GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 8965/1
File Number: DWERVT6085
Duration of Permit: From 20 October 2020 to 20 October 2022

PERMIT HOLDER

Shire of Pingelly

LAND ON WHICH CLEARING IS TO BE DONE

Pech Road reserve (PIN 11325623), West Pingelly.

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.074 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8965/1.

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. **Dieback and weed management**
   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 known *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.

3. **Direction of clearing**
   The Permit Holder shall conduct clearing in a slow progressive manner from east to west to allow fauna to move into adjacent native vegetation ahead of the clearing activity.

4. **Application**
   This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

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;
(e) actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 2 of this Permit; and
(f) the direction that clearing was undertaken 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*;

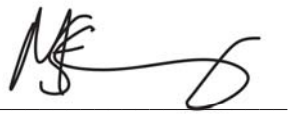
dieback means the effect of Phytophthora species on native vegetation;

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.



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

25 September 2020

Plan 8965/1

CPS layers

CPS areas approved to clear

base layers

Road Centrelines

Cadastre - LGATE 218

N

0 25 50 75 m

Mathew Gannaway
2020.09.25
09:09:31 +08'00'

Officer delegated under section 20 of the Environmental Protection Act 1986

GOVERNMENT OF WESTERN AUSTRALIA

MGA Zone 50
Geocentric Datum of Australia 1994

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1. Application details and outcome

1.1. Permit application details

Permit number:	8965/1
Permit type:	Area permit
Applicant name:	Shire of Pingelly
Application received:	14 July 2020
Application area:	0.074 hectares of native vegetation
Purpose of clearing:	Road realignment
Method of clearing:	Mechanical clearing
Property:	Pech Road reserve (PIN 11325623)
Location (LGA area/s):	Shire of Pingelly
Localities (suburb/s):	West Pingelly

1.2. Description of clearing activities

The realignment of Pech Road is required to remove a sharp bend in an existing unsealed road. The vegetation applied to be cleared is situated on a small rocky rise that the existing alignment bypasses. The application area is approximately 0.074 hectares within the Pech Road reserve West Pingelly that runs along the eastern side of Boyagin Nature Reserve (west) and leads to the trail head for Boyagin Rock. The removal of up to six trees of various age classes is required to straighten the road (see Figure 1, Section 1.5). The shape and extend of the application area has been chosen to minimise clearing impacts to the trees present whilst enabling the required road alignment.

1.3. Decision on application and key considerations

Decision:	Granted
Decision date:	25 September 2020
Decision area:	0.074 hectares of native vegetation as depicted in Section 1.5 and Figure 1 below.

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Water and Environmental Regulation (DWER) on 14 July 2020. DWER advertised the application for public comment and no submissions were received.

In undertaking the assessment, and in accordance with section 51O of the EP Act, the Delegated Officer has given consideration to the Clearing Principles in Schedule 5 of the EP Act (Appendix B), photos of the application area (Appendix D), relevant datasets (Appendix E), and relevant planning instruments, and any other pertinent matters they deemed relevant to the assessment (Section 3.3). The Delegated Officer also took into consideration the purpose of the clearing to improve community safety by removing a sharp bend in Pech Road leading to the Boyagin Rock trail head.

After consideration of the available information, the Delegated Officer determined that the proposed clearing may increase the spread of weeds and dieback into adjacent native vegetation, and may impact fauna utilising the application area at the time of clearing. To minimise this risk, conditions have been placed on the permit requiring the implementation of weed and dieback management practices, and directional clearing to allow fauna to escape into the surrounding native vegetation.

The Delegated Officer determined that given the small area and location of the proposed clearing, and the management and mitigation measures implemented, the proposed clearing is not likely to lead to an unacceptable risk to the environment.

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

1.5. Site map

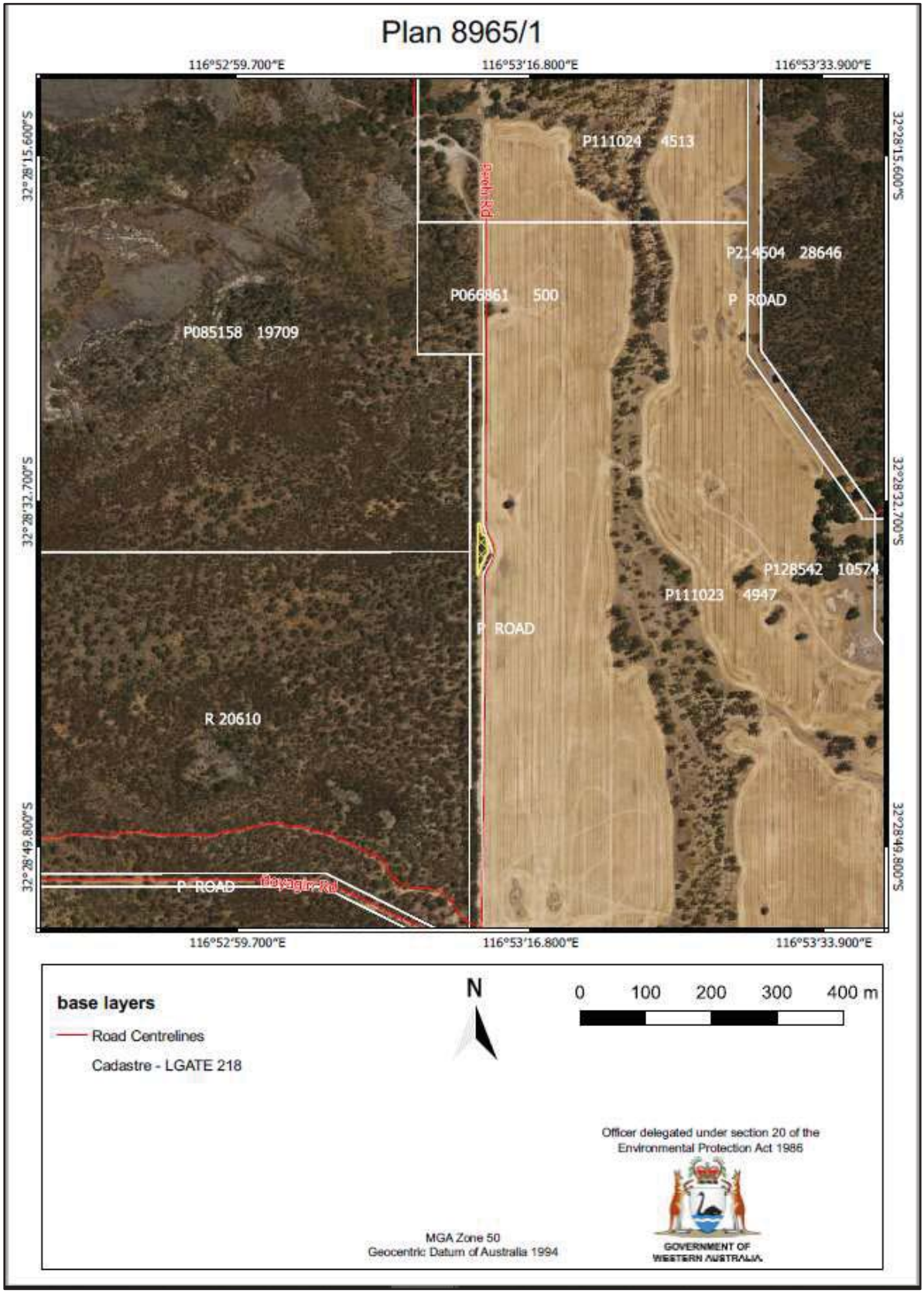


Figure 1. Map of the application area (CPS 8965/1).

2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.3), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle;
- the principle of inter-generational equity; and
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act);*
- *Biodiversity Conservation Act 2016 (BC Act);* and
- *Conservation and Land Management Act 1984* (WA) (CALM Act).

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (December 2013); and
- *Procedure: Native vegetation clearing permits* (DWER October 2019).

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The application is located entirely within the Pech Road reserve (PIN 11325623). The removal of up to six trees of various age class is required to straighten the road and avoid impacts to adjoining private property (Appendix D2). The larger eucalypts will be avoided wherever possible and the shape and extent of the application area has been chosen to minimise clearing impacts whilst enabling the desired road alignment (Figure 1).

3.2. Assessment of environmental impacts

In assessing the application in accordance with section 51O of the EP Act, the Delegated Officer has examined the application and site characteristics (Appendix A) and considered whether the clearing poses a risk to environmental values. The assessment against the Clearing Principles is contained in Appendix B.

This assessment identified that the clearing may pose a risk to the environmental values of significant ecosystems, flora, fauna, and conservation areas, and that these required further consideration. The detailed consideration and assessment of the clearing impacts against the specific environmental values is provided below. Where the assessment found that the clearing presents an unacceptable risk to environmental values, conditions aimed at controlling and/or ameliorating the impacts have been imposed under sections 51H and 51I of the EP Act. These are also identified below.

3.2.1.Environmental value: Biological values (flora) – Clearing Principles (a) to (d)

Assessment: Two Threatened flora taxa and 11 Priority (P) flora taxa have been recorded within ten kilometres of the application area (Appendix A). Of these taxa, four occur within similar vegetation communities and soil types as that of the application area. The species include *Lasiopetalum rotundifolium* (Endangered (EN)), *Chamelaucium* sp. Dryandra (D. Rose 446) (P2), *Synaphea boyaginensis* (P2), and *Brachyloma mogin* (P3).

Lasiopetalum rotundifolium (EN) is found in the Avon Wheatbelt and Jarrah Forest IBRA regions over a range of approximately 150 kilometres (WAH 1998-). Over 30 locations of this species have been recorded in the local area representing over 860 individual plants, with the closest record over 1.4 kilometres away.

Chamelaucium sp. Dryandra (D. Rose 446) (P2) is found in the Avon Wheatbelt and Jarrah Forest IBRA regions over a range of approximately 150 kilometres (WAH 1998). Nine locations of this species have been recorded in the local area with the closest record over 1.8 kilometres away.

Synaphea boyaginensis (P2) has been recorded in the Avon Wheatbelt, Jarrah Forest, and Mallee IBRA regions over a range of approximately 100 kilometres. *Synaphea boyaginensis* has been recorded at 10 locations in the local area with the closest record over 1.8 kilometres away.

Brachyloma mogin (P3) is widespread in the Avon Wheatbelt, Esperance Plains, Jarrah Forest, and Mallee IBRA regions from 100 kilometres east of Perth through to Esperance, with the application area close to its most northern distribution. *Brachyloma* has been recorded just twice in the local area with the closest record over 1.5 kilometres away.

The understorey of the application area is sparsely vegetated, with much of it covered in rock and conglomerate (Appendix D1). Due to the small area of the application area, the lack of understorey, the distance to known records, and edge effects from the adjacent Pech Road, it is very unlikely that flora taxa of conservation significance occur over the application area. The Department of Biodiversity, Conservation and Attractions (DBCA) has advised that no records of any Western Australian state listed Threatened Flora occurs at the site (DBCA 2020). In the very unlikely event that flora of conservation significance occur, impacts to local and regional populations would be considered low.

From the site photographs provided (Appendix D1), the vegetation within the application area appears to be a medium woodland of Powderbark *(Eucalytpus accedens)* over scattered shrubs on a rocky rise. This is broadly consistent with the *Eucalypt woodlands of the Western Australian Wheatbelt* Priority Ecological Community (PEC) (P3) which is synonymous with the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed Threatened Ecological Community (TEC) (Endangered) (Commonwealth of Australia 2016).

The small application area of 0.074 hectares incorporating up to six eucalypt trees of various age classes is situated on the extreme edge of a patch of at least 3,200 hectares of native vegetation, the majority of which is eucalypt woodland protected in conservation tenure (predominantly Boyagin Nature Reserve). Being located on the edge of this larger woodland area (Figure 1 and Figure 2), and adjacent to a road and rural lands (Appendix D2), this small area is currently subject to edge effects and the loss of several trees of various age classes will not impact the overall significance or viability of the larger patch. Considering the proximity of remnant vegetation, the proposed clearing has the potential to increase the spread of weeds and dieback into adjacent remnant vegetation.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is not going to significantly impact this environmental value.

Conditions: Implementing weed and dieback management strategies will manage potential impacts from the clearing.

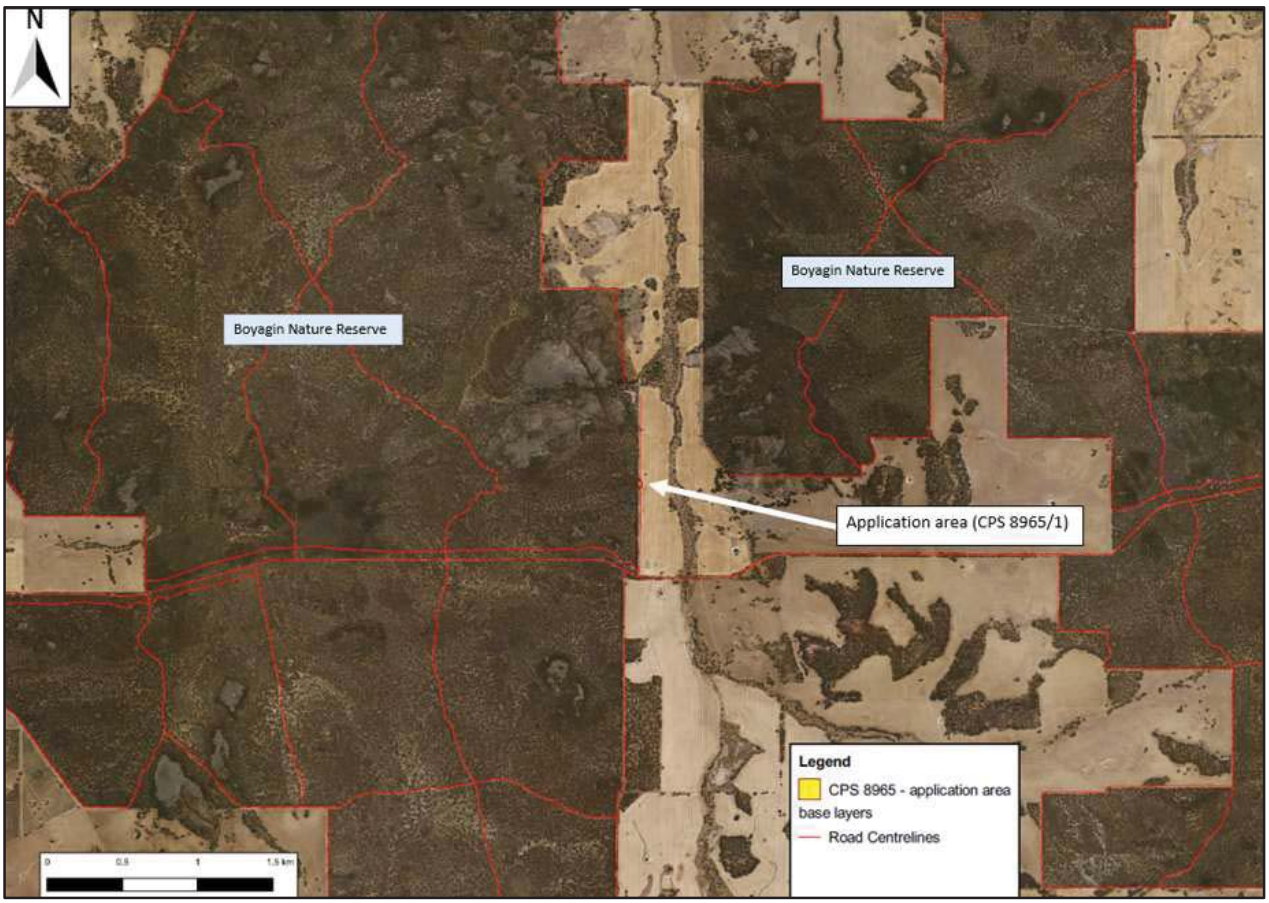


Figure 2. Location of application area in relation to nature resurves (CPS 8965/1).

3.2.2. Environmental value: Biological values (fauna) – Clearing Principle (b)

Assessment: A total of 11 fauna species of conservation significance have been recorded from the local area (Appendix A) including four Threatened, three Priority, one conservation dependant, and one specially protected fauna species. Of these seven are mammals and four are birds.

The application area consists of Powderbark woodland with little understorey (Appendix D1), providing potential habitat to three mammals of conservation significance; Numbat (*Myrmecobius fasciatus),* Woylie *(Bettongia 5enicillate ogilbyi),* and Chuditch *(Dasyurus geoffroii),* as well as three birds of conservation significance; Carnaby's Cockatoo (*Calyptorhynchus latirostris),* Peregrine Falcon (*Falco peregrinus),* and Western Rosella (inland) (*Platycercus icterotis xanthogenys).*

The application area is adjacent to Boyagin Nature Reserve (Figure 2), the site of a number of Threatened mammal reintroductions as a part of the Western Shield program. Western Shield is a DBCA managed conservation program that commenced in 1996 and focuses on broadscale introduced predator control and the recovery of Threatened species such as Numbat, Chuditch, Tammar Wallaby *(Notamacropus eugenii derbianus)* and Red-tailed Phascogale *(Phascogale calura)* (Mawson 2003). These are mammals in the 'critical weight range' (CWR) (with a weight between 35 grams and 5,500 grams) whose distribution and abundance have declined severely, most likely due to fox and feral cat predation (Burbidge and McKenzie 1989). Numbats were successfully reintroduced into the Boyagin Nature Reserve in 1985 and still persist (DPAW 2017), as do the Woylie and Chuditch albeit in small numbers. All three species can occur in woodland habitat such as the application area. Numbats and Chuditch are both wide-ranging species with large home ranges, that require denning opportunities in burrows and fallen logs (DEC 2012; DPAW 2017; van Dyck and Strahan 2008). The Woylie constructs a well-concealed nest in the understorey and requires dense vegetation that provides shelter from predators (Yeatman and Groom 2012). Due to the open nature of the application area, with a lack of dense understorey, important cover for these species appears to be lacking. Additionally due to the application area's positioning immediately adjacent to a road and cleared rural lands it is also unlikely to be a preferred denning location, and the loss of a small area of roadside vegetation is unlikely to impact local populations.

The inland sub-species of the Western Rosella (inland) (*Platycercus icterotis xanthogenys)* was originally considered a Threatened taxa. The 2012 update of the Threatened Species list for Western Australia determined that the population of Inland Western Rosellas has stabilised, and the sub-species no longer required inclusion on the list and is now considered by DBCA to be a Priority 4 species. The Western Rosella (inland) has been recorded within 1.2 kilometres of the application area within Boyagin Nature Reserve. The Western Rosella (inland) is Australia's smallest rosella and requires hollows for nesting (Higgins 1999).

The Peregrine Falcon is widespread in Australia, but requires specific nesting sites. This species does not build a nest but requires cliffs, rocky outcrops, or large tree hollows within which to nest and prefers to be near water. The Peregrine Falcon has the potential to occur over the application area, however, it is unlikely to breed due to the lack of preferred large hollows or rocky cliffs.

The application area is within the distribution of Carnaby's Cockatoo and the species has been recorded in the local area with a record within 250 metres of the application area (2004). Carnaby's Cockatoo habitat can be considered in terms of breeding habitat, night roosting habitat, and foraging habitat. Carnaby's Cockatoos will generally forage up to 12 kilometres from an active breeding site (Commonwealth of Australia 2017; DSEWPaC 2012; DpaW 2013). Following breeding, they will flock in search of food, usually within six kilometres of a night roost (Commonwealth of Australia 2017; DSEWPaC 2012; DpaW 2013), but may range up to 20 kilometres (Commonwealth of Australia 2017). Food resources within the range of breeding sites and roost sites are important to sustain populations, and foraging resources are therefore viewed in the context of known breeding and night roosting sites, particularly within 12 kilometres of an impact area (Commonwealth of Australia 2017).

There are no recorded Carnaby's Cockatoo breeding sites within 20 kilometres of the application area, with the closest over 35 kilometres to the north-west. There are no recorded Carnaby's Cockatoo night roosting sites within 20 kilometres of the application area, with the closest approximately 21 kilometres to the north-west. Boyagin Nature Reserve provides foraging habitat for Carnaby's Cockatoo, however, Powderbark (*Eucalytpus accedens)* within the application area does not provide a high quality foraging resource (Bamford 2013; DEC 2011). The application area does not represent a significant loss of roosting, breeding or foraging habitat for Carnaby's Cockatoo.

DBCA has advised that no records of any Western Australian state listed Threatened Fauna occur at the site (DBCA 2020). There remains a minor risk for the presence of conservation significant fauna within the application area at the time of clearing, however, large tracts of native vegetation occur immediately to the west of the application area (Figure 1; Figure 2). In the unlikely event of any conservation significant fauna being present in the application area at the time of clearing slow and directional clearing from the east to the west will allow any ground-dwelling fauna present to disperse into surrounding areas.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is not going to significantly impact this environmental value.

Conditions: Undertaking slow, directional clearing to allow fauna to escape into the surrounding vegetation will mitigate impacts to fauna present at the time of clearing.

3.2.3. Environmental value: Conservation areas – Clearing Principles (h)

Assessment: The 4,845 hectare Boyagin Nature Reserve is vested in the Western Australian Conservation and Parks Commission and comprises an east block and a west block separated by approximately 500 metres of farmland (DBCA 2019) (Figure 2). Proposed clearing of approximately 0.074 hectares is located entirely within the Pech Road reserve (PIN 11325623) that runs along the eastern side of the Boyagin Nature Reserve west block (parcels R 20610 and R 11144), and leads to the trail head for Boyagin Rock. The application area itself is located approximately 11.5 metres from the Boyagin Nature Reserve cadastral boundary.

The application area is up to 15 metres wide at its widest point, and approximately 11.5 metres away from the Boyagin Nature Reserve cadastral boundary (Figure 1). The road realignment only requires realignment of two or three metres to avoid damage to the adjoining property, including the boundary fenceline (Figure 3; Appendix D2) and the application area provides ample space to allow for the realignment without impacting Boyagin Nature Reserve tenure.

Figure 3. Pech Road and the adjoining property at the application area location (Shire of Pingelly 2020)

The construction process has the potential to introduce or spread dieback and weeds to adjacent native vegetation managed for conservation purposes. Pech Road is located downslope from Boyagin Nature Reserve reducing the risk of impact from dieback. Nevertheless the implementation of dieback and weed management strategies will reduce the risk further.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is not going to significantly impact this environmental value.

Conditions: Implementing weed and dieback management strategies will manage potential impacts from the clearing.

3.3. Relevant planning instruments and other matters

The application was advertised on the DWER website for a 21 day public comment period on 5 August 2020. No public submissions were received in relation to this application.

The Shire of Pingelly is the public authority that manages the application area and the application area is zoned as a Local Road under the Shire of Pingelly Scheme Number 3.

The DBCA provided officer level advice regarding potential impacts from the proposed clearing. DBCA advised that no records of any Western Australian state listed Threatened Fauna, Flora or Threatened Ecological Communities occur at the site. Although significant conservation values exist in the adjoining Nature reserve (Boyagin Rock) proposed clearing should have minimal impact on these conservation values. DBCA does not object to proposed clearing, however, recommend that any hollow logs present be examined for evidence of Numbat or Chuditch activity and carefully moved out of the work area if deemed necessary (DBCA 2020). Supplied site photographs (Appendix D1) and Google Map imagery indicates that hollow logs are not likely to be present over the application area. A condition has been placed on the permit to undertake slow and directional clearing from the west to the east to allow any ground-dwelling fauna present at the time of clearing to escape into the surrounding vegetation.

DBCA also advised that the proponent may wish to evaluate the project against the referral provisions for Carnaby's Black Cockatoo and Eucalypt Woodlands of the Western Australian Wheatbelt Threatened Ecological Community under the Commonwealth's EPBC Act (DBCA 2020).

The application area is located in a *Rights in Water and Irrigation Act 1914* (RIWI Act) proclaimed surface water area: the Avon River Catchment. The application area is not located within any RIWI Act groundwater areas, nor any *Country Areas Water Supply Act 1947* (CAWS Act) clearing control catchments, or Public Drinking Water Source Areas.

The application area is located within the boundaries of the Gnaala Karla Booja Native Title Registered Claim (WAD6274/1998), Single Noongar Claim (Area 1) (WAD6006/2003), and associated Indigenous Land Use Agreement; the Gnaala Karla Booja Indigenous Land Use Agreement (ILUA WI2015/005). The application area is located completely within two Aboriginal Sites of Significance: Boyagin Creek (Mythological), and Jelcobine Complex (Ceremonial, Mythological). It is the applicant's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Appendix A – Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix B.

1. Site summary

<table>
<tr><th>Site characteristic</th><th>Details</th></tr>
<tr><td>Local context</td><td>The application area is situated within the Avon Wheatbelt bioregion (AVW) of Thackway and Cresswell (1995), and the Katanning subregion (AVW02). Proposed clearing of approximately 0.074 hectares is located entirely within the Pech Road reserve (PIN 11325623) that runs along the eastern side of Boyagin Nature Reserve (west) and leads to the trail head for Boyagin Rock.</td></tr>
<tr><td>Vegetation description</td><td>From site photographs (Appendix D1) vegetation is described as a medium woodland of Powderbark (Eucalyptus accedens) over scattered shrubs on a rocky rise.

Utilising the regional vegetation of Shepherd et al. (2001) the application occurs over vegetation association 352: ‘Medium woodland; York Gum’. However, regional mapping is of a coarse scale. Approximately 100 metres to the west of the application area vegetation association 5 is mapped. That is, ‘Medium woodland of Wandoo and Powderbark (Eucalyptus accedens)’, which is more closely aligned with the vegetation of the application area. Vegetation association 352 occurs in valleys (Richardson, et al. 2007) whereas the application area occurs on a rocky rise which typically supports Eucalyptus accedens.</td></tr>
<tr><td>Vegetation condition</td><td>From the site photographs supplied (Appendix D1) vegetation condition is rated at Good to Very Good (Appendix C).</td></tr>
<tr><td>Soil description</td><td>The soil is mapped as the Boyagin 1 Subsystem (Schoknecht et al., 2004) which is described as remnants of a lateritic plateau, often bounded by steep breakaways, in the Eastern Darling Range Zone. The subsystem is dominated by gravels and colluvial sands derived from gravels. The application area consists of a stony rise.</td></tr>
<tr><td>Land degradation risk</td><td>The Department of Primary Industries and Regional Development (DPIRD), provides a series of soil degradation risk mapping at the sub-system level (DPIRD 2017). The project area is located within the Boyagin 1 Subsystem, and the table below summaries the soil degradation risk within the application area.

<table>
<tr><th rowspan="2">Aspect</th><th colspan="4">Degradation risk</th></tr>
<tr><th colspan="4">Boyagin 1 Subsystem</th></tr>
<tr><td>Wind Erosion</td><td>H2</td><td>High</td><td>>70%</td><td>of mapped unit has a high to extreme risk</td></tr>
<tr><td>Waterlogging</td><td>L1</td><td>Low</td><td><3%</td><td>of mapped unit has a high to extreme risk</td></tr>
<tr><td>Water Erosion</td><td>L2</td><td>Low</td><td>3-10%</td><td>of mapped unit has a high to extreme risk</td></tr>
<tr><td>Salinity</td><td>L1</td><td>Low</td><td><3%</td><td>of mapped unit has a high to extreme risk</td></tr>
<tr><td>Phosphorous Export</td><td>M1</td><td>Medium</td><td>10-30%</td><td>of mapped unit has a high to extreme risk</td></tr>
<tr><td>Flood Risk</td><td>L1</td><td>Low</td><td><3%</td><td>of mapped unit has a high to extreme risk</td></tr>
<tr><td>Subsurface Acidification</td><td>H2</td><td>High</td><td>>70%</td><td>of mapped unit has a high to extreme risk</td></tr>
<tr><td>Acid Sulphate soils</td><td colspan="4">Not mapped</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Site characteristic</th><th>Details</th></tr>
<tr><td>Waterbodies</td><td>The desktop assessment and aerial imagery indicated that no geomorphic wetlands occur within, or in the vicinity of, the application area. Minor ephemeral drainage lines (tributaries of Dale River) occurs approximately 125 metres to the south, and 230 m east of the application area.
<table>
<tr><td>Division</td><td>South West</td></tr>
<tr><td>Catchment</td><td>Swan-Avon</td></tr>
<tr><td>Hydrological Zone</td><td>Eastern Darling Range</td></tr>
<tr><td>Groundwater salinity</td><td>7,000 to 14,000 TDS</td></tr>
<tr><td>RIWI Act surface water area</td><td>Avon River Catchment Area</td></tr>
<tr><td>RIWI Act groundwater area</td><td>No</td></tr>
<tr><td>RIWI Act rivers</td><td>None</td></tr>
<tr><td>CAWS Act clearing control catchment</td><td>No</td></tr>
<tr><td>Public Drinking Water Source Area</td><td>No</td></tr>
<tr><td>Flood Risk</td><td>Low</td></tr>
<tr><td>Consanguineous wetland suite</td><td>Not mapped</td></tr>
<tr><td>Geomorphic Wetlands</td><td>Not mapped</td></tr>
<tr><td>Wheatbelt Wetlands</td><td>Granite Outcrops 380 m north, and 580 m east</td></tr>
<tr><td>Waterlines (ephemeral)</td><td>125 m south (Dale River tributary)</td></tr>
<tr><td>Waterlines (ephemeral)</td><td>230 m east (Dale River tributary)</td></tr>
<tr><td>Ramsar Wetlands</td><td>None</td></tr>
<tr><td>Directory of Important Wetlands</td><td>None</td></tr>
</table></td></tr>
<tr><td>Conservation areas</td><td>The Pech Road reserve (PIN 11325623), within which the clearing application is located, is immediately adjacent to, and immediately east of, the western portion of Boyagin Nature Reserve (R 11144 and R 20610). The eastern portion of Boyagin Nature Reserve (also R 20610) is located approximately 500 metres to the north-east of the application area, separated by cleared agricultural land (Figure 1 and Figure 2).</td></tr>
<tr><td>Climate and landform</td><td>The regional climate can be described as Mediterranean, with 445 millimetre annual rainfall occurring predominantly from May to September (BOM 2020).

The AVW02 subregion landform is described as the erosional surface of gently undulating rises to low hills with abrupt breakaways. Continuous stream channels flow in most years. Geology id of granite and gneiss and colluvial processes are active with soils formed in colluvium or in-situ weathered rock (Beecham 2001).</td></tr>
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2. Ecosystem, flora, and fauna analysis

With consideration for the site characteristics set out above and relevant datasets (see Appendix E) the following conservation significant ecological communities, flora, and fauna species may be impacted by the clearing.

Ecological Community	Distance of closest record	Suitable soil type?	Suitable vegetation type?
Eucalypt woodlands of the Western Australian Wheatbelt (synonymous with the Eucalypt woodlands of the Western Australian Wheatbelt EPBC listed TEC)	23 metres west	Yes	Yes

Fauna Taxa	Common name	Status	Closest record (m)	Habitat present
Calyptorhynchus latirostris	Carnaby's cockatoo	EN	210	Yes
Leipoa ocellata	Malleefowl	VU	870	No
Falco peregrinus	Peregrine Falcon	OS	35	Yes
Platycercus icterotis xanthogenys	Western Rosella (inland)	P4	1,035	Yes
Bettongia 10enicillate ogilbyi	Woylie	CR	1,530	Yes
Myrmecobius fasciatus	Numbat	EN	580	Yes
Dasyurus geoffroii	Chuditch	VU	1,100	Yes
Macrotis lagotis	Bilby	VU	4,580	No
Phascogale calura	Red-tailed Phascogale	CD	1,050	No
Isoodon fusciventer	Quenda	P4	2,600	No
Notamacropus eugenii derbianus	Tammar wallaby	P4	1,150	No

Flora Taxa	Status	Closest Record (m)	Comparable soil type and community
Lasiopetalum rotundifolium	EN	1,435	Yes
Thomasia montana	VU	460	No
Chamelaucium sp. Dryandra (D. Rose 446)	P2	1,859	Yes
Millotia tenuifolia var. *laevis*	P2	4,580	No
Persoonia hakeiformis	P2	1,085	No
Synaphea boyaginensis	P2	1,876	Yes
Brachyloma mogin	P3	1,591	Yes
Hibbertia 10enicilla subsp. wandoo	P3	1,591	No
Acacia cuneifolia	P4	475	No
Banksia cynaroides	P4	1,090	No
Eucalyptus caesia subsp. caesia	P4	895	No
Eucalyptus exilis	P4	605	No
Gastrolobium stipulare	P4	5,290	No

Note: Threatened and priority status retrieved from Species Profile and Threats Database (Department of the Environment, 2020), and FloraBase (Western Australian Herbarium 1998-).

3. Vegetation extent (Government of Western Australia 2019).

Bioregion AVW (Avon Wheatbelt)	Pre-European Extent (ha)	Current Extent (ha)	Remaining (%)	Protected for Conservation (ha)	Protected for Conservation (%)
AVW (Avon Wheatbelt)	9,517,110	1,761,187	18.51	129,577	1.36

	Association 5: Medium woodland; Wandoo & Powderbark *(Eucalytpus accedens)*	Assoc.	Pre-European Extent (ha)	Current Extent (ha)	Remaining (%)	Protected for Conservation (ha)	Protected for Conservation (%)
Entire	Entire	5	51,731	24,058	46.51	8,109	15.67
Bioregion	Within AVW (Avon Wheatbelt)	5	19,089	8,664	45.39	4,841	25.36
Subregion	Within AVW02 (Katanning)	5	19,089	8,664	45.39	4,841	25.36
System	Within Narrogin System	5	16,163	7,445	46.06	4,782	29.59

	Association 352: Medium woodland; York Gum	Assoc.	Pre-European Extent (ha)	Current Extent (ha)	Remaining (%)	Protected for Conservation (ha)	Protected for Conservation (%)
Entire	Entire	352	724,269	142,012	19.61	3,080	0.43
Bioregion	Within AVW (Avon Wheatbelt)	352	630,578	108,888	17.27	1,552	0.25
Subregion	Within AVW02 (Katanning)	352	337,872	36,296	10.74	760	0.22
System	Within Narrogin System	352	13,299	1,428	10.74	59	0.45

Remnant vegetation within ten kilometres of the application area.

Remaining (ha)	Remaining (%)
8,723	27.62

Appendix B – Assessment against the Clearing Principles

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: No significant flora species have been recorded within the application area. Vegetation of the application area is consistent with *Eucalypt woodlands of the Western Australian Wheatbelt* which is synonymous with an EPBC listed TEC. The application area is located on the extreme edge of a large woodland area, adjacent to a road and rural lands, subject to edge effects and the loss of several trees of various age classes will not impact the overall significance or viability of the larger patch.	Not likely to be at variance	Further consideration required, see Section 3.2.1
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."* Assessment: The application area is immediately adjacent to the Boyagin Nature Reserve (Figure 1), the site of a number of Threatened mammal reintroductions as a part of Western Shield. Western Shield is a DBCA managed conservation program focusing on broadscale introduced predator control and the recovery of Threatened species such as Numbat *(Myrmecobius fasciatus),* Woylie *(Bettongia penicillate ogilbyi),* Chuditch *(Dasyurus geoffroii),* Tammar Wallaby *(Notamacropus eugenii derbianus),* and Red-tailed Phascogale *(Phascogale calura).* The application area is located on the extreme edge of a large woodland area, adjacent to a road, and unlikely to impact these species.	May be at variance	Further consideration required, see Section 3.2.2
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The Endangered *Lasiopetalum rotundifolium* has been recorded within 1.5 kilometres of the application area within similar vegetation communities (i.e. Powderbark woodland) and Boyagin 1 Subsystem soil type. (i.e. Remnants of the lateritic plateau bounded by steep breakaways, in the Eastern Darling Range Zone and dominated by gravels and colluvial sands derived from gravels.) The application area is located adjacent to a road and on a rocky rise with negligible understorey and threatened flora are unlikely to occur.	Not likely to be at variance	Further consideration required, see Section 3.2.1
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."* Assessment: The application area does not contain species assemblages analogous with any currently listed TEC's endorsed by the Western Australian Minister for Environment, and none occur within ten kilometres of the application area.	Not at variance	No further consideration required.
Environmental values: significant remnant vegetation and conservation areas		
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."* Assessment: The vegetation of the application area is comparable to vegetation association 5 of Shepherd *et al*. (2001). Vegetation association 5 retains over 45 per cent of its original vegetation cover (Appendix A3), consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia 2001). Within the local	Not likely to be at variance	No further consideration required.

Assessment against the Clearing Principles	Variance level	Is further consideration required?
area of a ten kilometres radius of the application area over 8,723 hectares of remnant vegetation is retained, or 27.62 percent of the original extent. The application area is not significant as a remnant due to the loss of 0.074 hectares of native vegetation that does not comprise of threatened flora, significant fauna habitat or ecological communities.		
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."* Assessment: The Pech Road reserve (PIN 11325623) is located immediately adjacent to Boyagin Nature Reserve (parcels R 20610 and R 11144), vested in the Western Australian Conservation and Parks Commission and managed by DBCA. The application area within the Pech Road reserve is located approximately 11.5 metres from the Boyagin Nature Reserve cadastral boundary. DBCA have advised that proposed clearing should have minimal impact on conservation values of Boyagin Nature Reserve.	May be at variance	Further consideration required, see Section 3.2.3
Environmental values: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: There are no defined watercourses or wetlands within the application area, or within the vicinity of the application area, with the closest drainage line over 125 metres distant. Proposed clearing is unlikely to impact riparian vegetation or on or off-site hydrology.	Not at variance	No further consideration required.
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The potential for wind erosion and subsurface acidification over the application area is high (DPIRD 2017) if not managed appropriately. Standard road construction methodologies including strategies for drainage controls and wind and/or water erosion will be implemented and soils will not be excavated at depth. Any impacts to surrounding landscapes, soils and drainage can also be managed through appropriate design. Based on the scale of proposed clearing and standard construction methodologies proposed, clearing is unlikely to cause appreciable land degradation.	Not likely to be at variance	No further consideration required.
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."* Assessment: The absence of waterbodies within the application area, or within the vicinity of the application area, and the shallow depth of clearing required indicates that proposed clearing is unlikely to impact surface or groundwater quality.	Not at variance	No further consideration required.
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: Both flood risk and waterlogging risk are rated Low (L1) over the application area, and proposed clearing is not located within a mapped floodplain. There are no watercourses or drainage lines within the application area, or within the vicinity of the proposed clearing. The application area is small (0.074 hectares), and proposed clearing is unlikely to cause, or exacerbate, the incidence or intensity of flooding or waterlogging.	Not at variance	No further consideration required.

Appendix C – Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Measuring Vegetation Condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very Good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D – Photographs of the vegetation in the application area

(1) Photographs of the vegetation in the application area

Photographs of the application area (Shire of Pingelly 2020)

(2) Photographs of the adjoining private property

Photographs of the application area and adjoining property (Shire of Pingelly 2020)

Pech Road at the application area location (Google Map imagery, July 2008)

Appendix E – References and databases

4. References

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5. GIS datasets

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- Aboriginal Heritage Places (DPLH-001)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Regional Parks (DBCA-026)
- Soil and Landscape Mapping – Best Available

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)