GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 6621/1
File Number: DER2015/001424-1
Duration of Permit: 2 January 2016 to 2 January 2018

PERMIT HOLDER

Thomas George Marshall

LAND ON WHICH CLEARING IS TO BE DONE

Lot 7182 on Deposited Plan 224140, Cranbrook

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 50 native trees within the area cross-hatched yellow on attached Plan 6621/1.

CONDITIONS

1. **Fauna management**
   This Permit does not authorise the Permit Holder to clear native vegetation between 1 July and 28 February, unless first approved by the CEO.

2. **Fauna management**
   Permit Holder shall ensure that no clearing of *black cockatoo habitat tree/s* occurs, unless first approved by the CEO.

3. **Avoid, minimise etc. clearing**
   In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:
   (a) avoid the clearing of native vegetation;
   (b) minimise the amount of native vegetation to be cleared; and
   (c) reduce the impact of clearing on any environmental value.

DEFINITIONS

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

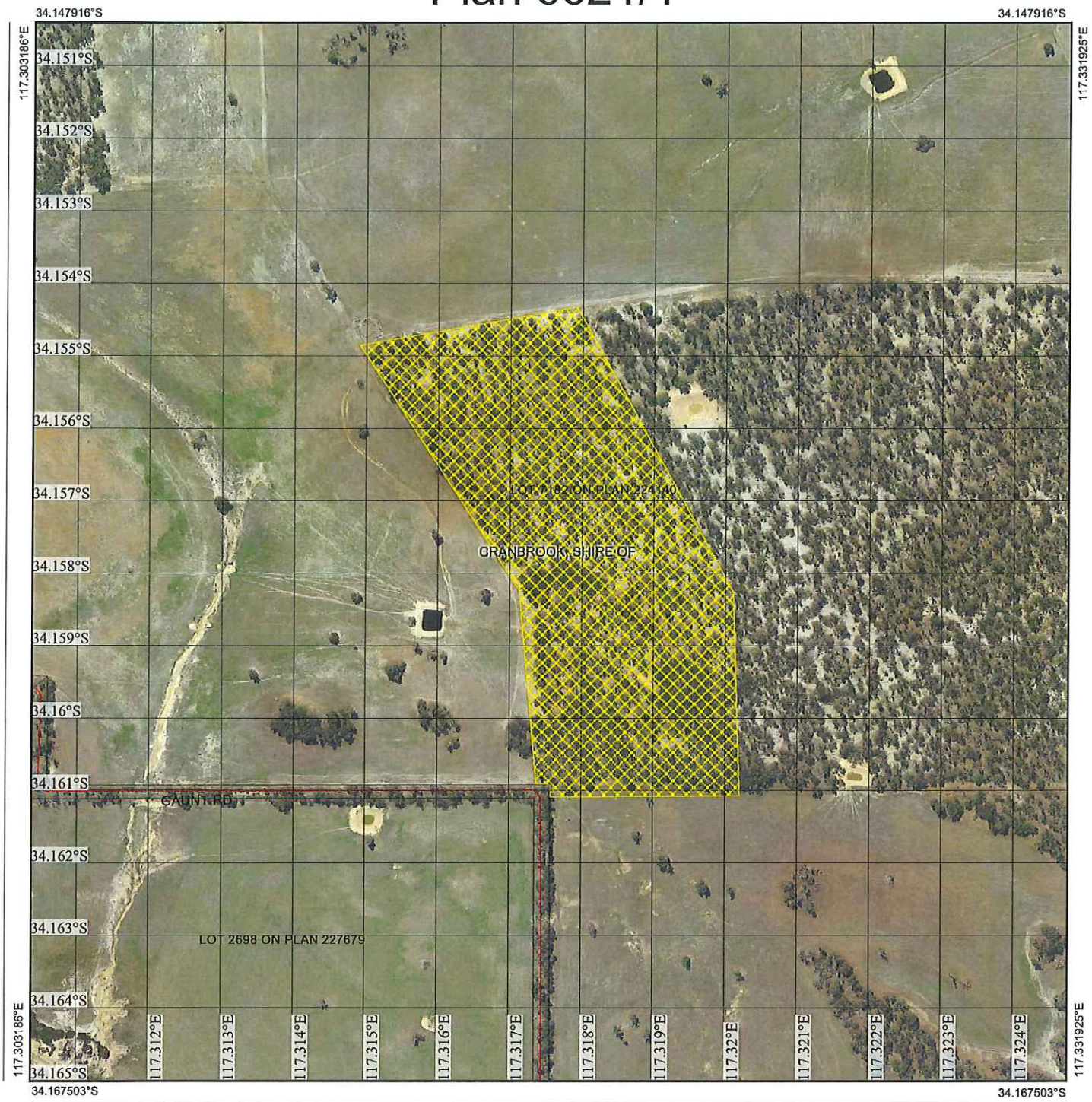
black cockatoo habitat tree/s: means trees that have a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater.

JANE CLARKSON
A/ SENIOR MANAGER
CLEARING REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

3 December 2015

Plan 6621/1



Legend

- Roads
- Local Government Authority
- Cadastre
- Imagery
- Clearing Instruments Activities

N

0 200m

1:7,000

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Jane Clarkson Date 3/12/15

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.: 6621/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Mr Thomas George Marshall

1.3. Property details

Property: Lot 7182 on Deposited Plan 224140, Cranbrook
Local Government Authority: Cranbrook, Shire Of
DER Region: South Coast
DPaW District: Great Southern
LCDC: Tunney
Localities: Cranbrook

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
-	50	Mechanical Removal	Fencing and farming materials

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 3 December 2015

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description
Beard vegetation association 967 is described as medium woodland; wandoo (*Eucalyptus wandoo*) and yate (*Eucalyptus comuta*) (Shepherd et al., 2001).

During a site inspection it was determined that vegetation within the application area represented a jarrah (*Eucalyptus marginata*) and wandoo woodland (DER, 2015).

Clearing Description
Mr Thomas George Marshall proposes to clear 50 trees within Lot 7182 on Plan 224140 for the purpose of fencing and farming materials.

Vegetation Condition
Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994)

Comment
Vegetation condition was determined by a Department of Environment Regulation site inspection undertaken on 12 August 2015 (DER, 2015).

The proposed clearing is for the purpose of sourcing timber to use in place of steel for fence posts and shed materials.

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 may be at variance to this Principle

The current application is to clear up to 50 native trees within a 20 hectare area within Lot 7182 on Plan 224140, Cranbrook, for the purpose of sourcing farming materials. Vegetation within the application area is in a degraded (Keighery, 1994) condition, with no midstorey and little to no understorey present. The application area has been historically logged and grazed, and contains both mature and young jarrah and wandoo trees (DER, 2015).

No Threatened or Priority Ecological Communities (TECs, PECs) have been recorded within 10 kilometres of the application area and vegetation proposed to be cleared is not considered to represent a PEC or TEC. Given the degraded (Keighery, 1994) condition of vegetation, it is highly unlikely that any rare or priority flora occur within the application area. Furthermore, the clearing of 50 jarrah and wandoo trees is unlikely to impact surrounding vegetation.

Only 23 per cent of pre-European vegetation remains within 10 kilometres of the application area. Therefore, fauna diversity within the application area may be high in comparison to a majority of the surrounding landscape. During a site inspection a variety of bird species and one mammal (western grey kangaroo; *Macropus fuliginosus*) were observed. Due to the lack of midstorey and understorey habitat, it is likely that bird species represent a large component of biodiversity within the application area.

The application area includes mature wandoo trees with hollows of various size, which are suitable nesting habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*; rare or likely to become extinct under the *Wildlife Conservation Act 1950*). While no external evidence of hollow use by Carnaby's cockatoo was observed during the site inspection (DER, 2015), there are nearby records of Carnaby's cockatoo nesting sites and Carnaby's cockatoo may use this habitat for foraging or nesting.

As the application area is located within a highly cleared landscape, it is considered to contain a high level of biodiversity for the region. The clearing of 50 trees within a 20 hectare area may impact the biological carrying capacity of the remnant, especially if a high number of hollow-bearing trees are cleared. Therefore, the proposed clearing may be at variance to this Principle.

Methodology

References:
DER (2015)
Keighery (1994)

GIS Databases:
- Remnant vegetation
- SAC bio datasets (Accessed October 2015)

(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 may be at variance to this Principle

The application area is located within a remnant approximately 91 hectares in size, which is the eleventh largest remnant within a 10 kilometre radius. The surrounding landscape has been highly cleared, with only 23 per cent of pre-European vegetation remaining within 10 kilometres of the application area. Therefore, all remnant vegetation within the area is likely to be important habitat for native fauna.

Vegetation within the application area is in a degraded (Keighery, 1994) condition, with no midstorey and a near-complete loss of understorey (DER, 2015). During a site inspection, the application area was observed to be inhabited by wedge-tailed eagles (*Aquila audax*), Australian ringneck parrots (*Barnardius zonarius*), western grey kangaroos and a number of small to medium bird species (DER, 2015).

A total of three threatened, three priority and one migratory fauna species have been recorded within 10 kilometres of the application area. Of these, Carnaby's cockatoo is most likely to utilise habitat within the application area (Parks and Wildlife, 2015). Carnaby's cockatoos predominantly nest within hollow-bearing salmon gum (*Eucalyptus samonophloia*) and wandoo, which are increasingly limited within the Wheatbelt (Parks and Wildlife, 2013). Carnaby's cockatoo use this habitat for nesting between July and February (Parks and Wildlife, 2015b). The application area represents suitable nesting habitat for this species, with a number of mature wandoo trees with hollows present. However, hollows showed no evidence of use by Carnaby's cockatoo (DER, 2015).

Three nesting sites for Carnaby's cockatoo are known to occur within 10 kilometres of the application area. Similar habitat with a moderate density of hollow-bearing wandoo trees is present outside the application area within the same remnant, and therefore the loss of 50 jarrah and wandoo trees may not have a significant impact on Carnaby's cockatoos within the region.

Parks and Wildlife (2015a) advise that although the taking of wandoo may impact Carnaby's cockatoo in the future, removing trees that currently do not have suitable hollows for cockatoo nesting is unlikely to significantly impact cockatoos currently breeding in the local or regional area.

However, clearing is likely to impact Carnaby's cockatoos if trees proposed to be cleared are used for breeding at the time of clearing. Impacts to this species may therefore be minimised by conducting clearing outside the breeding season or Carnaby's cockatoo, and avoiding the clearing of black cockatoo habitat trees.

Based on the lack of native vegetation within the surrounding landscape and the presence of suitable habitat for Carnaby's cockatoo within the application area, the proposed clearing may be at variance to this Principle.

Methodology

References:
DER (2015)
Keighery (1994)
Parks and Wildlife (2013)
Parks and Wildlife (2015a)
Parks and Wildlife (2015b)

GIS Databases:
- Remnant vegetation

(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

One rare flora has been recorded within 10 kilometres of the application area. This species occurs in low woodlands of jarrah and silver mallet (*Eucalyptus falcata*) with *Hakea lissocarpha, Austrostipa* sp. and *Austrodanthonia* sp. over red and brown loam and gravel on sloping topography, breakaways and hilltops (Department of the Environment, 2015). While this soil type and landform is present within the application area, vegetation composition within the application area is not considered to provide suitable habitat for this rare flora, and had a sparse to absent midstorey and understorey (DER, 2015). Furthermore, the proposed clearing is for 50 trees, and is unlikely to disturb any additional flora species.

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

Methodology

References:
Department of the Environment (2015)
DER (2015)

GIS Databases:
- SAC bio datasets (Accessed October 2015)

(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 at variance to this Principle

According to available databases, there are no Threatened Ecological Communities within 10 kilometres of the application area. The vegetation was observed to be in a degraded (Keighery, 1994) condition and does not represent any Threatened Ecological Communities listed under either the state or federal legislation (DER, 2015).

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology

References:
DER (2015)

GIS Databases:
- SAC bio datasets (Accessed October 2015)

(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 may be at variance to this Principle

The application area is located within the Avon Wheatbelt Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, which has been highly cleared for agricultural purposes and contains only 19 per cent of its pre-European vegetation (Government of Western Australia, 2014).

Vegetation within the application area is mapped as Beard vegetation association 967 (medium woodland; wandoo and yate). This vegetation association retains approximately 18 per cent of its pre-European extent within the Avon Wheatbelt bioregion (Government of Western Australia, 2014). However, the application area comprises a woodland of wandoo and jarrah in a degraded condition (Keighery, 1994; DER, 2015), and therefore the vegetation proposed to be cleared does not represent the pre-European vegetation mapped within the area.

The application area falls within a highly cleared landscape. Approximately 23 per cent of remnant vegetation exists within 10 kilometres of the application area, and the remnant within which the application area occurs is the eleventh largest remnant within a 10 hectare radius. Therefore, vegetation within the application area may be significant as a remnant despite its degraded (Keighery, 1994) condition, particularly due to the presence of hollow-bearing wandoo trees suitable for nesting by Carnaby's cockatoo.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion* - Avon Wheatbelt	9,517,110	1,765,881	19	9.7
Shire* - Shire of Cranbrook	327,501	118,471	36	37.5
Beard vegetation association in Bioregion*				
967	105,911	19,029	18	1.7

If a large proportion of the 50 trees to be removed contain hollows suitable for nesting by Carnaby's cockatoo, the proposed clearing may impact the carrying capacity of the 91 hectare remnant within which the application area is located. Therefore, the proposed clearing may be at variance to this Principle.

Methodology References:
DER (2015)
*Government of Western Australia (2014)
Keighery (1994)

GIS Databases:
- Pre-European vegetation
- Remnant 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 is not at variance to this Principle**
There are no watercourses or wetlands mapped within one kilometre of the application area. A site inspection of the application area did not reveal the presence of vegetation growing in or in association with a watercourse or wetland (DER, 2015).

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology References:
DER (2015)

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**
Soils within the application area are mapped as hard neutral and acidic yellow mottled soils with ironstone gravels (Northcote et al., 1960-68). A site inspection revealed that the soil type within the application area is predominantly gravel (DER, 2015). These soils are not likely to be susceptible to wind or water erosion. Erosion risk is further minimised as vegetation surrounding the trees proposed to be cleared within the 20 hectare application area will be retained.

The Commissioner of Soil and Land Conservation (2015) advises that the application area occurs within an area prone to salinity, which is evident within drainage lines in the vicinity of the application area. The clearing of 50 trees within a 20 hectare area may cause a slight increase in salinity. However, as the proposed clearing is for the removal of 50 trees within a 20 hectare area, the Commissioner of Soil and Land Conservation (2015) advises that land degradation via salinity is not likely to occur as a result of the proposed clearing activity.

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

Methodology References:
Commissioner of Soil and Land Conservation (2015)
DER (2015)
Northcote et al. (1960-68)

GIS Database:
- 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 **Proposed clearing is not likely to be at variance to this Principle**
There are no conservation areas within 10 kilometres of the application area. Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- 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**
There are no watercourses within the application area (DER, 2015). Given this, the proposed clearing is not likely to impact the quality of surface water within or surrounding the application area.

Groundwater salinity within the application area is mapped as 7,000 to 14,000 milligrams per litre total dissolved solids. The application area occurs within an area that is prone to salinity (Commissioner of Soil and Land Conservation, 2015). However, the removal of 50 mature trees within a larger remnant is not likely to significantly impact the quality of groundwater.

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

Methodology References:
Commissioner of Soil and Land Conservation (2015)
DER (2015)

GIS Database:
- Topography, 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**
The application area contains gravelly soils (DER, 2015) that are unlikely to be highly permeable to rainfall. Annual mean rainfall within Cranbrook is approximately 500 millimetres (BoM, 2015), and annual evapotranspiration is approximately 600 millimetres. Therefore, any standing water following rainfall is likely to be short-lived.

The proposed clearing is for the removal of 50 trees within a 20 hectare area. As all other vegetation will be retained, the proposed clearing is highly unlikely to cause or exacerbate flooding within the area, and is not likely to be at variance to this Principle.

Methodology References:
BoM (2015)
DER (2015)

GIS Database:
- Evapotranspiration, Area Actual

Planning instruments and other relevant matters.

Comments The current application proposes to clear up to 50 native trees within a 20 hectare area on Lot 7182 on Plan 224140, Cranbrook, for the purpose of sourcing fencing and farming materials.

A previous application by the applicant to clear four hectares of native vegetation (CPS 2920/1) was refused by the Department of Environment and Conservation (DEC) in 2009. The application was located adjacent to the current application area, and was for the purpose of dam construction. The assessment found that the application was at variance to Principles (a), (b) and (e), and may be at variance to Principles (g) and (i). The current application has been assessed against the clearing principles and it has been determined that the current application is not likely to have the same impacts as CPS 2920/1.

There are no Sites of Aboriginal Significance mapped within the area applied to clear.

The clearing permit application was advertised on 27 July 2015 by the Department of Environment Regulation inviting submissions from the public. No submissions were received.

Methodology GIS Database:
- Aboriginal Sites Register System

4. References

BoM (2015) Annual rainfall statistics for Cranbrook. Australian Government Bureau of Meteorology. http://www.bom.gov.au/jsp/ncc/cdio/weatherData. Accessed September 2015.

Commissioner of Soil and Land Conservation (2015) Advice received from the Commissioner of Soil and Land Conservation on 25 November 2015. DER REF: A1012275.

DAFWA (2015) NRMInfo Mapping Tool. Department of Agriculture and Food Western Australia. http://maps.agric.wa.gov.au/nrminfo/framesetup.asp. Accessed September 2015.

Department of the Environment (2015) Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat. Accessed September 2015.

DER (2015) Site inspection report for clearing permit application CPS6621/1. Conducted on 12 August 2015. DER REF: A973424.

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.

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.

Parks and Wildlife (2013) Carnaby's cockatoo (*Calyptorhynchus latirostris*) Recovery Plan. Department of Parks and Wildlife, Perth, Western Australia.

Parks and Wildlife (2015a) Advice provided by the Department of Parks and Wildlife on 7 September 2015. DER REF: A972633.

Parks and Wildlife (2015b) Advice provided by the Department of Parks and Wildlife on 3 December 2015. DER REF: A1016276.

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.