



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 7527/1
File Number: DER2017/000417-1
Duration of Permit: From 17 May 2018 to 17 May 2020

PERMIT HOLDER

Amy Karin Molloy
Shannon Thomas Leslie O'Donohue

LAND ON WHICH CLEARING IS TO BE DONE

Lot 40 on Deposited Plan 41369, Quindalup

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.05 hectares of native vegetation within the area hatched yellow on attached Plan 7527/1.

CONDITIONS

1. 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.

2. 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

3. Records must be kept

The Permit Holder must maintain the following records in relation to clearing:

- (a) the location where clearing occurred, 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;
- (b) the date(s) that clearing occurred;
- (c) the size of the area cleared (in hectares);
- (d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of this Permit; and
- (e) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 2 of this Permit.

4. Reporting

The Permit Holder must provide to the CEO the records required under condition 3 of this Permit, when requested by the CEO.

Definitions

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

dieback means the effect of *Phytophthora* species on native vegetation;

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or

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.



Jane Clarkson
MANAGER
CLEARING REGULATION

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

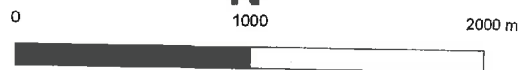
17 April 2018

Plan 7527/1



Legend

- Areas approved to clear
- Roads
- Local Government Authority
- WANow_Imagery
- Cadastre



MGA 94
Geocentric Datum of Australia 1994

.....Date.....

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



**GOVERNMENT OF
WESTERN AUSTRALIA**



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7527/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Mr Shannon O'Donohue
Ms Amy Karrin Molloy
Application received date: 24 March 2017

1.3. Property details

Property: Lot 40 on Deposited Plan 41369, Quindalup
Local Government Authority: City of Busselton
Localities: QUINDALUP

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
0.05		Mechanical Removal	Building or structure

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 17 April 2018

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

It has been determined that the proposed clearing will impact upon vegetation associated with a watercourse and may indirectly impact adjacent vegetation through the introduction or spread of weeds and dieback. However, noting the size of the application area, the proposed clearing is unlikely to have a significant impact on the environmental values of this watercourse.

Given the above, the Delegated Officer decided to grant a clearing permit subject to weed and dieback management conditions.

2. Site Information

Clearing Description

The applicant proposes to clear 0.05 hectares of native vegetation within Lot 40 on Deposited Plan 41369, Quindalup, for the purpose of constructing a dam.

Vegetation Description

The application area is mapped as Matiske vegetation complex 'Metricup (Mv)' which is described as: low woodland of *Eucalyptus marginata* subsp. *marginata* (jarrah) with some *Nuytsia floribunda* (WA Christmas tree) on deeply incised valleys in the humid zone (Matiske and Havel, 1998).

In support of the application, the applicant provided the report *Reconnaissance Flora, Vegetation and Fauna Survey – Lot 40 Caudalie Way, Quindalup* (Ecosystem Solutions, 2018), which was commissioned to determine the presence of rare flora and fauna within the application area (Flora, Vegetation and Fauna Survey).

The Flora, Vegetation and Fauna Survey identified that the vegetation present within the application area is categorised as Open Woodland of *Corymbia calophylla* (marri) and *Agonis flexuosa* (peppermint), over Tall Open Shrubland of marri and peppermint and *Xanthorrhoea preissii* (grasstree). over Shrubland of grasstree and marri, over low shrubland of grasstree, over Very open sedgeland of *Lepidosperma squamatum*, *Lomandra* spp., *Mesomelaena tetragona* (semaphore sedge), over very open herbland of *Hibbertia hypericoides* (yellow buttercups), *Banksia sessilis* (parrot bush), with scattered introduced grasses in the upper areas (Ecosystem Solutions, 2018).

Vegetation Condition

Good; Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).

To

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

The condition of the vegetation was determined from the Flora, Vegetation and Fauna Survey, which identified that the vegetation is in a good to degraded (Keighery, 1994) condition due to the lack of structural diversity and weed (grasses) invasion which is prevalent in the higher areas of the site (Ecosystem Solutions, 2018).

Soil type

The application area is mapped within soil type 'MT8' which is described as gently undulating terrain of broad shallow valleys and low ridges with moderate amounts of laterite and lateritic (ironstone) gravel: chief soils of the broad shallow valleys are acid grey earths sometimes containing ironstone gravels ((Northcote et al., 1960-68).

Comments:

The local area considered in the assessment of this application is defined as a 10 kilometre radius measured from the perimeter of the application area.



Figure 1: Map of application area

3. Minimisation and mitigation measures

During the assessment of the application, the applicant reduced the extent of the proposed clearing from 0.18 hectares to 0.05 hectares to minimise impacts to identified environmental values, and commissioned the Flora, Vegetation and Fauna Survey within Lot 40 to determine the presence of rare flora and fauna within the application area. The outcomes are discussed in Section 4.

4. Assessment of application against clearing principles

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

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

The application (as revised) is for the proposed clearing of 0.05 hectares of native vegetation within Lot 40 on Deposited Plan 41369, Quindalup, for the purpose of constructing a dam.

The application area has been impacted upon by overgrazing, logging and weed infestations (Clay, 2006). The vegetation is considered to be in a good to degraded (Keighery, 1994) condition due to the lack of structural diversity and weed (grasses) invasion which is prevalent in the higher areas of the site (Ecosystem Solutions, 2018).

According to available databases, seven rare flora and 23 priority flora species have been recorded within the local area. Given the small size of the application area and extent native vegetation within the local area, the proposed clearing is not likely to impact upon the conservation status of any priority flora species. As assessed under Principle (c), no rare flora have been identified within the application area (Ecosystem Solutions, 2018).

According to available databases, 17 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-). The application area may provide potential habitat for forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*), Carnaby's cockatoo (*Calyptorhynchus latirostris*), chuditch (*Dasyurus geoffroii*), southern brush-tailed phascogale (*Phascogale tapoatafa* subsp. *tapoatafa*), western ringtail possum (*Pseudocheirus occidentalis*) and quokka (*Setonix brachyurus*). As assessed under Principle (b), noting the size of the application area and that vegetation of a similar type and condition occurs adjacent to the application area, the application area is not likely to comprise significant habitat for indigenous fauna including the abovementioned species.

The vegetation within the application area is not representative of any priority ecological communities recorded within the local area. As assessed under Principle (d), the vegetation within the application area is not representative of any threatened ecological communities (TEC) recorded within the local area.

The South West Regional Ecological Linkage Technical Report (Molloy et al., 2009) identified a regional ecological linkage approximately 100 metres east of the application area. As a result of the location of this axis line, the application area is classed as '1a' under the report. '1a' areas comprise native vegetation adjacent to or within 100 metres of a linkage (Molloy et al., 2009). These linkages are recognised for their significance in facilitating indigenous fauna movement across the landscape (Molloy et al., 2009). 'The landscape function of an ecological linkage will be considered impaired where a proposed development causes the proximity value of a level 1 patch of remnant vegetation to change to level 2' (Molloy et al., 2009). The proposed clearing may impact on '1a' vegetation, however noting the size of the application area, the proposed clearing is unlikely to have an unacceptable impact on the environmental values of this linkage through fragmentation.

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 actions will help mitigate this risk.

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

(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.

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

According to available databases, 17 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-). The application area may provide potential habitat for forest red-tailed black cockatoo, Baudin's cockatoo, Carnaby's cockatoo, chuditch, southern brush-tailed phascogale, western ringtail possum and quokka.

The former Department of Parks and Wildlife (Parks and Wildlife) advised that the proposed clearing has the potential to impact on western ringtail possums that inhabit the creekline, and that it is possible that the application area supports trees that may provide roosting or nesting habitat for black cockatoos species (Parks and Wildlife, 2017a).

Carnaby's cockatoo is listed as endangered and Baudin's cockatoo and forest red-tailed black cockatoo are listed as vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Black cockatoos breed in large hollow-bearing trees, generally within woodlands or forests or former woodland or forest now present as isolated trees, including hollows in live or dead trees of jarrah, marri, *Euclayptus diversicolor* (karri), *Euclayptus wandoo* (wandoo), *Euclayptus gomphocephala* (tuart), *Euclayptus salmonophloia* (salmon gum), *Euclayptus rudis* (flooded gum), *Euclayptus loxophleba* (York gum), *Euclayptus accedens* (powderbark), *Eucalyptus megacarpa* (bullich) and *Eucalyptus* sp. (blackbutt). Criteria for black cockatoo breeding habitat include trees having a diameter at breast height (DBH) of more than 50 centimetres. 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). Black cockatoos were heard during two dusk fauna surveys undertaken within Lot 40 but were not observed within the application area or within Lot 40 (Ecosystem Solutions, 2018). The application area is likely to contain foraging habitat for the black cockatoo species. However, given the relatively small size of the application area, located adjacent to remnant vegetation in good or better condition and that the local area retains 40 per cent native vegetation cover, the proposed clearing is not likely to impact upon significant foraging habitat for these species.

The Flora, Vegetation and Fauna Survey identified 14 black cockatoo habitat trees within Lot 40, one of which is located within the application area (Ecosystem Solutions, 2018). The habitat trees located within the application contains one hollow (Ecosystem Solutions, 2018). No evidence of black cockatoos using any of the identified habitat trees was observed (Ecosystem Solutions, 2018). Given this, it is unlikely that black cockatoos are currently utilising the habitat tree within the application area for breeding. If the proposed clearing was to occur, 13 habitat trees would remain within Lot 40 and therefore no loss of potential breeding habitat is expected.

The southern brush-tailed phascogale inhabits dry sclerophyll forests and open woodlands that contain hollow-bearing trees (DEC, 2012a). Suitable habitat for this species may be located within hollow bearing trees if present within the application area. The Flora, Vegetation and Fauna Survey did not identify evidence of hollows within Lot 40 being utilised by this species (Ecosystem Solutions, 2018).

The current distribution of the western ringtail possum is patchy and largely restricted to the moister south-western corner of Western Australia, especially near coastal areas of peppermint woodland and peppermint/tuart associations from the Australind/Eaton area to the Waychinicup National Park (DEC, 2012b). Suitable habitat for this species may be located within the application area (Parks and Wildlife, 2017a). Photographs provided by the applicant indicate that the vegetation predominantly consists of jarrah and marri and that limited peppermint trees are present. The Flora, Vegetation and Fauna Survey identified western ringtail possum urine scent within the extreme western portion of Lot 40, however no individuals were identified during the night survey (Ecosystem Solutions, 2018). Noting the size of the application area and the limited number of peppermint trees present, the proposed clearing is not likely to impact on significant habitat for this species.

The chuditch inhabits most kinds of wooded habitat within its current range including eucalypt forest (especially jarrah), dry woodland and mallee shrublands. In jarrah forest, chuditch populations occur in both moist, densely vegetated, steeply sloping forest and drier, open, gently sloping forest (Department of the Environment and Energy, 2017a). The quokka's main habitat for mainland populations is dense riparian vegetation (Department of the Environment and Energy, 2017b). The quokka has been recorded within the local area on three occasions between 1933 and 1978. Suitable habitat for these species may occur within the application area, however noting the size of the application area, the proposed clearing is unlikely to impact on significant habitat for these species.

As assessed under Principle (a), the South West Regional Ecological Linkage Technical Report (Molloy et al., 2009) identified a regional ecological linkage approximately 100 metres east of the application area. The proposed clearing may impact on vegetation associated within this linkage, however noting the size of the application area, the proposed clearing is unlikely to have an unacceptable impact on the environmental values of this ecological linkage through fragmentation.

Given the above, the application area is not likely to comprise significant habitat for fauna indigenous to Western Australia. The proposed clearing is not likely to be at variance to this Principle.

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

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

According to available databases, seven rare flora species have been recorded within the local area.

Three vascular flora surveys were conducted within Lot 40 in 2004 in which no rare flora were identified (Clay, 2006). Parks and Wildlife advised that the vascular flora surveys were conducted in the property in 2004 which concluded that there is a lack of plant diversity due to stock grazing and kangaroos (Parks and Wildlife, 2017c).

Suitable habitat for five rare flora species may occur within the application area (Parks and Wildlife, 2017c). However, four of the rare flora species are orchids, and given the degraded understorey as identified in the Environment Report (Clay, 2006), it is unlikely that the threatened orchid species would occur in such areas if the understorey is still degraded (Parks and Wildlife, 2017c).

The Environmental Report (Clay, 2006) states that Species 1 occurred within Lot 40 and was an unnamed new species at the time. Species 1 has now been identified as a threatened species (Parks and Wildlife, 2017c). Parks and Wildlife advised that five individuals of Species 1 occurred within Lot 40 in 2013, therefore Species 1 has the potential to occur within the application area. Species 1 is known from one location consisting of two populations, over an extent of approximately 0.5 square kilometres (Parks and Wildlife, 2017b). The loss of any plants of Species 1 would be highly significant; it is currently under threat from property development and powerline maintenance (Parks and Wildlife, 2017b).

The Flora, Vegetation and Fauna Survey identified 10 individuals of rare flora within Lot 40, however no rare flora were identified within the application area (Ecosystem Solutions, 2018). The closest occurrence rare flora is located approximately 150 metres from the application area (Ecosystem Solutions, 2018).

Given the above, the application area is not likely to include, or be necessary for the continued existence of, rare flora. The proposed clearing is not likely to be at variance to this Principle.

(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.

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

According to available databases, six TECs have been recorded within the local area. The closest is the Commonwealth-listed TEC 'Banksia Woodlands of the Swan Coastal Plain', located approximately 900 metres from the application area.

As discussed in Section 2, the vegetation within the application area comprises predominantly a marri and peppermint woodland over mixed understorey. The vegetation within the application area is not representative of the abovementioned TEC.

Given the above, the application area is not likely to comprise the whole or a part of, or be necessary for the maintenance of, a TEC. The proposed clearing is not likely to be at variance to this Principle.

(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.

Proposed clearing is not likely to 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 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

As indicated in Table 1, the current extents of native vegetation within the bioregion, local government authority, mapped vegetation association and mapped vegetation complex are above the 30 per cent threshold. The local area retains approximately 40 per cent native vegetation.

Notwithstanding, the current extent of the mapped vegetation complex does not exceed the minimum 1,500 hectares retention target of Molloy et al. (2007) (Parks and Wildlife, 2017a). The proposed clearing represents less than 0.0005 per cent of this extent.

The application area does not comprise a high biological diversity, rare flora, significant fauna habitat or a priority or threatened ecological community and therefore, is not likely to be considered to be a significant remnant of native vegetation.

Given the above, the proposed clearing is not likely to be significant as a remnant of native vegetation in an extensively cleared area. The proposed clearing is not likely to be at variance to this Principle.

Table 1: Vegetation extents

	Pre-European	Current Extent	Remaining	Current Extent in Parks and Wildlife Managed Lands	
	(ha)	(ha)	(%)	(ha)	(%)
IBRA Bioregion					
Jarrah Forest	4 506 660	2 406 938	53	1 673 352	70
Local Government Authority					
City of Busselton	146,478	60,014	41	41,378	69
Beard Association in Bioregion*					
1000	5,428	2,802	52	398	14
Mattiske Complex in Bioregion**					
Metricup (Mv)	972	492	51	-	17

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Proposed clearing is at variance to this Principle

A minor perennial watercourse intersects the application area.

Given the above, the vegetation proposed to be cleared is considered to be growing in association with a watercourse. The proposed clearing is at variance to this Principle.

Noting the size of the application area and the condition of the vegetation, the proposed clearing is not likely to have an unacceptable impact on the environmental values of this watercourse.

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

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

As outlined in Section 2, the application area is mapped as laterite and lateritic (ironstone) gravels. Noting the soil types present within the application area and the size of the application area, the proposed clearing is not likely to cause appreciable land degradation in the forms of wind erosion, salinity, waterlogging or nutrient export.

As discussed under Principle (f), a watercourse intersects the application area. Noting the purpose of the proposed clearing and the size of the application area, it is considered that the final dam design will adequately manage surface water flow and prevent water erosion.

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

(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.

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

Numerous conservation areas have been recorded within the local area. The closest conservation area is Leeuwin-Naturaliste National Park located approximately 3.4 kilometres east of the application area.

Noting the distance to this conservation area, the proposed clearing is not likely to impact upon the environmental values of this of any other conservation areas.

As assessed under Principle (b), the South West Regional Ecological Linkage Technical Report (Molloy et al., 2009) identified a regional ecological linkage approximately 100 metres east of the application area. The proposed clearing may impact upon vegetation associated within this linkage, however noting the size of the application area, the proposed clearing is unlikely to have an unacceptable impact on the environmental values of this ecological linkage through fragmentation.

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

(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.

Proposed clearing to this Principle

As discussed under Principle (f), a minor perennial watercourse intersects the application area. This watercourse flows into the Toby Inlet (Parks and Wildlife, 2017a).

The proposed clearing may increase sedimentation and runoff into this watercourse, however noting the size of the application area the impacts are likely to be minimal and short term.

Noting the purpose of the proposed clearing, and that the application area is located within the Geographe Bay Rivers Surface Water Area proclaimed under *the Rights in Water and Irrigation Act 1914* (RiWI Act), relevant approvals under the RiWI Act and the City of Busselton will be required. These approvals will ensure that the final dam design will prevent deterioration in the quality of surface water.

The former Department of Water (DoW) advised that the main risk associated with the proposed clearing relates to erosion, sediment transport and associated turbidity in downstream dams and the waterway. DoW advised that to minimise turbidity and erosion, if possible clearing should be restricted to the dry period of the year when surface water flows are at their lowest and erosion is least likely (DoW, 2017).

Groundwater salinity is mapped between 1,000–3,000 milligrams per litre total dissolved solids, which is considered to be brackish to moderately saline. Noting this and the size of the application area, it is considered that the proposed clearing is not likely to impact upon the quality of underground water.

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

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

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

Noting the size of the application area, the mapped soil types present and the purpose of the proposed clearing, it is considered that the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding.

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

Planning instruments and other relevant matters.

DoW advised that the application area is located within the Geographe Bay Rivers Surface Water Area and Busselton-Capel Groundwater Area as proclaimed under the RiWI Act (DoW, 2017).

The applicant has submitted an application for a permit to construct a dam and licence to take surface water under the RiWI Act (DoW, 2017). A detailed assessment of the application to construct a dam and licence to take surface water has determined that there is unlikely to be any adverse impact associated with the proposed dam development, however a determination on the clearing permit application is required prior to completing the assessment (DoW, 2017).

On 12 April 2018, the City of Busselton granted development approval for the construction a dam within Lot 40 on Deposited Plan 41369 (City of Busselton, 2018).

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

The application was advertised on the former Department of Environment Regulation's website on 18 April 2017 for a 21 day submission period. No submissions have been received in relation to this application.

5. References

- Clay, B (2006) Environmental Report Lot 40 The Vitner's Ridge. Sussex Location 4209 Biddle Road and Ptn 4107 Commonage Road. Western Australia
- City of Busselton (2018) Application for Development Approval – Dam – Lot 40 (HSE No. 61) Caudalie Way, Quindalup. Western Australia (DWER Ref: A1654461)
- 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. Department of Sustainability, Environment, Water, Populations and Communities, Canberra
- Department of Environment and Conservation (DEC) (2012a) Fauna Profiles – Brush-tailed Phascogale (*Phascogale tapoatafa*). Department of Environment and Conservation. Western Australia
- Department of Environment and Conservation (DEC) (2012b). Fauna profile, western ringtail possum *Pseudocheirus occidentalis* (Thomas, 1888). (Western Australia)
- Department of the Environment and Energy (2017a). *Dasyurus geoffroii* in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: <http://www.environment.gov.au/sprat>.
- Department of the Environment and Energy (2017b). *Setonix brachyurus* in Species Profile and Threats Database, Department of the Environment, Canberra.
- Department of Parks and Wildlife (Parks and Wildlife) (2017a) Regional Advice for Clearing Permit Application CPS 7527/1. South West Region. Western Australia (DER Ref: A1475070).
- Department of Parks and Wildlife (Parks and Wildlife) (2017b) Flora Advice for Clearing Permit Application CPS 7527/1. Species and Communities Branch. Western Australia (DER Ref: A1475062).
- Department of Parks and Wildlife (Parks and Wildlife) (2017c) Flora Advice for Clearing Permit Application CPS 7527/1. Species and Communities Branch. Western Australia (DER Ref: A1474938).
- Department of Water (DoW) (2017a) Application to Clear Native vegetation under the Environmental Protection Act 1986. Western Australia. (DER Ref: A1475072).
- Ecosystem Solution (2018) Reconnaissance Flora, Vegetation and Fauna Survey. Lot 40 Caudalie Way, Quindalup. Western Australia. DWER Ref: A1604979
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- Government of Western Australia (2018). 2017 South West Vegetation Complex Statistics. Current as of October 2017. WA Department of Biodiversity, Conservation and Attractions, Perth, <https://catalogue.data.wa.gov.au/dataset/dbca>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
- Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009) South West Regional Ecological Linkages Technical Report, Western Australian Local Government Association and Department of Environment and Conservation, Perth.
- Molloy, S., O'Connor, T., Wood, J. and Wallrodt, S. (2007) Addendum for the South West Biodiversity Project Area, Western Australian Local Government Association, West Perth.
- 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

GIS Datasets

- Aboriginal Sites of Significance
- Groundwater Salinity
- Hydrology, linear
- Mattiske Vegetation Complexes
- Parks and Wildlife, Tenure
- Pre-European Vegetation
- SAC Bio Datasets – accessed June 2017
- Soils, statewide