



## CLEARING PERMIT

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

### PERMIT DETAILS

Area Permit Number: CPS 9429/1  
File Number: DWERVT8662  
Duration of Permit: From 6 November 2021 to 6 November 2023

### PERMIT HOLDER

Mr Leon Russell DeLuis and Ms Jackie Narelle DeLuis

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 374 on Deposited Plan 205924, Thomson Brook

### AUTHORISED ACTIVITY

The permit holder must not clear more than 0.22 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

### CONDITIONS

#### 1. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending 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. Weed and dieback management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of 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. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

**Table 1: Records that must be kept**

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	<ul style="list-style-type: none"> <li>(a) the species composition, structure, and density of the cleared area;</li> <li>(b) 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;</li> <li>(c) the date that the area was cleared;</li> <li>(d) the size of the area cleared (in hectares);</li> <li>(e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; and</li> <li>(f) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 2.</li> </ul>

### 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

In this permit, the terms in Table have the meanings defined.

**Table 2: Definitions**

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> .
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
Fill	means material used to increase the ground level, or to fill a depression.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
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.
weeds	means any plant – (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i> ; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

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## END OF CONDITIONS



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Mathew Gannaway  
MANAGER  
NATIVE VEGETATION REGULATION

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

13 October 2021

# SCHEDULE 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).



Figure 1: Map of the boundary of the area within which clearing may occur



# Clearing Permit Decision Report

## 1 Application details and outcome

### 1.1. Permit application details

<b>Permit number:</b>	CPS 9429/1
<b>Permit type:</b>	Area permit
<b>Applicant name:</b>	Mr Leon Russell DeLuis and Ms Jackie Narelle DeLuis
<b>Application received:</b>	14 September 2021
<b>Application area:</b>	0.22 hectares
<b>Purpose of clearing:</b>	Dam construction
<b>Method of clearing:</b>	Mechanical – chainsaw and excavator
<b>Property:</b>	Lot 374 on Deposited Plan 205924
<b>Location (LGA area/s):</b>	Shire of Donnybrook-Balingup
<b>Localities (suburb/s):</b>	Thomson Brook

### 1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous area (see Figure 1, Section 1.5). The vegetation applied to be cleared is described as parkland cleared, comprised as a mix of largely *Corymbia calophylla* and *Eucalyptus marginata* trees over a weedy understorey. The proposed clearing is for the purpose of a dam construction.

<b>Decision:</b>	Granted
<b>Decision date:</b>	13 October 2021
<b>Decision area:</b>	0.22 hectares (18 trees)

### 1.3. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 14 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix B), relevant datasets (see Appendix F.1), representative photographs of the application area (Appendix E), the clearing principles set out in Schedule 5 of the EP Act (see Appendix C), and any other matters considered relevant to the assessment (see Section 3).

The assessment identified that the proposed clearing will result in:

- The potential introduction and spread of weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values.
- Loss of 0.22 hectares of foraging habitat for black cockatoos. After consideration of the size of the proposed clearing in relation to available foraging habitat in the local context, the proposed clearing is not likely to significantly impact available foraging habitat for black cockatoos.

After consideration of the available information as well as the minimisation and avoidance strategy implemented by the applicant (Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to lead to an unacceptable risk to environmental values. The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise and reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback into adjacent remnants.

#### 1.4. Site map



Figure 1 Map of the application area

The area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.

## 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 1.4), 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 intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *Biosecurity and Agriculture Management Act 2007* (BAM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)

The key guidance documents which inform this assessment are:

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

## 3 Detailed assessment of application

### 3.1. Avoidance and mitigation measures

The applicant has selected an area which will result in the least number of trees being cleared to construct the dam (DeLuis.L.R & DeLuis.J.N 2021a).

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

### 3.2. Assessment of impacts on environmental values

The assessment against the clearing principles (see Appendix C) identified that the impacts of the proposed clearing present a risk to biological values (fauna), significant remnant vegetation, and land and water resources. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

#### 3.2.1. Biological values (fauna) - Clearing Principles (b)

**Assessment:** Vegetation over the application area consists of 18 scattered trees (DeLuis.L.R & DeLuis.J.N 2021a) and majority are identified as *Eucalyptus marginata* subsp. *marginata* (Jarrah) or *Corymbia calophylla* (Marri) over a completely degraded understorey consisting predominately of pasture grass species (Appendix E).

A desktop assessment of the application area identified 13 conservational significant fauna species within the ten kilometre radius of the application area which included of five birds species, seven mammals species, and one invertebrate specie.

#### **Class: Birds**

Based on known distribution and habitat preference, the bird species most likely to occur over the application area are the three vagile species of black cockatoo; the Endangered *Calyptorhynchus latirostris* (Carnaby's black cockatoo), vulnerable *Calyptorhynchus banksii naso* (Forest red-tailed black cockatoo and endangered *Calyptorhynchus baudinii* (Baudin's cockatoo). These birds may utilise the tree canopy present within the application area. Majority of the black cockatoos were identified as *Calyptorhynchus* sp. 'white-tailed black cockatoo' within the local area.

There are three key components of black cockatoo habitat: foraging habitat; roosting habitat; and breeding habitat (DSEWPAC 2012). Three confirmed black cockatoo roost sites are located approximately 7.2 kilometres south of the area applied to clear, and the application area falls within broadly mapped black cockatoo breeding areas (GIS databases). For a black cockatoo breeding site to be viable, there must be sufficient foraging habitat available within

6 to 12 kilometres of a nesting site. The loss of breeding habitat with suitable breeding hollows is a major contributor towards the declining black cockatoo numbers (DSEWPAC 2012). A tree suitable for a black cockatoo breeding is defined as a tree with a diameter of 50 centimetres or greater at a height of 1.5 metres above the ground (Stratagen 2020). The trees within the application area do not represent a suitable size to contain hollows large enough to provide for black cockatoo habitat (Appendix E), hence black cockatoo nest sites will not be impacted.

The application area falls within broadly mapped potential black cockatoo feeding area. The quality of black cockatoo foraging habitat to support populations at breeding sites or night roosting sites varies depending upon how black cockatoos utilise the habitat in that particular location. The figure below represents the extent of black cockatoo roosting and feeding vegetation within the local area.

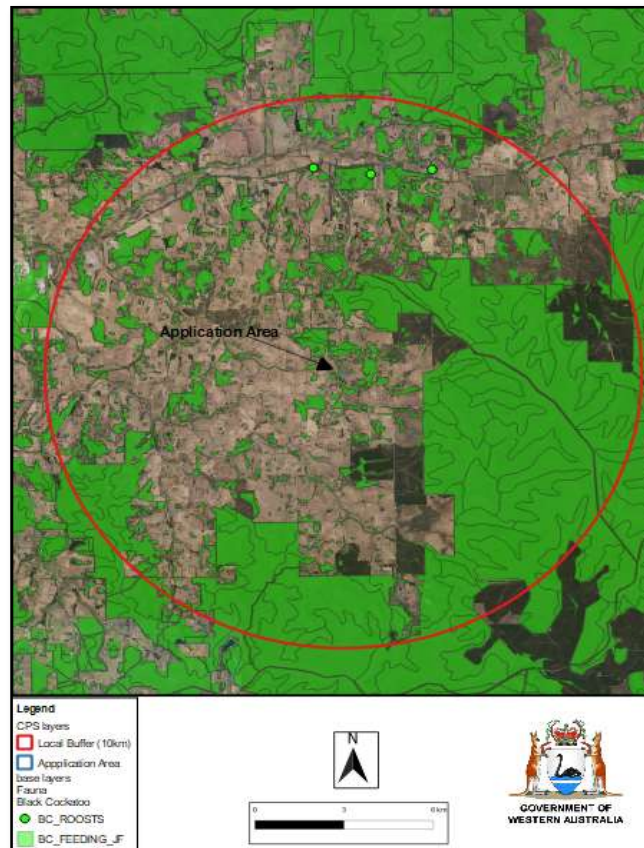


Figure 2. Mapped black cockatoo roosting and feeding within ten kilometres of the application area.

Marri fruit is a known food resource for black cockatoos (Bamford 2013; Groom 2011; Valentine and Stock 2008). However due to the location of the trees within the landscape (being located adjacent to state forest) it is unlikely that trees within the application area will provide significant foraging for roosting and breeding populations. Black cockatoos are most likely to utilise the landscape to the east where extensive tracts of native vegetation occur (Figure 2) and the possibility of black cockatoos using the trees within the application area is minimal.

Vulnerable *Leipoa ocellata* (Malleefowl) was recorded 9.25 kilometres from the application area. Malleefowl is known to occur within shrublands, and low woodlands dominated by mallee and can occur in woodlands dominated by eucalypts. Malleefowl requires sandy substrate with abundant leaf litter to construct mounds that act as incubator-nests (Benshemesh 2007). Noting this description, the application area will not provide suitable habitat for Malleefowl.

#### **Class: Mammals**

The degraded nature of the native vegetation, and in particular the lack of an understorey, combined with the isolation of the application area from areas of native vegetation in good or better condition excludes the likelihood of the majority of terrestrial mammals of conservation significance occurring over the application area (Appendix B.4.).

Records of the Critically Endangered, *Pseudocheirus occidentalis* (Western Ringtail Possums (WRP)) occur approximately 8.3 kilometres from the application area. WRP typically require high canopy cover and connectivity and is associated with marri and jarrah within the south-west forest and utilises ground nests, logs and balga (Department of Parks and Wildlife 2017). Application area is not mapped within a WRP habitat suitability zone. Noting



this description, the absence of a coherent midstory element, the application area does not provide suitable habitat for WRP and therefore, clearing of the proposed trees are unlikely to cause a significant impact to these species.

**Class: Invertebrate**

The Vulnerable *Westralunio carteri* (Carter's freshwater mussel) were identified within the ten kilometre local area during the desktop assessment. The most recent record was in 2018. Carter's freshwater mussel inhabits sandy/muddy sediments of freshwater lakes, rivers and streams; usually occurring with woody debris and overhanging riparian vegetation (often flooded gum, *Melaleuca* sp. or *Casuarina* sp.). They retreat to shallow pools or damp mud with most moist leaf litter in times of drought (Klunzinger et al. 2015). The creek line within the application area is not a permanent watercourse to support carter's freshwater mussels, or connected to a known location. Noting this and the absence of overhanging riparian vegetation, lack of a shallow pool, and the distance to the closest record from the application area, the likelihood of Carter's freshwater mussel to be impacted by proposed clearing is low.

The proposed clearing of 0.22 hectares of native vegetation is likely to depreciate the condition of the adjacent remnant vegetation due to the increased risk of spread of weeds and dieback. Implementation of weed and dieback management strategies will mitigate this risk.

Conclusion:

A fauna survey was not requested from the applicant as the photographs were sufficient to inform the assessment and none of the species identified within the local area were considered likely to utilise the application area.

Given the size of the clearing and the completely degraded condition of the vegetation in relation to its position in the landscape, and the location of known roost sites and mapped foraging habitat, it is unlikely that individual marri and jarrah trees within the application area represent important foraging resource to support black cockatoo populations. For the reasons set out above, it is considered that the impacts of the proposed clearing on fauna habitats does not constitute a significant residual impact.

It is also considered appropriate that hygiene measures should be implemented during clearing to help protect adjacent remnant vegetation from weed and dieback spread and the resultant degradation in habitat that can occur.

Conditions:

The permit holder is to take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.

**3.2.2. Environmental value: Significant remnant vegetation (e)**

Assessment:

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

The application area is located within the Jarrah Forest IBRA bioregion, and the Balingup subsystem. The Jarrah Forest bioregion has approximately 2,399,838.15 hectares of native vegetation remaining, equating to approximately 53.25 per cent of its original extent (Government of Western Australia 2019b) (Appendix B.2).

Approximately 29.38 per cent of the former extent of the Balingup Complex has been retained (Government of Western Australia 2019a) (Appendix B.2.). That is, just below the 30 per cent retention threshold of the Commonwealth of Australia (2001).

Remnant vegetation has been mapped regionally. Within the local area of a ten kilometre radius of the application area, approximately 13,969.22 hectares of mapped native vegetation remains, or approximately 44.20 per cent of its original extent (Appendix B.2.).

The vegetation in the application area consists of marri and jarrah trees. The vegetation is in a completely degraded condition (Keighery 1994) and considered a degraded remnant of the mapped vegetation complex.

The application area is not part of a significant ecological linkage. There are three known ecological linkages (part of the South West Regional Ecological Linkage) within the local area that would be utilised by organisms for the movement across, the landscape. The application area contains no midstory or understorey remnant vegetation to support a linkage and the application area is located adjacent to state forest which retains high amount of remnant vegetation to allow organism movement. Considering the above, the proposed clearing will not have an impact on the movement of organisms in the landscape.

Conclusion:

Percentage of vegetation remaining within the Jarrah Forest and within the local area exceed the 30 per cent threshold as outlined above. Within the Balingup vegetation complex, the percentage of remaining vegetation is just below 30 percent. Given the scale and condition of the vegetation within the application area, it is considered that the proposed clearing will not significantly impact on the amount of native vegetation within the local area or on the occurrence of the Balingup Complex.

Conditions:

Nil conditions required to manage this environmental value.

**3.2.3. Environmental value: Watercourses and wetlands – Clearing Principal (f)**

Assessment:

The application area is located within the Western Darling Range hydrological zone of Western Australia and within the Leschenault Estuary-Preston River catchment. A minor creek line which is evident on aerial images and photographs provided by the applicant, runs east to west across the application area and appears to flow westwards. This is not a perennial watercourse.

The proposed clearing is minimal, and vegetation is currently in a completely degraded condition. The cleared area will be replaced with a dam with drainage controls. Given the small scale of clearing, the purpose of clearing and standard methodologies implemented for a dam construction, it is unlikely the proposed clearing would contribute, or cause appreciable impacts to vegetation growing in association with a watercourse.

Conclusion:

Based on the above assessment, the Delegated officer has determined that the proposed clearing is not likely to be significant in relation to this environmental value.

Condition:

No riparian vegetation, watercourse or wetland management conditions required.

**3.3. Relevant planning instruments and other matters**

The Shire of Donnybrook-Balingup advised DWER that local government approvals are not required as the position of the dam is 20 metres from all lot boundaries, and that the proposed clearing is consistent with the Shire's Local Planning Scheme (Shire of Donnybrook-Balingup 2021). The Shire has advised further information in regard to the clearing principals b, d and f be sought prior to approval.

The application area is not located within any Surface Water Areas or Irrigation Districts proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act), or any *Country Areas Water Supply Act 1947* (CAWS Act) Clearing Control Catchments, or Public Drinking Water Source Areas. Groundwater will not be intercepted, the beds or banks of any watercourses will not be disturbed, and no additional permitting by DWER is required.

No Aboriginal sites of significance have been mapped within the application area. If an Aboriginal site is discovered during the clearing activities, it is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

**End**

**Appendix A. Additional information provided by applicant**

<b>Information</b>	<b>Description</b>
Photographs of native vegetation to be cleared	Supporting photographs representing the proposed dam location from various directions (DeLuis.L.R & DeLuis.J.N 2021b).

## Appendix B. Site characteristics

### B.1. 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 C.

Characteristic	Details
Local context	<p>The application area is situated within the Jarrah Forest bioregion and located in the Western Darling Range between Harvey and Bridgetown.</p> <p>The application area is part of an isolated patch of native vegetation in the intensive land use zone of Western Australia. It is surrounded by state forest to the east.</p> <p>Aerial imagery and Spatial data indicate the local area (10-kilometre radius from the centre of the application area) retains approximately 44.20 per cent of the original native vegetation cover (Appendix B.2.).</p>
Ecological linkage	<p>Three known ecological linkages (part of the South West Regional Ecological Linkage (SWREL)) are mapped within the local area and the closest SWREL identified is approximately 2.7 kilometres to the south of application area. No ecological linkages are mapped or considered to exist within the application area.</p>
Conservation areas	<p>There are DBCA – Legislated Land (state forest) located to the east and south of the application area, approximately 2.5 kilometres from the application area. No conservation covenants, regional parks and DBCA areas of interest are mapped within the ten kilometre buffer around the application area (DBCA-026, DBCA-012).</p>
Vegetation description	<p>The vegetation within the application area is mapped as the Balingup complex described as ‘Open Forest of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Corymbia calophylla</i> slopes and woodland of <i>Eucalyptus rudis</i> on the valley floor in the humid zone’ on the broader scale mapping (Webb et al.2016).</p> <p>Photographs provided by the applicant (DeLuis.L.R &amp; DeLuis.J.N 2021b) indicate the vegetation within the application area consists of <i>Eucalyptus marginata</i> and <i>Corymbia calophylla</i> over pasture grass species along a drainage line. additional tree species may be present however could not be identified from the available photography. Representative photos are available in Appendix E.</p> <p>The mapped vegetation complex retains approximately 29.38 per cent of the original extent (Government of Western Australia, 2019a) while native vegetation extent remaining within the local area is 44.20 per cent.</p>
Vegetation condition	<p>Photographs supplied by the applicant indicate the vegetation within the application clearing area is in a completely degraded (Keighery, 1994) – condition, based on the vegetation scale adapted from Keighery (1994) which measures vegetation condition for the Southwest and Interzone Botanical Province.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix D. Representative photos are available in Appendix E.</p>
Climate and landform	<p>Application area is within moderate valley slopes described as Balingup moderate slopes phase and comprises slopes with gradients of 15-35 per cent and relief 60-120 meters (DPIRD 2019).</p> <p>Geology within the application area is Gneiss and granite and some laterite colluvium. The current land use within the soil landscape system (255LVBL4) is grazing, some remnant vegetation, state forest and pine plantation. This area receives 800-1200 millimetres of rainfall (DPIRD 2019). Most of the land has well drained loamy soil with good moisture and nutrient retention.</p>

Characteristic	Details
Soil description	<p>The application area is mapped as Balingup Subsystem moderate slope phase (255LvBL4).</p> <p>The application area is within the Western Darling Range Zone (255) and is summarised as deep gneissic valleys, loamy earth, loamy duplex, gravel and stony soils supporting jarrah-marri forest (DWER 2021).</p>
Land degradation risk	<p>The Department of Primary Industries and Regional Development (DPIRD), provides a series of soil degradation risk mapping at the systems level. The land degradation table B.5. below summaries the soil degradation risk within the application area. The application area is mapped as having high subsurface acidification and phosphorus export, and medium to high water erosion.</p>
Waterbodies	<p>The application area is within the Leschenault Estuary, Preston River hydrographic catchment and Thompson Brook sub catchment and falls within the Western Darling Range Hydrological Zone (DPIRD-069).</p> <p>The desktop assessment and aerial imagery indicated that a minor creek line, non-perennial watercourse transect the centre of the application area. There are number of earth dam waterbodies surrounding the application area. No conservation significant wetlands and Ramsar sites were identified within the ten kilometre local buffer area (DBCA-045).</p>
Hydrogeography	<p>The application area does not occur within a Public Drinking Water Source Area or a surface or groundwater area under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act) nor does it occur within an area subject to the <i>Country Areas Water Supply Act 1947</i> (DWER-034). Application Area is surrounded by Preston River tributaries protected under the RIWI Act (DWER-037).</p> <p>Groundwater salinity level (Total Dissolved Solids) is mapped as 500-1000 milligrams per litre (Fresh water) (DWER-026).</p>
Flora	<p>Three conservation significant flora taxa have been recorded within the local area. Nearest record is 7.4 kilometres from the application area which is a priority four specie (<i>Acacia semitrullata</i>). Two species (<i>Hemiandra</i> sp. Windy Harbour (B.J.Conn &amp; J.A. Scott BJC 3344) and <i>Tetratheca parvifolia</i>) are recorded within the same soil landscape system as the application area. The application area however does not comprise of suitable habitat for their occurrence and has no native understorey.</p>
Ecological communities	<p>No Threatened or Priority Ecological Communities were recorded within the application area nor within the local area (DWER 2021).</p>
Fauna	<p>Thirteen conservational significant fauna species were identified within the local area and known three black cockatoo roosting sites are identified approximately 7.2 kilometres to the south of the application area. The nearest record identified is <i>Calyptorhynchus</i> sp. 'white-tailed black cockatoo' which was 5.35 kilometres from application area (GIS databases). The fauna table B.4. below provides an analysis of the fauna species identified within the local area.</p>

## B.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Jarrah Forest*	4,506,660.25	2,399,838.15	53.25	1,673,614.25	37.14
Vegetation complex					
Mattiske/Havel (1998) vegetation complex BL24 ** (Balingup)	59,446.57	17,466.47	29.38	9,120.37	15.30
Native Vegetation					
Ten kilometre radius	31,606.93	13,969.22	44.20	-	-

\*Government of Western Australia (2019a)

\*\*Government of Western Australia (2019b)

## B.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Acacia semitrullata</i>	P4	N	N	7.4	4	N/A
<i>Hemiandra</i> sp. Windy Harbour	P3	N	Y	9.7	1	N/A
<i>Tetradlea parvifolia</i>	P3	N	Y	9.7	1	N/A

## B.4. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1), impacts to the following conservation significant fauna required further consideration.

Species name (Scientific)	Species name (Common)	Conservation status	Class	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Calyptorhynchus banksii naso</i>	Forest Red-tailed Black Cockatoo	VU	Bird	5.81	42	N/A
<i>Calyptorhynchus baudinii</i>	Baudin's Cockatoo	EN	Bird	7.5	2	N/A
<i>Calyptorhynchus latirostris</i>	Carnaby's Cockatoo (White-tailed Black Cockatoo)	EN	Bird	5.35	33	N/A

Species name (Scientific)	Species name (Common)	Conservation status	Class	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify ? [Y, N, N/A]
<i>Calyptorhynchus</i> sp. 'white-tailed black cockatoo'	White-tailed black cockatoo	EN	Bird	8.27	268	N/A
<i>Leipoa ocellata</i>	Malleefowl	VU	Bird	9.25	1	N/A
<i>Dasyurus geoffroyi</i>	Chuditch, Western Quoll	VU	Mammal	6.24	6	N/A
<i>Falsistrellus mackenziei</i>	Western False Pipistrelle, Western Falsistrelle	P4	Mammal	9.23	1	N/A
<i>Hydromys chrysogaster</i>	Water-rat, Rakali	P4	Mammal	8.28	1	N/A
<i>Isodon fusciventer</i>	Quenda, Southwestern Brown Bandicoot	P4	Mammal	5.46	6	N/A
<i>Notamacropus irma</i>	Western Brush Wallaby	P4	Mammal	6.42	2	N/A
<i>Phascogale tapoatafa wambenger</i>	South-western Brush-tailed Phascogale, Wambenger	CD	Mammal	5.7	9	N/A
<i>Pseudocheirus occidentalis</i>	Western Ringtail Possum, ngwayir	CR	Mammal	8.3	5	N/A
<i>Westralunio carteri</i>	Carter's freshwater mussel	VU	Invertebrate	8.26	120	N/A

## B.5. Land degradation risk table

Land quality risk level against aspects of land degradation

Risk categories	Land Unit 1
Wind erosion	L2: 5% of map unit has a high to extreme hazard
Water erosion	H1: 61% of map unit has a very high to extreme hazard
Salinity	L1: 0% of map unit has a moderate hazard
Subsurface Acidification	H2: 86% of map unit has a high susceptibility
Flood risk	L1: 0% of the map unit has a moderate to high hazard
Water logging	L1: 0% of map unit has a moderate to very high risk
Phosphorus export risk	H2: 84% of map unit has a high to extreme hazard

L = Low

M = Medium

H = High

## Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
<b>Environmental value: biological values</b>		
<p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u> Native vegetation over the application area consists of scattered marri, jarrah over an understorey of pasture grasses. Native vegetation is in a completely degraded condition (Keighery 1994). No native species are represented in the understorey. The native vegetation of the application area does not represent any conservation significant ecological communities, does not support Threatened or Priority flora taxa, and does not comprise a high level of biodiversity.</p>	Not at variance	No
<p><u>Principle (b):</u> <i>“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.”</i></p> <p><u>Assessment:</u> The application area falls within mapped black cockatoo feeding area, Baudin’s cockatoo distribution area and within the Forest red-tailed black cockatoo distribution zone. The trees identified (Appendix E) are not likely to provide roosting or breeding habitat for black cockatoos due to their size. The application area does include foraging habitat for breeding or roosting black cockatoos.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u> Native vegetation identified within the application area is in a completely degraded condition (Keighery 1994). No native flora species are represented in the understorey and the application area is unlikely to include, or be necessary for, the continued existence of Threatened flora species under the BC Act.</p>	Not at variance	No
<p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u> The native vegetation within the application area does not contain a structure, diversity and condition that would indicate the presence of a Threatened Ecological Community listed by the Western Australian Minister for Environment (Appendix F).</p>	Not at variance	No
<b>Environmental value: significant remnant vegetation and conservation areas</b>		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u> The extent of vegetation remaining within the bioregion (Refer Appendix B.2.) is greater than 30 per cent which is considered as the threshold for protecting biodiversity (Commonwealth of Australia, 2001). However, the mapped vegetation complex (Balingup 24) in which the application area occurs retains less than 30 per cent vegetation.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<p><u>Principle (h):</u> <i>“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.”</i></p> <p><u>Assessment:</u> The application area does not fall within any conservation areas. Given the distance to the nearest conservation area, the proposed clearing is</p>	Not at variance	No



Assessment against the clearing principles	Variance level	Is further consideration required?
not likely to have an impact on the environmental values of adjacent conservation areas.		
<b>Environmental value: land and water resources</b>		
<p>Principle (f): <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u> The application area is located within a non-perennial creekline (Appendix F). No major water courses or wetlands are recorded within the application area.</p>	At variance	Yes <i>Refer to Section 3.2.3, above.</i>
<p>Principle (g): <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u> Land degradation risks for the mapped soil type is high for subsurface acidification and phosphorus export. Eutrophication (phosphorus export) is not likely to be a risk as final land use is not for planting crops. As the final land use is for construction of a dam which would be few metres deep, subsurface acidification will not be an impacting factor. Water erosion is mapped as medium to high. Short term water erosion is likely but standard water erosion and drainage control methodologies will be implemented during the dam construction to mitigate any potential impacts from water erosion. Following the completion of the dam, water drainage will accumulate into the dam and no water erosion will remain.</p> <p>Noting the extent of the application area and the condition of the vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	Not likely to be at variance	No
<p>Principle (i): <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.”</i></p> <p><u>Assessment:</u> Given no major water courses, wetlands and Public Drinking Water Sources Areas are recorded within or in close proximity to the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p>	Not at variance	No
<p>Principle (j): <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u> The mapped land degradation risk for flooding potential over the application area is rated at low.</p> <p>Given the condition and the small extent of the application area, clearing of the proposed native trees is unlikely to cause, or exacerbate, the incidence or intensity of flooding.</p>	Not at variance	No

## Appendix D. 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.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

### Measuring vegetation condition for the Southwest 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.

**CPS 9429/1 – Supporting Information – Photographs of native vegetation to be cleared.**



*Figure 1: Dam Location (Looking South)*



*Figure 2: Dam Location (Looking North West)*



Figure 3: Google Screenshot - Lot 374 on Plan 205924 (DELUIS)[1]



Figure 4; Dam Location (Looking East)

## Appendix F. Sources of information

### F.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- 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)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

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)

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