



## CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

### PERMIT DETAILS

Area Permit Number: 8751/1  
File Number: DWERVT4989~4  
Duration of Permit: From 30 April 2020 to 30 April 2022

### PERMIT HOLDER

Shire of Jerramungup

### LAND ON WHICH CLEARING IS TO BE DONE

Meechi Road reserve, PIN 11541632, Bremer Bay

### AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.19 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8751/1.

### CONDITIONS

#### 1. Avoid, minimise and reduce the impacts and extent of 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. Clearing not authorised

This Permit does not authorise the Permit Holder to clear native vegetation between 1 August and 31 December.

#### 3. 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.

#### 4. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

## 5. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit, in relation to the clearing of native vegetation authorised under this Permit:

- (a) the location where the 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 that the area was cleared;
- (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 *dieback* and *weeds* in accordance with condition 3 of this Permit.

## 6. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 5 of this Permit, when requested by the *CEO*.

## DEFINITIONS

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

*CEO* means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

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

*fill* means material used to increase the ground level, or fill a hollow;

*mulch* means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

*weed/s* means any plant -

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



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Meenu Vitarana  
MANAGER  
NATIVE VEGETATION REGULATION

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

6 April 2020

# Plan 8751/1

119°10.500'E

119°11.250'E

119°12.000'E



34°15.750'S

34°16.500'S

34°17.250'S

34°15.750'S

34°16.500'S

34°17.250'S


119°10.500'E

119°11.250'E


119°12.000'E

## Legend

### CPS layers

 CPS areas approved to clear

### base layers

 Cadastre - LGATE 218

0 250 500 750 1000 m



Date:

2020.04.06

11:49:35

+08'00'

Officer delegated 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.: 8751/1  
Permit type: Area Permit

### 1.2. Applicant details

Applicant's name: Shire of Jerramungup  
Application received date: 09 December 2019

### 1.3. Property details

Property: Meechi Road Reserve (PIN 11541632), Bremer Bay  
Local Government Authority: Shire of Jerramungup  
Localities: Bremer Bay

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
0.19		Mechanical removal	Road construction or upgrades

### 1.5. Decision on application

Decision on Permit Application: Granted

Decision Date: 6 April 2020

Reasons for Decision: The clearing permit application received on 9 December 2020 has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. Proposed clearing is required for the management of road verge vegetation along the western side only of Meechi Road, Jerramungup, for road safety purposes.

The assessment concluded that proposed clearing is not likely to be at variance with the ten clearing principles.

The Delegated Officer determined that in consideration of the minimisation measures implemented the proposed clearing of just one metre width along one side only of Meechi Road is unlikely to have any significant environmental impacts, and is not likely to lead to an unacceptable risk to the environment. The Delegated Officer, however, noted that the proposed clearing may increase the risk of dieback and/or weeds being introduced or spread into adjacent areas. Given the above, the Delegated Officer decided to grant a clearing permit subject to standard weed and dieback management conditions.

## 2. Site Information

**Clearing Description:** The Shire of Jerramungup has applied for an Area Permit to clear a one metre strip of native vegetation along four sections of the western side of Meechi Road Reserve (PIN 11541632), Bremer Bay, for a combined length of approximately 1.9 kilometres, equating to an area of approximately 0.19 hectares (Figure 1). The road maintenance is required for road safety reasons.

**Vegetation Description:** The application area is mapped as Beard Vegetation Association 47: Qualup. Shrublands; tallerack mallee-heath (Shepherd *et al.* 2001). Great Southern Bio Logic (2017) undertook a flora and vegetation survey of the application area and mapped and described two vegetation types:

- Predominantly an open mallee woodland of *Eucalyptus pleurocarpa* and *E. adesmophloia* over a sparse mid shrubland of *Calothamnus gibbosus*, *Hakea marginata* and *Petrophile squamata*; with
- A minor area of woodland of *Eucalyptus occidentalis* over a shrubland of *Melaleuca viminea*.

**Vegetation Condition:** Excellent (Keighery 1994). The vegetation condition is described by Great Southern Bio Logic (2017) as excellent with very limited weed invasion or soil disturbance away from the road edge.

**Soil Description:** The application area occurs over the mapped Chillinup 8 subsystem of gently undulating sandplain with soils developing on tertiary marine sediments (Schoknecht *et al.* 2004). In particular, the application area comprises a flat plain with sand, and clay duplex soils, intersected with several small water accumulating pans, and by one moderately incised saline drainage channel (Great Southern Bio Logic 2017).

**Comments:** Assessment of the environmental values of the application area was considered at the local scale consisting of a 20 kilometre radius of the application area.



Figure 1: Map of the application area (CPS 8751/1)

### 3. Minimisation and mitigation measures

The Shire of Jerramungup have reduced the proposed clearing footprint by limiting clearing to one side only of Meechi Road (the western side), and limiting clearing to a maximum of one metre width from the existing back slope. This will eliminate the clearing of vegetation from the eastern side of the road reserve facilitating the sustainability of roadside vegetation. Strategic removal of small shrubs and trees will be undertaken using a grab bucket, followed with the reforming of the back slope using a grader. The works are required to continue to maintain the Meechi Road network to industry standards, and facilitate the efficiency of the network which forms a vital link between Bremer Bay and Jerramungup.

### 4. Assessment of application against clearing principles

The clearing of 0.19 hectares of native vegetation along the western side of Meechi Road Reserve is located in the Shire of Jerramungup. The application area is situated within the Esperance Plains Bioregion (ESP) and Fitzgerald sub-region (ESP01) of Thackway and Creswell (1995), and within the intensive land-use zone.

A flora and vegetation survey undertaken by Great Southern Bio Logic (2017) which included the Meechi Road application area found that a majority of the application area comprised of an open mallee woodland of *Eucalyptus pleurocarpa* and *E. adesmophloia* over a sparse mid shrubland of *Calothamnus gibbosus*, *Hakea marginata* and *Petrophile squamata*. A very small section of the survey area (approximately 30 square metres) intersects a woodland of *Eucalyptus occidentalis* over a shrubland of *Melaleuca viminea*.

The application area is not within an Environmentally Sensitive Area (ESA), with the closest being the locations of the Endangered flora taxa (*Boronia clavata*) approximately 2.1 kilometres to the south-east, and the Fitzgerald River National Park (ESA) approximately 11.8 kilometres to the east. The application area is located within the South Coast Macro Corridor of Wilkins *et al.* (2006), however, it is not located in proximity to any specific vegetated 'South Coast Linkages' associated with the macro corridor. Roadside vegetation associated with the Meechi Road Reserve connects with remnant vegetation associated with Devil Creek, and with Crown Reserve 33258 (Parkland and Recreation) approximately 425 metres to the north (Figure 1). Crown Reserve 33258 is a large vegetated parcel that includes the Bremmer River, and is contiguous to the south-east with the Fitzgerald River National Park.

No Threatened or Priority flora taxa have been recorded from within the application area, or the Meechi Road Reserve within the vicinity of the application area. According to available databases within a 20 kilometre radius of the application area twenty-seven Priority (P) flora taxa and two Threatened flora taxa have been recorded, and within 10 kilometres five Priority and one Threatened flora taxa have been recorded. The closest taxa recorded was *Boronia clavata* (Endangered) located approximately 2.1 kilometres to the south-east (four records), *Lasiopetalum parvuliflorum* (P3) located approximately 5.7 kilometres to the south-east (two records), and *Stylidium pseudohirsutum* (P3) located approximately 7.6 kilometres to the south-east (one record). Of these taxa Great Southern Bio Logic (2017) considered the two Priority 3 species as 'possibly' occurring based on known habitat preferences and the vegetation types present. However, the field survey of Great Southern Bio Logic (2017) did not record any Priority or Threatened flora taxa over the application area. The Endangered *Boronia clavata* is known from flats and riparian vegetation associated with the Bremer River and Devil Creek downstream of the application area. Great Southern Bio Logic (2017) assessed that habitats over the application area were less suitable for this taxa, and noted that *Boronia clavata* is a very conspicuous shrub unlikely to be overlooked along a roadside. No survey limitations were identified by Great Southern Bio Logic (2017) that would have prevented the detection of any Threatened or Priority flora if present.

'Proteaceae Dominated Kwongan Shrublands of the Southeast Coastal Floristic Province of Western Australia' is considered a Priority Ecological Community (PEC) (Priority 3) in Western Australia by the Department of Biodiversity, Conservation and Attractions (DBCA), and is listed as a Threatened Ecological Community (TEC) (Endangered) under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This TEC has been regionally-mapped over a proportion of the application area. The Approved Conservation Advice for this TEC (and State PEC) specifies a number of key diagnostic characteristics for vegetation to be considered representative (Department of the Environment, 2014). The TEC is dominated by flowering shrub species from the Proteaceae family such as Banksias, Grevilleas, and Hakeas. The application area consists predominantly of Myrtaceae dominant species, and Great Southern Bio Logic (2017) concluded that vegetation occurring is not concordant with any listed TECs or PECs. No additional TECs or PECs occur within 20 kilometres of the application area.

Fauna habitat consists of open mallee woodland and eucalypt woodland. According to available databases within a 20 kilometre radius of the application 18 birds, 5 mammals and 1 Invertebrate of conservation significance have been recorded. Of the birds, 12 are Priority species and/or species protected under international agreements that are waders or waterbirds that utilise habitats not present over the application area. Most of these species have been recorded in habitats associated with the major Gairdner River approximately 9.7 kilometres to the east and/or estuarine and marine habitats further afield, and are unlikely to occur. The Critically Endangered Western Ground Parrot (*Pezoporus flaviventris*) and Endangered Western Whipbird (*Psophodes nigrogularis nigrogularis*) are known from records over 14 kilometres distant within the Fitzgerald River National Park, and are unlikely to occur within linear road verges. Twelve records of the Vulnerable Malleefowl (*Leipoa ocellata*) have been made within 20 kilometres of the application area. The closest record, from 1979, is located approximately six kilometres to the east, with the most recent record from 2016 located approximately 19.5 kilometres north-east within Fitzgerald River National Park where most of the recent sightings are located. Considering the distance to recent sightings it is unlikely that the Malleefowl would utilise the Meechi Road Reserve.

Numerous records of the Endangered Carnaby's Cockatoo (*Calyptorhynchus latirostris*) (including 'White-tailed Black Cockatoo' records) have been made within 20 kilometres of the application area, with the closest 5.8 kilometres to the east. No confirmed breeding or roosting sites have been recorded within 20 kilometres, and the vegetation description does not coincide with quality foraging habitat for this species (DoEE 2020; DSEWPaC 2012), which is more aligned with Proteaceae dominated kwongan shrublands. Past surveys have recorded the breeding of Red-Capped Parrots (*Purpureicephalus spurius*) within, or adjacent to, the application area (Elson, 2016). This species is not under any threat or danger to its population, and has not been assigned any conservation status. However, to mitigate potential harm to this and other native bird species, the permit has been conditioned for clearing to occur during the non-breeding season.

The Endangered Dibbler (*Parantechinus apicalis*) and Vulnerable Chuditch (*Dasyurus geoffroi*) are known from the Fitzgerald River National Park, with records at least 12 kilometres distant. The Chuditch, however, is a wide-ranging species and it is possible that dispersing individuals could utilise the Meechi Road Reserve intermittently, particularly remnant vegetation associated with Devil Creek. Although not recorded within six kilometres of the application area dispersing Quenda (*Isodon fusciventer*) (Priority 4) and Western Brush Wallaby (*Notamacropus irma*) (Priority 4) may similarly utilise Meechi Road Reserve intermittently. One historical record (1978) of the Vulnerable Greater Bilby (*Macrotis lagotis*) was made approximately six kilometres to the north-west of the application area with a certainty of 'not sure'. This species no longer occurs within the bioregion (Pavey 2006) and is unlikely to be present. One Threatened (Vulnerable) invertebrate, the millipede *Atelomastix flavognatha*, has been recorded 14 kilometres to the north-east of the application area within the Fitzgerald River National Park. *Atelomastix flavognatha* is a short-range endemic with extremely small distribution, likely occurring in discontinuous habitat such as mountain ranges, granite outcrops, or fragments of wet forest (Edward and Harvey 2010), and the Meechi Road Reserve is unlikely to provide the specific habitat variables required for this species.

Given the small scale of clearing at less than one metre wide, the linear configuration, vegetation types occurring, significant areas of analogous vegetation, and the low probability of Priority and/or Threatened flora and fauna taxa occurring, the application area is unlikely to support high levels of species biodiversity. Vegetation is not likely to be consistent with key diagnostic characteristics for any TECs or PEC's, and proposed clearing is not likely to be at variance with Principles (a), (b), (c) or (d).

National Objectives and Targets for Biodiversity Conservation (2001-2005) include a target to have clearing controls in place that prevent clearance of ecological communities with an extent below 30 per cent of that present prior to the year 1750 (Commonwealth of Australia 2001). The application area is located within the Esperance Plains Bioregion (ESP) and Fitzgerald sub-region (ESP01). The Esperance Plains Bioregion has 51.5 per cent native vegetation remaining, with 28.1 per cent protected within lands managed for conservation (Government of Western Australia 2019). The represented vegetation association over the application area (Beard association 47) has 35.9 per cent remaining in total, with 35.1 per cent remaining within the Esperance Plains Bioregion, and 50.2 per cent remaining in the Fitzgerald sub-region (Government of Western Australia 2019). Beard association 47 has 18.3 per cent currently protected within lands managed for conservation within the Esperance Plains Bioregion, and 30.9 per cent protected for conservation within the Fitzgerald sub-region (Government of Western Australia 2019). At the local scale, of within a twenty

kilometre radius of the application area, approximately 44.8 per cent of remnant vegetation remains, and proposed clearing is therefore not likely to be at variance with Principle (e).

There is just one conservation reserve managed by DBCA for conservation purposes within 20 kilometres of the application area; the 330,000 hectare Fitzgerald River National Park approximately 11.8 kilometres to the east, and the proposed clearing is not at variance with Principle (h). The application area comprises vegetation contiguous with approximately 2,130 hectares of native vegetation within Crown Reserve 33258 (PIN 625299) vested with the Department of Planning, Lands and Heritage for the purpose of 'Parklands and Recreation'. Crown Reserve 33258 includes the Bremmer River and is contiguous to the south-east with the Fitzgerald River National Park. The proposed clearing may increase the risk of weeds and/or dieback being introduced or spread into adjacent areas. Standard weed and dieback management actions would minimise impacts to adjacent bushland areas.

No wetlands have been mapped within the application area, however numerous are recorded within a 20 kilometre radius. A Wetland of National Significance, the Yellilup Yate Swamp System, is located 12.3 kilometres to the west and five South Coast Significant Wetlands are mapped within ten kilometres, the closest of which is 4.7 kilometres distant. A small amount of remnant vegetation associated with a minor river, Devil Creek, is included within the application area. Devil Creek is a tributary of the Bremer River, a major river 750 metres to the east. Great Southern Bio Logic (2017) describe Devil Creek as an incised saline drainage channel, and the associated vegetation of *Eucalyptus occidentalis* over *Melaleuca viminea* can be considered riparian vegetation. Proposed clearing intersects with approximately 0.003 hectares (30 square metres) of this mapped community. However, the beds and banks and drainage channel of Devil Creek are not included within the application area, and no impacts to riparian vegetation are likely. Proposed clearing is therefore not likely to be at variance with Principle (f).

Annual rainfall of the locality is approximately 600 millimetres (BOM 2020). Geology consists of marine limestone, sandstone, and valley-fill deposits and metasedimentary rocks. The application area occurs over the mapped soils of the Chillinup 8 subsystem of gently undulating sandplain (Schoknecht *et al.*, 2004). Lower slopes are often saline. Soils are developing on tertiary marine sediments with slopes under 3 per cent, and relief at one to three metres (Schoknecht *et al.*, 2004). The application area occurs over a flat plain with sand, and clay duplex soils, intersected with several small water accumulating pans and one moderately incised saline drainage channel (Devil Creek) is located in close proximity (Great Southern Bio Logic 2017). Less than 3 per cent of the L1 unit mapped over the application area has a moderate or high salinity hazard (or is presently saline), with a very low to no risk of acid sulfate soils forming (DPIRD 2017).

No *Rights in Water and Irrigation Act 1914* (RIWI Act) Surface Water Areas or Rivers occur within the local area, and the closest Groundwater Area (Bremer Bay Groundwater Area) is located 18 kilometres to the south-east. Similarly, no Country Areas Water Supply Act 1947 (CAWS Act) catchments occur within 20 kilometres. Groundwater is saline at 7,000 to 14,000 milligrams per litre (mg/L) TDS (Total Dissolved Solids). The application area is mapped as a low risk of flooding with less than 3 per cent of the mapped L1 unit having a moderate to high flood risk (DPIRD 2017). Given the location, the small scale of clearing, and linear configuration it is unlikely that proposed clearing would contribute to or cause appreciable land degradation, deteriorate the quality of groundwater or surface water, nor exacerbate flooding and is therefore not likely to be at variance with principles (g), (i) or (j).

The assessment has found that proposed clearing is not likely to be at variance with the ten clearing principles.

## Planning instruments and other relevant matters

The clearing permit application was advertised on the DWER website on 28 January 2020 with a 21 day submission period. No public submissions have been received in relation to this application.

A previous clearing permit (CPS 7721/2) was granted to the Shire of Jerramungup in March 2018 that incorporated the widening and realignment of Meechi Road, including the installation of larger culverts at the Devil Creek crossing. Application CPS 8751/1 proposes to widen Meechi Road to a maximum of one metre on the western side of Meechi Road only, within four linear sections that were not authorised previously by CPS 7721/2, and excludes Devil Creek.

The application area is zoned 'Roads' (Zone number 83) under the Shire of Jerramungup Town Planning Scheme.

Works are not required within a waterway so a Beds and Banks Permit issued under the *Rights in Water and Irrigation Act 1914* (RIWI Act) is not required.

No Aboriginal sites of significance have been recorded within the application area. The application area is within the mapped Wagyl Kaip & Southern Noongar Indigenous Land Use Agreement (ILUA). Aboriginal Heritage Place 5010 (Devil Creek 1) occurs 800 metres to the west and Aboriginal Heritage Place 5015 (Old Sheepyards) occurs 2.3 kilometres to the north. It is the applicant's responsibility to ensure compliance with any obligations under the *Aboriginal Heritage Act 1972*.

## 5. References

Bureau of Meteorology (BOM) (2020) Climate Data Online. Available at <http://www.bom.gov.au/>.

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

Department of Biodiversity Conservation and Attractions (DBCA) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed February 2020.

- Department of Primary Industries and Regional Development (DPIRD) (2017) NRInfo (natural resource information) Digital Mapping. <https://maps.agric.wa.gov.au/nrm-info/> Accessed February 2020. Department of Primary Industries and Regional Development. Government of Western Australia.
- Department of the Environment (2014) Approved Conservation Advice for Proteaceae Dominated Kwongan Shrublands of the southeast coastal floristic province of Western Australia. Canberra: Department of the Environment (now the Department of the Environment and Energy). Available from: <http://www.environment.gov.au/biodiversity/threatened/communities/pubs/126-conservation-advice.pdf>. In effect under the EPBC Act from 1 February 2014.
- Department of Environment and Energy (DoEE) (2020). Species Profile and Threats Database: *Calyptorhynchus latirostris* — Carnaby's Cockatoo, Short-billed Black-Cockatoo. Department of Environment and Energy. <http://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl>.
- Department of Sustainability, Environment, Water, Population and Communities (DSEWPaC) (2012) EPBC Act referral guidelines for three threatened black cockatoo species: Carnaby's cockatoo (endangered) *Calyptorhynchus latirostris*, Baudin's cockatoo (vulnerable) *Calyptorhynchus baudinii*, Forest red-tailed black cockatoo (vulnerable) *Calyptorhynchus banksii naso*. Department of Sustainability, Environment, Water, Population and Communities (now the Department of Environment and Energy), Canberra.
- Edward, K. L. and Harvey, M. S. (2010) A review of the Australian millipede genus *Atelomastix* (Diplopoda: Spirostreptida: Iulomorphidae). *Zootaxa*. 2371, 1-63.
- Elson, S. (2016) Supporting documentation for CPS 7721/1. Proposed Culvert Installation Site Meechi Road. Steve Elson. Shire of Jerramungup (DWER Ref: A1522328).
- Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>.
- Great Southern Bio Logic (2017) Flora and Vegetation Surveys of Boxwood Hill-Ongerup Road and Meechi Road. Shire of Jerramungup. 12 January 2017 (DWER Ref: A1359373).
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Pavey, C. (2006) National Recovery Plan for the Greater Bilby *Macrotis lagotis*. Northern Territory Department of Natural Resources, Environment and the Arts.
- 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.
- Schoknecht, N., Tille, P. and Purdie, B. (2004) Soil-landscape mapping in South-Western Australia – Overview of Methodology and outputs' Resource Management Technical Report No. 280. Department of Agriculture.
- Thackway, R and Cresswell, I.D. (eds) (1995) An interim biogeographical regionalisation of Australia. Australian Nature Conservation Agency (now Department of Environment and Energy), Canberra.
- Wilkins, P., Gilfillan, S., Watson, J. and Sanders, A. (ed). (2006) The Western Australian South Coast Macro Corridor Network – a bioregional strategy for nature conservation, Department of Conservation and Land Management (CALM) and South Coast Regional Initiative Planning Team (SCRIPT), Albany, Western Australia.

#### GIS Databases:

- Aboriginal Sites of Significance
- Department of Biodiversity, Conservation and Attractions, Managed Tenure
- Geomorphic Wetlands Management Category
- Hydrography Linear – Linear
- Hydrography WA 250K – Surface Water Lines
- IBRA Australia
- Land Degradation Hazards
- SAC bio datasets
- Threatened and Priority Fauna Data
- TPFL Data November 2019
- WA Herb Data