to this Principle.

Methodology References:
Commissioner of Soils and Land Conservation (2016)

(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

Proposed clearing is not likely to be at variance to this Principle

The closest conservation area to the application area is an unnamed nature reserve located approximately five kilometres west.

No significant ecological linkages between the application area and nearby conservation areas are apparent.

Given the distance to the closest conservation area the clearing as proposed is not likely to impact upon the environmental values of any conservation areas.

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

Methodology GIS Databases:
Parks and Wildlife, Tenure

(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

Proposed clearing is not likely to be at variance to this Principle

No watercourses or wetlands have been mapped within the application area. The closest major watercourse is located approximately 2.7 kilometres east of the application area. Two areas subject to inundation are located approximately 35 metres east and 151 metres south west of the application area.

Given the distance to the closest watercourse the proposed clearing is not likely to cause deterioration in the quality of surface water.

The Commissioner of Soil and Land Conservation (2016) has advised that no salinity was observed within the vicinity of the application area. No significant change to salinity levels is expected as a result of the proposed clearing, therefore the risk of salinity causing deterioration to the quality of underground water is low (Commissioner of Soil and Land Conservation 2016).

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

Methodology References:
Commissioner of Soils and Land Conservation (2016)

GIS Databases:
Groundwater salinity
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

Proposed clearing is not likely to be at variance to this Principle

No watercourses or wetlands have been mapped within the application area. The soils within the application area are prone to waterlogging, however the proposed clearing is not likely to cause or exacerbate, the incidence or intensity of flooding.

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

Methodology

Planning instruments and other relevant matters.

Comments

No Aboriginal Sites of Significance have been recorded within the application area.

The application was advertised on 29 February 2016 for a 21 day submission period. No submissions have been received in relation to this application.

Methodology

GIS Datasets:
Aboriginal Sites of Significance

4. References

Atlas of Living Australia (2016) Zephyrarchaea mainae (Platnick, 1991)Western Archaeid Spider. Available from: http://bie.ala.org.au/species/urn:lsid:biodiversity.org.au:afd.taxon:9600324f-f9f0-410f-b69d-29277698fe37

Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.

Commissioner of Soil and Land Conservation (2016) Advice for Clearing Permit CPS 6927/1. Department of Agriculture and Food Western Australia. DER Ref: A1080905

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

Commonwealth of Australia (2012) EPBC Act referral guidelines for three threatened black cockatoo species, Canberra.

DER (2016) Site Inspection Report for Clearing Permit Application CPS 6927/1. Site inspection undertaken 11 March 2016. Department of Environment Regulation, Western Australia (DER Ref. A1085325).

Department of the Environment (2016). Myrmecobius fasciatus in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat.

Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Parks and Wildlife, 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.

Parks and Wildlife (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/. Accessed April 2016

Parks and Wildlife (2014). Ringtail Possum (Pseudocheirus occidentalis) Recovery Plan. [Online]. Wildlife Management Program No. 58. Department of Parks and Wildlife, Perth, WA. Available from: http://www.dpaw.wa.gov.au/plants-and-animals/threatened-species-and-communities/197-approved-recovery-plans.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.