GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number: CPS 6594/1
File Number: DER2015/001215-1
Duration of Permit: 7 November 2015 to 7 November 2017

PERMIT HOLDER
Hugh Rogers
Glenda Rogers

LAND ON WHICH CLEARING IS TO BE DONE
Lot 6 on Deposited Plan 52348, Dinninup

AUTHORISED ACTIVITY
The Permit Holder shall not clear more than 5 hectares of native vegetation within the areas cross-hatched yellow on attached Plan 6594/1.

CONDITIONS

1. **Fauna management**
   The Permit Holder shall not clear native vegetation within the areas shaded red on attached Plan 6594/1.

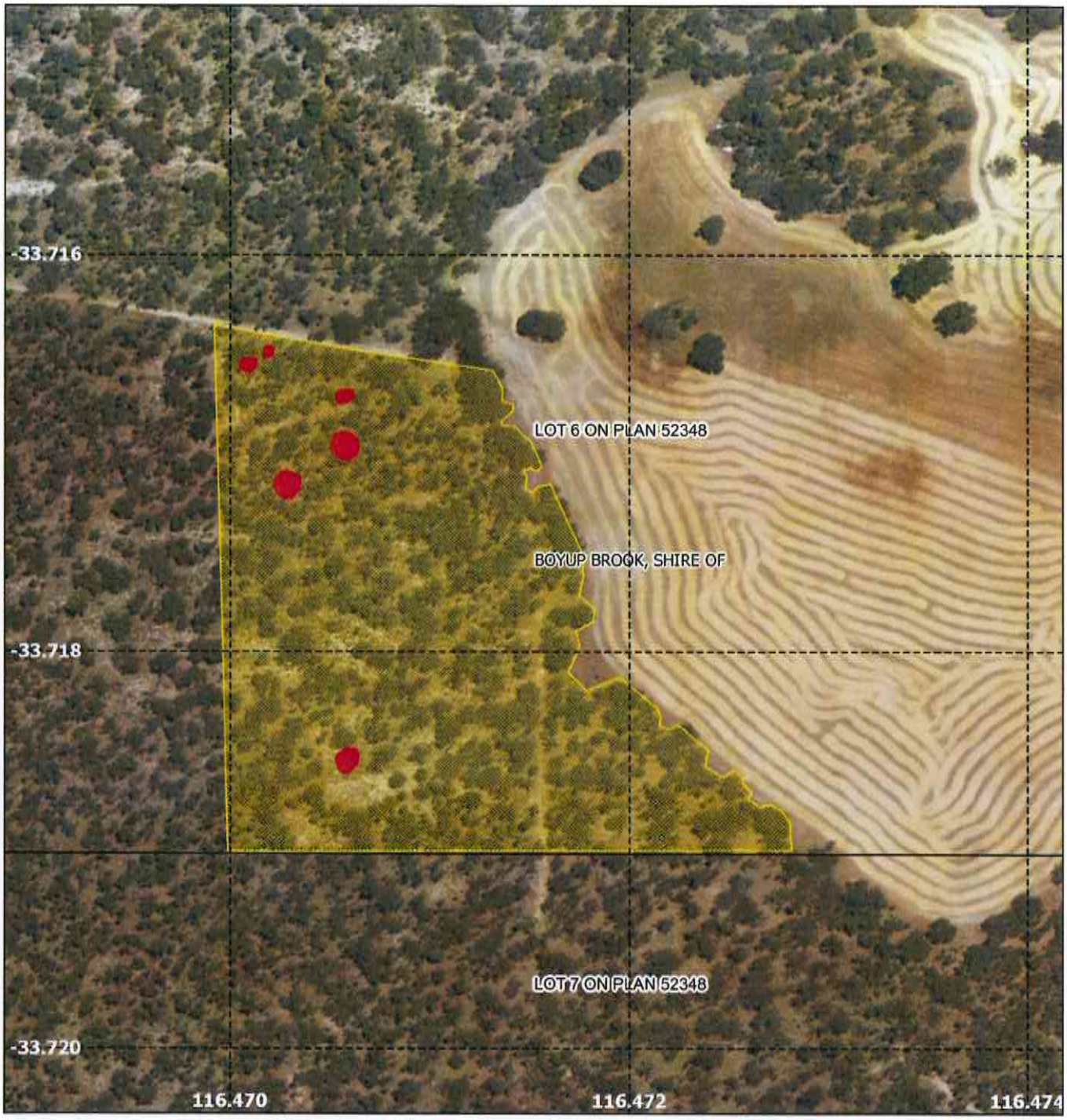
2. **Avoid, minimise etc. clearing**
   In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:
   (a) avoid the clearing of native vegetation;
   (b) minimise the amount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

M Warnock
SENIOR MANAGER
CLEARING REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

8 October 2015

Plan 6594/1



Legend

- Areas approved to clear
- Clearing Instruments Conditions
- Roads
- Cadastre
- local_gov_authority

Virtual Mosaic

N

1:2,000

MGA 94
Geocentric Datum of Australia 1994

..... Date 8/10/15

M Warnock

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.: 6594/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Mr Hugh Rogers
Mrs Glenda Rogers

1.3. Property details

Property: Lot 6 on Deposited Plan 52348, Dinninup
Local Government Authority: Shire of Boyup Brook
DER Region: Greater Swan
DPaW District: Blackwood
LCDC: Boyup Brook
Localities: Dinninup

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 8 October 2015

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
One Beard vegetation association has been mapped within the application area: 3: Medium forest; jarrah-marri (Shepherd et al., 2001). One Mattiske vegetation complex has been mapped within the application area: DM2: Woodland of *Eucalyptus wandoo-Eucalyptus marginata* subsp. *marginata-Corymbia calophylla* on uplands in semiarid and arid zones (Mattiske and Havel, 1998). A site inspection revealed that vegetation within the application area represents a jarrah-wandoo open woodland (DER, 2015).	Mr and Mrs Hugh and Glenda Rogers propose to clear five hectares of native vegetation within Lot 6 on Deposited Plan 52348, Dinninup, for the purpose of cropping and livestock.	Good; Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994) to: Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).	The application area comprises a five hectare portion of a large and mostly continuous patch of native vegetation. Vegetation condition was determined during a site inspection (DER, 2015). Native vegetation surrounding the application area is in a very good (Keighery, 1994) condition. Vegetation within the application area has been subjected to historic logging activity, and is inhabited by feral pigs, rabbits and foxes. Minimal weed invasion was observed during the site inspection (DER, 2015).

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 area comprises five hectares of jarrah-wandoo open woodland to be cleared for the purpose of expanding cropping and livestock grazing within Lot 6 on Deposited Plan 52348. Vegetation within the application area is in a good to very good condition (Keighery, 1994), however disturbances via previous

logging activity and feral species were evident during a site inspection (DER, 2015).

The proposed clearing occurs within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion and the Southern Jarrah Forest subregion. This bioregion, as with the whole of south-western Australia, is rich in endemic flora species. A search of the Naturemap database revealed records for 191 dicotyledon, 101 monocotyledon, 1 gymnosperm, 1 fern, 31 lichen and 15 moss species within 15 kilometres of the application area, including three rare and six priority flora species (Department of Parks and Wildlife [Parks and Wildlife], 2007-). Based on the vegetation and soil type within the application area, one priority 3 flora species (*Synaphea hians*) and two priority 4 flora species (*Banksia acuminata* and *Gastrolobium tomentosum*) may occur within the application area. However, these species have moderate distributions and their conservation is unlikely to be impacted by the proposed clearing. Parks and Wildlife (2015a) advise that there are unlikely to be any significant flora values within the application area.

A total of 76 bird, eight mammal, 13 reptile, six amphibian and eight invertebrate species have been recorded within 15 kilometres of the application area, including seven threatened, one priority and three other specially protected fauna species (Parks and Wildlife, 2007-). However, only a small subset of these species are likely to utilise habitat within the application area. The applicant has advised that at least five large marri and jarrah trees will be excluded from clearing, which will retain some fauna habitat within the application boundary, particularly for bird species. Given the availability of good quality habitat bordering the application area, it is not likely that the application area comprises a high level of fauna diversity on a local or regional scale.

Hearn et al. (2002) identified a number of 'ecosystems at risk' within the Southern Jarrah Forest subregion, however none occur within the application area. Similarly, there are no priority ecological communities (PECs) or threatened ecological communities (TECs) within the area proposed to be cleared.

According to available databases, 21 weed species have been recorded within 15 kilometres of the application area (Parks and Wildlife, 2007-). Invasive flora species can decrease biodiversity in an area as they out-compete native vegetation for available resources and increase the frequency and intensity of fires (DEC, 2011). The application area was found to have very little weed cover, despite occurring adjacent to pre-existing farming activities (DER, 2015). The proposed clearing is for the purpose of expanding cropping activities and livestock grazing, which will in turn convert ground cover to non-native species. Given the minimal evidence of weed intrusion within the application area, it is considered that there is a low risk of the proposed clearing causing significant weed spread within adjacent areas of remnant vegetation.

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

Methodology

References:
DER (2015)
DEC (2011)
Keighery (1994)
Hearn et al. (2002)
Parks and Wildlife (2007-)
Parks and Wildlife (2015a)

GIS Database:
- SAC bio datasets (Accessed August 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 proposed clearing consists of five hectares of jarrah-wandoo open woodland on the eastern periphery of a large patch of remnant native vegetation approximately 373 hectares in size.

Vegetation within the area proposed to be cleared is in good to very good (Keighery, 1994) condition (DER, 2015), and is likely to support a number of fauna species that inhabit the wider area. A total of 11 rare, priority and other scheduled fauna under the *Wildlife Conservation Act 1950* have been recorded within 15 kilometres of the application area including Carnaby's cockatoo (*Calyptorhynchus latirostris*; Endangered), Baudin's cockatoo (*Calyptorhynchus baudinii*; Endangered), forest red-tailed black-cockatoo (*Calyptorhynchus banksii naso*; Vulnerable), brush-tailed phascogale (*Phascogale tapoatafa* ssp. (WAM M434); Vulnerable), chuditch (*Dasyurus geoffroii*; Vulnerable), numbat (*Myrmecobius fasciatus*; Vulnerable), woylie (*Bettongia penicillata* subsp. *ogilbyi*; Critically Endangered), western brush wallaby (*Macropus irma*; Priority 4), Muir's corella (*Cacatua pastinator* subsp. *pastinator*; other specially protected fauna), peregrine falcon (*Falco peregrinus*; other specially protected fauna) and carpet python (*Morelia spilota* subsp. *Imbricata*; other specially protected fauna) (Parks and Wildlife, 2007-).

The western brush wallaby was observed in adjacent vegetation during a site inspection, and the application area has fallen logs present that may provide suitable denning habitat for the chuditch, woylie and numbat. The proposed clearing also contains a number of small to medium sized jarrah and wandoo trees, with some large and mature wandoo present (DER, 2015). These trees have the potential to provide feeding habitat for the three aforementioned black-cockatoo species. While some hollows were present in a small number of mature wandoo that could provide nesting habitat, no external signs of use by black-cockatoos were observed around hollows during the site inspection (DER, 2015). Tree hollows are a critical resource for many bird and mammal

species, however they are slow to form and trees are usually >120 years old before hollows are created via processes such as fire and fungal infection of heartwood (Harper et al., 2005; Manning et al., 2013). The exclusion of large trees from the clearing area will minimise impacts to black-cockatoo feeding and nesting resources.

While the application area provides habitat suitable for the chuditch, numbat and woylie, the wider area is also inhabited by feral pigs (*Sus scrofa*) and foxes (*Vulpes vulpes*), which are likely to discourage extensive use of the application area by terrestrial and ground-denning species. Furthermore, impacts from the proposed clearing to resident fauna are mitigated by the availability of good quality native vegetation to the west of the application area.

On a landscape scale, the large patch of native vegetation within which the proposed clearing is located may be significant habitat for fauna. However, the clearing of five hectares within a wider area of native vegetation (373 hectares in size) is unlikely to significantly decrease the ability of this area to support various fauna populations.

Based on the above, the proposed clearing may be at variance to this Principle.

Methodology

References:
DER (2015)
Harper et al. (2005)
Keighery (1994)
Manning et al. (2013)
Parks and Wildlife (2007-)

GIS Database:
- NLWRA, Current Extent of Native 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
There are three rare flora species recorded within 15 kilometres of the application area (Parks and Wildlife, 2007-). Based on the vegetation and soil type present within the application area, none of these species are likely to occur within the application boundary.

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

Methodology

References:
Parks and Wildlife (2007-)

GIS Database:
- SAC bio datasets (Accessed August 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 likely to be at variance to this Principle
According to available databases, the application area does not occur within the buffer zone of any threatened ecological communities (TECs). Based on a site inspection and available databases, the vegetation within the application area is not considered to represent a TEC (DER, 2015).

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

Methodology

References:
DER (2015)

GIS Database:
- SAC bio datasets (Accessed August 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 is not likely to be at variance to this Principle
The application area occurs within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, in which approximately 54 per cent of the pre-European vegetation remains (see table below) (Government of Western Australia, 2014).

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DPaW Managed Lands (%)

IBRA Bioregion - Jarrah Forest	4,506,660	2,425,551	54	69
Shire* - Shire of Boyup Brook	282,643	125,124	44	47
Beard Vegetation Association in Bioregion*				
3	2,390,591	1,613,658	68	81
Mattiske Vegetation Complex **				
DM2	43,086	15,233	35.36	5.55

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). No mapped vegetation association within the application area occurs at below the 30 per cent threshold within the Jarrah Forest bioregion.

Historic large-scale clearing has occurred to the east of the proposed clearing for agricultural land use. However, the application area comprises five hectares of native vegetation on the periphery of a large patch of native vegetation that is likely to be a significant remnant on a landscape scale. During a site inspection (DER, 2015), it was observed that native vegetation outside the application area is in very good (Keighery, 1994) condition.

While the application area is on the edge of an extensively cleared area, the proposed clearing of five hectares is not likely to impact the ecological viability or carrying capacity of the larger remnant.

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

Methodology

References:
Commonwealth of Australia (2001)
DER (2015)
*Government of Western Australia (2014)
Keighery (1994)
**Parks and Wildlife (2015b)

GIS Database:
- Imagery

(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

The native vegetation within the application area is mapped as Mattiske vegetation complex DM2: Woodland of *Eucalyptus wandoo-Eucalyptus marginata* subsp. *marginata-Corymbia calophylla* on uplands in semiarid and arid zones (Mattiske and Havel, 1998).

No watercourses occur within or in the area immediately surrounding the proposed clearing. Therefore, vegetation within the application area is not considered to be riparian in nature.

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

Methodology

References:
Mattiske and Havel (1998)

(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 soil type within the application area has been mapped as lateritic gravels and block laterite, with chief soils of ironstone gravels with sandy and earthy matrices (Northcote et al., 1960-68). Topography within the application area follows a minor slope of 235 to 240 metres above sea level.

The proposed clearing is for the purpose of expanding cropping and livestock grazing activities within the property, and will exclude large trees. The soil type present within the application area is not highly susceptible to erosion, however the exclusion of large trees from clearing will further mitigate wind and water erosion of topsoil.

A Land Degradation Assessment was undertaken by the Department of Agriculture and Food Western Australia (DAFWA) for the Commissioner of Soil and Land Conservation (2015). The assessment found that salinity was occurring at varying degrees along waterways within the property. However, as the application area is not located near any waterway, the proposed clearing is not considered likely to cause or increase salinity (Commissioner of Soil and Land Conservation, 2015).

Waterlogging does occur elsewhere within the property, however the Commissioner of Soil and Land Conservation (2015) advises that waterlogging is not likely to occur as a result of the proposed clearing due to the soil types present within the application area.

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)
Northcote et al. (1960-68)

GIS Database:
- Soils, Statewide
- Topography, 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 or in the vicinity of the application area. The nearest conservation area is a 'Parks and Wildlife Land for Wildlife Site', and occurs 6.9 kilometres north-east of the proposed clearing. From this distance, the proposed clearing is not likely to impact the environmental values of any conservation area.

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

Methodology

GIS Database:
- DEC Land for Wildlife Sites
- Parks and Wildlife Tenure
- System 1 to 5 and 7 to 12 Areas
- System 6 Conservation Reserves

(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 or immediately surrounding the application area and the proposed clearing is therefore not likely to impact surface water on a local or regional scale.

Groundwater salinity in the local area is 3,000 - 7,000 total dissolved solids, which is considered to be brackish. The proposed clearing is not likely to deteriorate the quality of groundwater on a local or regional scale.

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

Methodology

GIS Database:
- Groundwater Salinity, Statewide
- 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
The application area occurs on a slight slope, and does not lie within a low point in the landscape. During a site inspection, it was revealed that waterlogged areas do occur within surrounding areas during the winter period (DER, 2015), however large flooding events are uncharacteristic of the region. The proposed clearing is for the purpose of cropping and livestock grazing, and on a local scale may slightly increase the amount of water runoff and minor flooding following heavy rains. However, it is unlikely that the clearing of five hectares will significantly increase flooding on a local or regional scale.

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

Methodology

References:
DER (2015)

GIS Database:
- Topographic Contours, Statewide

Planning instruments and other relevant matters.

Comments

The applicant proposes to clear up to five hectares of native vegetation within Lot 6 on Deposited Plan 52348, Dinninup, for the purpose of cropping and livestock grazing.

The application area occurs within an area subject to previous application CPS 103/1 to clear 162 hectares of native vegetation. This application was refused by the former Department of Environment on 11 May 2006. The assessment found that the proposed clearing was at variance to Principles (a), (e), (g) and (h), and may be at variance to Principles (b), (c) and (h). The current application has been assessed and it is determined that the significant impacts associated with CPS 103/1 are not likely to occur as a result of the proposed clearing.

The subject area is within the agricultural area defined in the Environmental Protection Authority Position Statement No.2 (EPA, 2000), which states that significant clearing of native vegetation has already occurred on agricultural land, leading to a reduction in biodiversity and increase in land salinisation. Therefore there is a general presumption against clearing within this area for agricultural purposes (EPA, 2000).

There are no registered Aboriginal Sites of Significance located in the area applied to clear.

The clearing permit application was advertised on 8 June 2015 by the Department of Environment Regulation inviting submissions from the public. No submissions were received.

Methodology

References:
EPA (2000)

GIS Database:
- Aboriginal Sites Register System

4. References

Commissioner of Soil and Land Conservation (2015) Advice received from the Commissioner of Soil and Land conservation on 20 July 2015. DER REF: A936164.

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

DER (2015) CPS 6594/1 site inspection report. Department of Environment Regulation, Perth. DER REF: A968564.

DEC (2011) Invasive Plant Prioritisation, Department of Environment and Conversation, Perth.

EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority, Western Australia.

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.

Harper, M. J., McCarthy, M. A., van der Ree, R. (2005) The abundance of hollow-bearing trees in urban dry sclerophyll forest and the effect of wind on hollow development. Biological Conservation 122: 181-192.

Hearn, R., Williams, K., Comer, S and Beecham, B. (2002) Jarrah Forest 2 (JF2 – Southern Jarrah Forest subregion). In A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions in 2002 (eds J. E. May & N. L. McKenzie). Department of Conservation and Land Management, WA.

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

Manning, A. D., Gibbons, P., Fischer, J., Oliver, D. L. and Lindenmayer, D. B. (2013) Hollow futures? Tree decline, lag effects and hollow-dependent species. Animal Conservation, 1-9.

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.

Parks and Wildlife (2007-) Naturemap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife, Perth. http://naturemap.dpaw.wa.gov.au/default.aspx (Accessed June 2015).

Parks and Wildlife (2015a) Regional advice received from the Department of Parks and Wildlife on 9 July 2015. DER REF: A933817.

Parks and Wildlife (2015b) 2015 South West Forest and Swan Coastal Plain Vegetation Complex Statistics: a report prepared for the Department of Environment Regulation. Current as of March 2015. Department of Parks and Wildlife, Perth, Western Australia.

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.