



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 7288/1
File Number: DER2015/001751-1
Duration of Permit: From 22 April 2017 to 22 April 2019

PERMIT HOLDER

City of Albany

LAND ON WHICH CLEARING IS TO BE DONE

Millbrook Road Reserve (PIN: 11238636), Green Valley

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 1.91 hectares of native vegetation within the area hatched yellow on attached Plan 7288/1.

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;

2. Flora management

- (a) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *botanist* to conduct a *targeted flora survey* of the Permit Area for the presence of rare flora listed in the *Wildlife Conservation (Rare Flora) Notice* and *priority flora* in accordance with *Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment* (December 2016).
- (b) Where rare or *priority* flora are identified under condition 2(a) of this Permit, the Permit Holder shall engage a *botanist* to map the *critical habitat* of the identified rare or priority or flora within the Permit Area.
- (c) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall provide the results of the targeted flora survey in a report to the CEO.
- (d) If rare or *priority* flora are identified within the Permit Area, the *targeted flora survey* report must include the following:
 - (i) the location of each rare, either as the location of individual plants, or where this is not practical, the areal extent of the population and an estimate of the number of plants, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
 - (ii) the species name of each rare, *priority*, identified; and
 - (iii) the methodology, used to survey the Permit Area and to establish the *critical habitat* of flora; and

- (iv) the extent of the *critical habitat* of the identified rare or *priority* flora shown on a map; and
 - (v) a site description of the *critical habitat* of rare or *priority* flora found.
- (e) Where rare or *priority* flora are identified under condition 2(a) of this Permit, the Permit Holder shall ensure that:
- (i) no clearing of *critical habitat* of the identified rare or *priority* flora occurs, unless first approved by the CEO.

DEFINITIONS

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

botanist: means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of 2 years work experience in identification and surveys of flora native to the bioregion being inspected or surveyed, or who is approved by the CEO as a suitable botanist for the bioregion;

critical habitat: means any part of the Permit Area comprising of the habitat of flora or fauna species and its population, that is critical for the health and long term survival of the flora or fauna species and its population;

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;

priority flora: means those plant taxa described as priority flora classes 1, 2, 3 or 4 in the *Department of Parks and Wildlife's Threatened and Priority Flora List for Western Australia* (as amended);

targeted flora survey: means a field-based investigation, including a review of established literature, of the biodiversity of flora and vegetation of the Permit Area, focusing on habitat suitable for flora species that are being targeted and carried out during the optimal time to identify those species. Where target flora are identified in the Permit Area, the survey should also include sufficient surrounding areas to place the Permit Area into local context;

Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment: means the Environmental Protection Authority's Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment (December 2016);

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.

Wildlife Conservation (Rare Flora) Notice means those plant taxa gazetted as rare flora pursuant to section 23F(2) of the *Wildlife Conservation Act 1950* (as amended).



Mathew Gannaway
MANAGER
CLEARING REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

23 March 2017

Plan 7288/1



Legend

-  Areas approved to clear
 -  Roads
 -  LGA
 -  Cadastre
- Virtual Mosaic (LGATE-V001)



1:6,636

MGA 94
Geocentric Datum of Australia 1994


M Gannaway

Date 23/03/2017

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





1. Application details

1.1. Permit application details

Permit application No.: 7288/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: City of Albany

1.3. Property details

Property: Millbrook Road Reserve - PIN1(1238636), Green Valley
Colloquial name:
Local Government Authority: Albany, City of
DER Region: South Coast
DPaW District: Albany
LCDC:
Localities: Green Valley and Millbrook

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.91		Mechanical Removal	Road construction or upgrades

1.5. Decision on application

Decision on Permit: Grant

Application:

Decision Date: 23 March 2017

Reasons for Decision: The clearing permit application received on 21 September 2016 has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing is at variance to principle (f), may be variance to principle (a), (c) and (e) and is not likely to be at variance to any of the remaining clearing principles.

Through assessment it has been determined that the vegetation within the application area contains vegetation in very good to excellent (Keighery, 1994) condition and may contain rare flora species. To mitigate the potential impact to rare flora a condition has been placed on the permit requiring a targeted flora survey to be undertaken prior to clearing and Chief Executive Officer approval to clear any identified rare flora. It is noted that rare flora has been recorded within close proximity to the application area, a weed and dieback management condition has been placed on the permit to mitigate indirect impacts to identified rare flora species.

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
Two Beard vegetation associations have been mapped within the application area.	The applicant proposes to clear up to 1.91 hectares of native vegetation within Millbrook Road Reserve (PIN: 11238636), Green Valley, for the purpose of road widening and realignment.	Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).	The condition and description of the vegetation was determined by a targeted flora survey undertaken by Great Southern Bio Logic (2016).
Beard vegetation association 51 is described as sedgeland; reed swamps, occasionally with heath; and		To	The vegetation with the application area consists of jarrah, marri and <i>Eucalyptus staeri</i> sandy woodland (Great Southern Bio Logic, 2016).
Beard vegetation association 978 is described as low forest; jarrah, <i>Eucalyptus staeri</i> and <i>Allocasuarina fraseriana</i> (Shepherd et al., 2001).		Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994).	

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 application is for the clearing of up to 1.91 hectares of native vegetation within Millbrook Road Reserve (PIN 11238636), Green Valley, for the purpose of road widening and realignment.

The vegetation within the application area consists of jarrah, marri and *Eucalyptus staeri* sandy woodland. The vegetation within the study area is considered to be in a very good to excellent (Keighery, 1994) condition (Great Southern Bio Logic, 2016).

Ten rare flora species and twenty priority flora species have been recorded within the local area (10 kilometre radius). As discussed in Principle (c), a targeted threatened flora survey identified two rare flora species within close proximity and adjacent to the application area (Great Southern Bio Logic, 2016). The targeted flora survey did not cover the whole application area and therefore rare flora may potentially be present in unsurveyed areas of the application area. In addition, given the proposed clearing may indirectly impact nearby rare flora species and their critical habitat. Weed and dieback management practices will help mitigate indirect impacts to known rare flora species. Flora management practices requiring the application area to be surveyed for rare flora species prior to clearing will help mitigate impacts to rare flora potentially occurring within the application area.

The Department of Parks and Wildlife (Parks and Wildlife) has advised that targeted flora surveys for threatened and priority flora known to occur in a similar habitat in the local area is recommended. The flora survey should be appropriately timed to detect the presence of targeted threatened and priority flora and be conducted by a suitably qualified botanist (Parks and Wildlife, 2017).

A targeted threatened flora and priority ecological community (PEC) search of the Millbrook Road reserve identified an occurrence of the PEC *Banksia coccinea* Shrubland/*Eucalyptus staeri*/Sheoak Open Woodland (Priority 1) located approximately 1.5 kilometres east of the application area (Great Southern Bio Logic, 2016). Additional occurrences of the PEC have also been recorded within the adjacent property to the south and Millbrook Nature Reserve located north of the application area. This PEC is found on deep white/light grey sand on the lower slopes and valleys, usually occurring just upslope of seasonally wet drainage lines (Parks and Wildlife, 2016). One minor watercourse intersects the application area and therefore suitable habitat may be present for this PEC. However, given the application area is long and linear in shape impacts to vegetation associated with the watercourse is likely to be minimal and the proposed clearing is not likely to impact upon the conservation status of this PEC.

Six fauna species listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* (WC Act) have been recorded within the local area (Parks and Wildlife, 2007-). As discussed in principle (b) the proposed clearing may provide foraging habitat for the conservation significant black cockatoo species however given the long linear nature of the application and its proximity to remnant native vegetation the proposed clearing is not likely to impact upon significant habitat for this species.

The application area is located adjacent to remnant native vegetation. The proposed clearing may indirectly impact this vegetation through the spread of weeds and dieback. Weed and dieback management practices will help mitigate this risk.

The application area contains vegetation in very good to excellent (Keighery, 1994) condition and may contain rare flora and therefore may be considered to comprise a high level of biological diversity.

The proposed clearing may be at variance to this Principle.

Methodology

References:

Keighery (1994)
Great Southern Bio Logic (2016)
Parks and Wildlife (2016)
Parks and Wildlife (2007-)
Parks and Wildlife (2017)

GIS Databases

SAC Bio Datasets – accessed February 2017

(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 WC Act have been recorded within the local area (Parks and Wildlife, 2007-). Suitable habitat for the following species may be located within the application area: Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's Cockatoo (*Calyptorhynchus baudinii*), Carnaby's Cockatoo (*Calyptorhynchus latirostris*) and Western Ringtail Possum (*Pseudocheirus occidentalis*).

The vegetation with the application area consists of jarrah, marri and *Eucalyptus staeri* sandy woodland (Great Southern Bio Logic, 2016).

Carnaby's cockatoo is listed as endangered and Baudin's cockatoo and forest red-tailed cockatoo are listed as vulnerable under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*. Black cockatoos breed in large hollow-bearing trees, generally within woodlands or forests or in isolated trees (Commonwealth of Australia, 2012). These species nest in hollows in live or dead trees of karri, marri, wandoo, tuart, salmon gum, jarrah, flooded gum, York gum, powder bark, bullich and blackbutt (Commonwealth of Australia, 2012). The vegetation located within the application area is not likely to be of a sufficient size to provide breeding habitat for the black cockatoo species.

Black cockatoos have a preference for foraging 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). Suitable foraging habitat for the black cockatoo species may be located within the application area. However, given the application area is long and linear in shape, native vegetation will remain within Millbrook Road reserve, the application area is located adjacent to remnant vegetation and is located within close proximity to Millbrook Reserve, and no loss of significant habitat for these species is expected. Suitable foraging habitat for this species will remain within nearby remnant native vegetation.

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 shrub lands, bullich (*Eucalyptus megacarpa*) dominated riparian zones and karri forest (Parks and Wildlife, 2014). Given the vegetation type present within the application area and that the proposed clearing is long and linear in shape the proposed clearing is not likely to impact on significant habitat for this species.

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

Methodology References:
Commonwealth of Australia (2012)
Great Southern Bio Logic (2016)
Parks and Wildlife (2007-)
Parks and Wildlife (2014)

GIS Databases
SAC Bio Datasets – accessed February 2017

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

Comments **Proposed clearing may be at variance to this Principle**
Ten rare flora species have been recorded within the local area. Two rare flora species have been recorded within close proximity to the application area including within Millbrook Road reserve.

A targeted threatened flora survey of Millbrook Road was undertaken by Great Southern Bio Logic in August 2016. No rare flora species were identified within the application area (Great Southern Bio Logic, 2016).

The targeted survey searched three previously identified populations of the first rare flora species and two previously identified populations of the second rare flora species. The remainder of the application area was not surveyed for rare flora species (Great Southern Bio Logic, 2016).

The targeted flora survey identified the following for the first rare flora species:

- Population 1: two dead plants that potentially could be species 1 were identified within Millbrook Road reserve. It was noted that the area containing previous records of rare flora now displays evidence of recent fire. A brief survey of the adjacent northern road reserve was also undertaken which failed to locate any rare flora species.
- Population 2: this population was located on the south side of Mill brook Road facing south into the road reserve. Three plants had previously been recorded at this site, however no plants were located within the road reserve during the survey. Three dead plants were located within Millbrook Road reserve that may have been the first rare flora species.
- Population 3: the location for this population indicates a point now occurring within a cleared paddock. The targeted flora survey did not identify any rare flora species (Great Southern Bio Logic, 2016).

The targeted flora survey identified the following for the second rare flora species:

- Population 1: this population has previously been recorded as occurring on both north and south sides of Millbrook Road with approximately 18 plants recorded. The targeted flora survey identified three patches of plants within the northern road reserve, approximately 100 individuals were identified. An additional 25 plants were identified in the southern road reserve.
- Population 2: This population has been previously recorded as occurring on both north and south sides of Millbrook Road, with approximately 10 plants recorded. The targeted flora survey identified three patches of plants with the southern road reserve, with the estimated total number of individuals being 47. A brief survey of the adjacent northern reserve did not identify any plants (Great Southern

Bio Logic, 2016).

No rare flora species occur within the application area, however the above mentioned records of flora identified in the targeted flora survey are located adjacent to and within close proximity (within 10 metres) of the application area (Great Southern Bio Logic, 2016).

Parks and Wildlife considered that the targeted flora survey was not adequate in being able to detect any threatened and priority flora that may have been present in the application area aside from the known records of threatened flora. Given the presence of known populations of rare flora within the road reserve there is a high likelihood that this species could occur elsewhere along the road reserve within the application area (Parks and Wildlife, 2017).

Parks and Wildlife has advised that given the location of the identified rare flora within the road reserve there is a high potential for indirect impacts to these subpopulations and impacts on the critical habitat of the rare flora (Parks and Wildlife, 2017).

Parks and Wildlife advised that an additional population of the second rare flora species is also located within unallocated Crown land adjacent to the road reserve approximately 10 metres from the application area on the southern side of Millbrook Road, this population consists of approximately 250 mature plants and is the second largest population for this species. No information has been provided as to how these subpopulations will be protected during road works or whether any measures will be implemented to reduce indirect impacts (Parks and Wildlife, 2017).

Given the above, rare flora may occur within the application area and the proposed clearing may impact on known records of rare flora currently occurring outside of the application area.

Given the above the proposed clearing may be at variance to this Principle.

Flora management actions requiring the applicant to survey the whole application area prior to clearing will help mitigate impact to rare flora potentially occurring within the unsurveyed portion of the application area. Weed and dieback management practices will help mitigate indirect impacts to rare flora occurring within close proximity to the application area.

Parks and Wildlife advised that targeted flora surveys for threatened and priority flora known to occur in a similar habitat in the local area is recommended. The flora survey should be appropriately timed to detect the presence of targeted threatened and priority flora and be conducted by a suitably qualified botanist (Parks and Wildlife, 2017).

Methodology References:
Great Southern Bio Logic (2016).
Parks and Wildlife (2017)

GIS Databases
SAC Bio Datasets – accessed February 2017

(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, no threatened ecological communities (TEC) have been recorded within the local area. The vegetation within the application area does not represent a TEC endorsed by the Minister for Environment or listed under the EPBC Act.

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

Methodology GIS Databases:
SAC bio batasets (Accessed February 2017)

(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 national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 percent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

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, 2015).

The application area is located within the City of Albany, within which there is approximately 36 per cent pre-European vegetation extent remaining (Government of Western Australia, 2015). The local area retains approximately 25 per cent vegetation.

The application area is mapped as Beard vegetation associations 56 and 978 of which there is approximately 36 per cent of the pre-European vegetation extents remaining within the Jarrah Forest IBRA bioregion (Government of Western Australia, 2015). On this basis the mapped vegetation types retain above the recommended 30 per cent threshold and therefore the application area is not likely to be considered to be in an extensively cleared area.

The mapped Beard vegetation associations retain above the recommended 30 per cent threshold however the local area retains approximately 25 per cent vegetation and therefore may be considered to be located within an extensively cleared landscape.

The vegetation within the application area contains vegetation in very good to excellent (Keighery, 1994) condition and may contain rare flora and therefore the vegetation proposed to be cleared may be considered a significant remnant.

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

Flora management practices will mitigate impacts to rare flora.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion*				
Jarrah Forest	4,506,660	2,422,783	54	69
Shire*				
City of Albany	431,369	156,394	36	25
Beard vegetation association in Bioregion*				
56	19962	7284	36	32
978	53017	18912	36	27

Methodology References:
Commonwealth of Australia (2001)
Keighery (1994)
*Government of Western Australia (2015)

GIS Datasets:
Pre-European 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 at variance to this Principle**
A minor watercourse intersects the application area, therefore the application area is considered to be growing in association with a watercourse.

The proposed clearing is likely to impact this watercourse through the direct removal of vegetation however, given the long linear shape of the application area, impacts to this watercourse is likely to be minimal.

Given the above the proposed clearing is at variance to this Principle.

Methodology GIS Databases:
Hydrology, 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 mapped soil type Ca23 is described as 'undulating plain or plateau at low elevation, having a pronounced ridge and depression sequence, some flats, swamps, and lakes: chief soils seem to be leached sands (Northcote et al., 1960 – 1968).

The sandy soils mapped within the application area may be prone to wind erosion, however given the proposed clearing of 1.91 hectares is linear in shape for the purpose of road realignment and construction impacts are likely to be minimal and short term, the proposed clearing is not likely to cause appreciable land degradation.

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

Methodology References:
Northcote et al. (1960 – 1968)

GIS databases:
Soils, 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**
Millbrook Reserve is located approximately 1.4 kilometres north of the application area.

Given the distance to this reserve the proposed clearing is not likely to have any direct impacts on the environmental values of the reserve.

The proposed clearing is not likely to sever or disrupt any ecological linkages allowing fauna to move between conservation areas and remnant vegetation within the local area.

Given the above, 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**
A minor watercourse intersects the application area. The clearing proposed may increase run-off and sedimentation into the watercourse intersecting the application area, however this impact is likely to be minimal and short term. In addition, there are likely to already be culverts in place which will ensure that surface water flow is not disturbed.

Groundwater salinity is mapped between 500 and 1000 milligrams per litre which is considered marginal. Given this and that the application is long and linear in shape the proposed clearing is not likely to cause deterioration in the quality of groundwater.

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

Methodology GIS Databases:
Hydrology, linear
Groundwater salinity

(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**
Due to the extent of vegetation remaining in the local area, the clearing of 1.91 hectares of native vegetation along two sides of the road reserve is not likely to cause or exacerbate the incidence or intensity of flooding.

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

Methodology GIS Datasets:
Pre-European Vegetation
Soils, statewide

Planning instruments and other relevant matters.

Comments The Department of Water (DoW) has advised that the proposed clearing area is not located in a proclaimed *Rights in Water and Irrigation Act 1914* area, however, a permit to interfere with bed and banks of a waterway can apply if the waterway is accessed via a crown reserve, in this case the Millbrook Road reserve. The proposed clearing area may impact upon a tributary to the King River. If so, the applicant should contact DoW's office in Albany for more advice. A bed and banks permit to interfere with a waterway may be required (DoW, 2017).

Parks and Wildlife recommend:

- Targeted flora surveys for the rare flora species to be undertaken for the areas of the application area that were not included in the August 2016 Survey.
- Targeted flora surveys for threatened and priority flora known to occur in similar habitat in the local area is also recommended. The flora survey should be appropriately timed to detect the presence of targeted rare and priority flora and be conducted by a qualified botanist.
- If any threatened or priority flora are proposed to be impacted, the extent of the local population should be recorded to enable an assessment of the proportional impact of the proposal to the local population.
- The proponent will need to apply to Parks and Wildlife's Species and Communities Branch for a permit to take DRF. The DRF permit application should be submitted post the additional flora survey work to ensure any additional locations of DRF are included in the permit application. The proximity of the locations of any DRF to the application area should be provided with the DRF permit application, preferably clearly marked on a map.
- The proponent should ensure that any threatened or priority flora in proximity to the road works are clearly marked for avoidance and measures taken to ensure plants are not affected by indirect impacts, such as altered hydrology or dust during road works.
- Hygiene measures should be undertaken during road works to prevent the infestation or spread of disease (Parks and Wildlife, 2017).

There are no registered Aboriginal Sites of Significance mapped within the application area.

The clearing permit application was advertised in *The West Australian* newspaper on 31 October 2016 for a 21 day submission period. No submissions were received.

Methodology References:
DoW (2017)
Parks and Wildlife (2017)

4. References

- 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.
- Department of Parks and Wildlife (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed February 2017
- Department of 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>.
- Department of Parks and Wildlife (2016) Priority Ecological Communities For Western Australia Version 26 Species and Communities Branch, Department of Parks and Wildlife, 30 November 2016
- Department of Parks and Wildlife (2017) Species and Communities Advice for Clearing Permit Application CPS 7288/1. Western Australia. DER Ref: A1368530
- Department of Water (2017) Advice for Clearing Permit CPS 7288/1. Western Australia. DER Ref: A1373219
- Government of Western Australia (2015). 2015 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2015. Western Australia Department of Parks and Wildlife, Perth.
- Great Southern Bio Logic (2016) Targeted Flora Survey – Millbrook Road. Western Australia. DER Ref: A1168730
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Northcote, K. H. with Beckmann G. G., Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Shepherd, D.P., 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.