



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9721/1
File Number: DWERVT10120
Duration of Permit: From 05/09/2022 to 05/09/2024

PERMIT HOLDER

Rosa Maria Madigan

LAND ON WHICH CLEARING IS TO BE DONE

Lot 2 on diagram 82401, Henty

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.72 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. 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	<ol style="list-style-type: none">(a) the species composition, structure, and density of the cleared area;(b) the location where the clearing occurred, recorded using a Global Positioning

No.	Relevant matter	Specifications
		<p>System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;</p> <p>(c) the date that the area was cleared;</p> <p>(d) the size of the area cleared (in hectares); and</p> <p>(e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1.</p>

3. Reporting

The permit holder must provide to the *CEO* the records required under condition 2 of this permit when requested by the *CEO*.

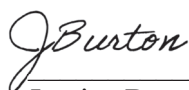
DEFINITIONS

In this permit, the terms in Table 2 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.
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)
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.

END OF CONDITIONS



Jessica Burton
 A/MANAGER
 NATIVE VEGETATION REGULATION

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

11 August 2022

SCHEDULE 1

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

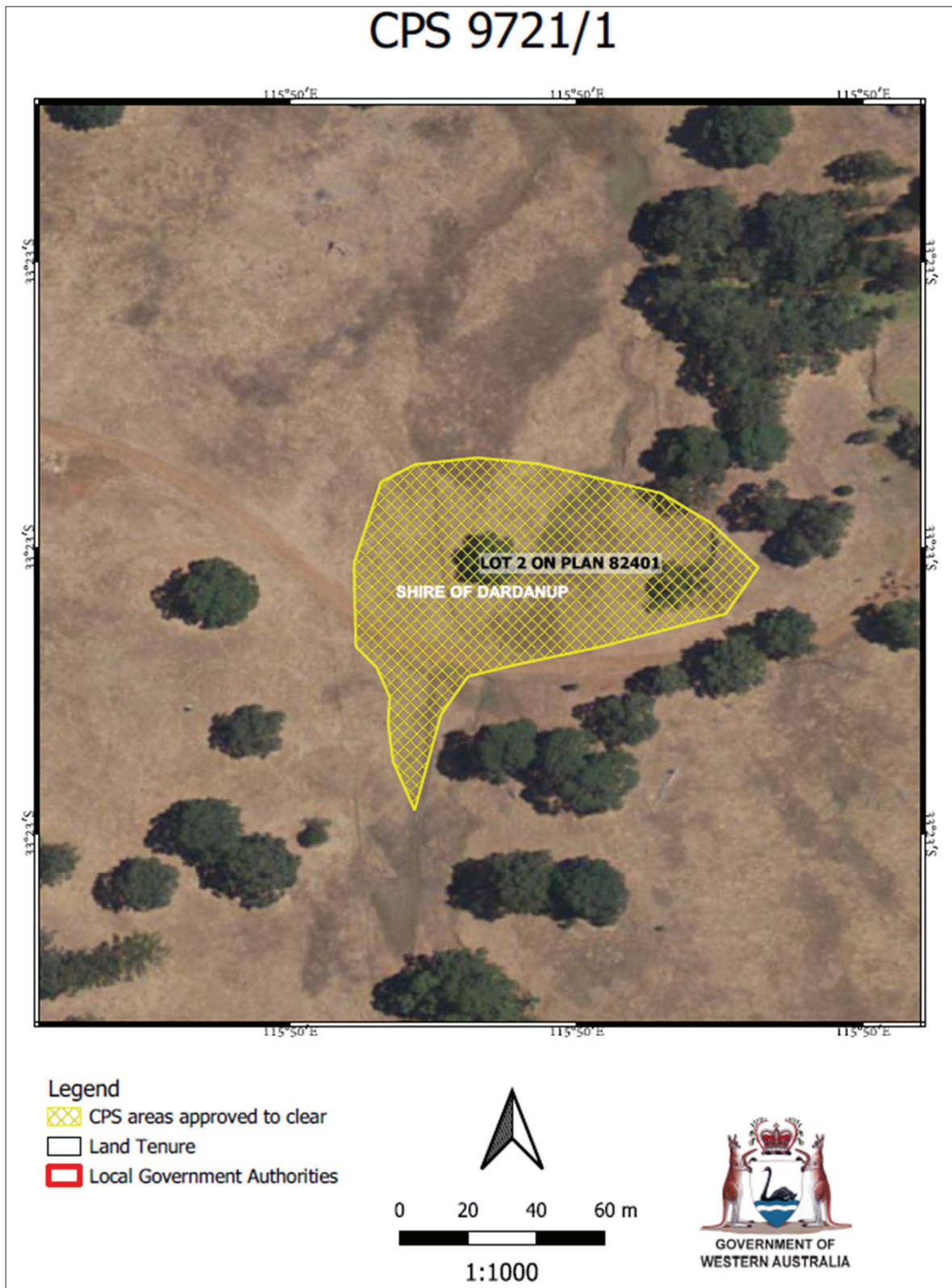


Figure 1: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9721/1
Permit type:	Area permit
Applicant name:	Rosa Madigan
Application received:	3 May 2022
Application area:	0.72 hectares of native vegetation
Purpose of clearing:	To construct a dam
Method of clearing:	Mechanical clearing
Property:	Lot 2 on diagram 82401
Location (LGA area/s):	Shire of Dardanup
Localities (suburb/s):	Henty

1.2. Description of clearing activities

The vegetation proposed to be cleared consists of two native trees over pasture within a 0.72 hectare area (see Figure 1, Section 1.5)

1.3. Decision on application

Decision:	Granted
Decision date:	11 August 2022
Decision area:	0.72 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. 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 21 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 FF.1), the clearing principles set out in Schedule 5 of the EP Act (see Appendix C), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The assessment identified that the proposed clearing will result in:

- the loss of suitable foraging habitat for Carnaby's cockatoos
- minor, localised and short-term impacts to surface water quality through sedimentation

Given the extent of foraging habitat within the application area, the sparse distribution of primary foraging species, and the existence of larger remnants of quality foraging habitat in the vicinity and in close proximity to significant habitat resources, the Delegated Officer determined that the proposed clearing was unlikely to result in significant

impacts to foraging habitat for black cockatoo species. Based on the extent and condition of vegetation within the application area, the Delegated Officer also determined that the proposed clearing was unlikely to result in long-term impacts to riparian vegetation or water quality. After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to have long-term adverse impacts on biological or water resource values and is unlikely to lead to an unacceptable risk to environmental values.

The Delegated Officer decided to grant a clearing permit subject to a condition to:

- avoid, minimise to reduce the impacts and extent of clearing

1.5. Site map

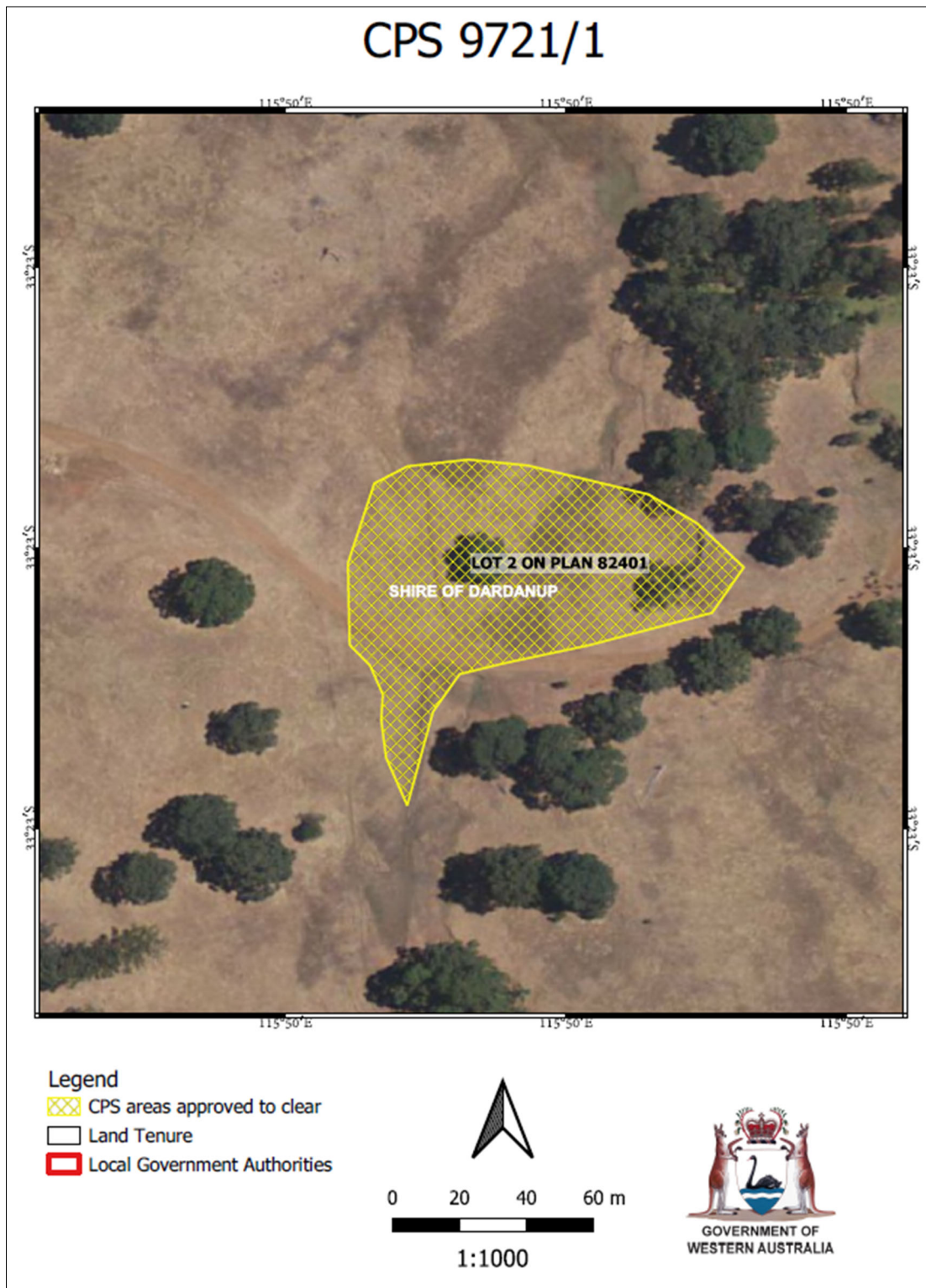


Figure 1 Map of the application area

The area crosshatched yellow indicate 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)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC 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 advised that the proposed clearing is to allow for the construction of a dam (Madigan, 2022a). The applicant also advised that the water from the proposed dam will be used to irrigate the creek line below it during the summer months. This will allow for revegetation of the creek line which will:

- control erosion control
- promote the habitats of native plant and wildlife
- increase survival rate of native trees and vegetation
- reverse the naturally declining numbers of native trees on the property.

The applicant further informed that native trees will be planted along the creek line below the proposed dam and along Paradise Creek to assist the natural revegetation process. The proposed dam and creek line below will be fenced off from the public and livestock for their own safety, as well as to prevent damage to vegetation and destruction of the habitat of local flora and fauna. The location of the dam has been chosen to minimise impact on existing vegetation and to preserve a number of established marri trees (Madigan, 2022c).

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

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix B B) and the extent to which the impacts of the proposed clearing present a risk to biological or land and water resource values.

The assessment against the clearing principles (see **Error! Reference source not found.**) identified that the impacts of the proposed clearing present a risk to biological values (fauna habitat) 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 two isolated trees and are identified as *Corymbia calophylla* (Marri) over a degraded understorey consisting predominately of pasture grass species (Appendix D and Appendix E). A desktop assessment of the application area identified 22 conservational significant fauna species within the ten-kilometre radius of the application area which included nine bird species, ten mammal species, two invertebrate species and one fish species.

Birds

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

There are three key components of black cockatoo habitat: foraging habitat; roosting habitat; and breeding habitat (DSEWPAC 2012). Four confirmed black cockatoo roost sites are located within the local area with the closest occurring 700 metres from the application area. In addition, the application area falls within broadly mapped black cockatoo feeding areas

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 (Strategen 2020). Two Marri trees are proposed to be cleared and both do not contain hollows suitable for black cockatoo breeding.

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. Figure 2 below represents the extent of black cockatoo roosting and feeding vegetation within the local area.

Marri fruit is a known food resource for black cockatoos (Bamford 2013; Valentine and Stock 2008). However due to the location of the trees under application 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. Further, roosting is typically noted to occur within suitable trees close to an important water source and within an area of quality foraging habitat (Commonwealth of Australia, 2012). 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.

It is not considered for suitable habitat for other conservation significant avian fauna recorded in the local area to be impacted on by the proposed clearing.

Invertebrate

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 2016. Carter's freshwater mussel inhabits sandy/muddy sediments of freshwater lakes, rivers and streams and 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. 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 minimal.

Mammals

The western ringtail possum (WRP) is an arboreal folivore, associated with mature marri and jarrah forests within the Southern Forest management zone surrounding Manjimup, characterised by high canopy cover and connectivity (DPAW, 2017). Within the Southern Forest management zone, suitable habitat also includes riparian vegetation with a canopy of flooded gum, wandoo forests, and karri forests with appropriate canopy, that provide suitable foraging habitat and tree hollows for breeding and diurnal refuge (DPAW, 2017). Application area is not mapped within a Western Ringtail Possum habitat suitability zone. Noting this description, the absence of a coherent midstory element and the lack of flora diversity, the application area does not provide suitable habitat for WRP.

The south-western brush-tailed phascogale is an arboreal dasyurid, associated with dry sclerophyll forests and open woodlands that contain hollow-bearing trees, characterised by high canopy cover and connectivity (DEC, 2012a).

Photographs provided by the applicant indicate no areas of full canopy connectivity. It comprises a sparse and disconnected canopy. Further, the application area is part of a small, isolated remnant that has limited to no connectivity to larger areas of suitable habitat in the local area, making it unlikely to support a significant population or comprise significant habitat for this species.

Quenda are ground-dwelling marsupials, typically associated with forest or woodlands near watercourses, where understorey consists of dense scrub and leaf litter is abundant (DEC, 2012b). 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. Given the location and extent of the proposed clearing, the condition of the vegetation, and the extent of suitable habitat available in the local area, the application area is not considered likely to comprise significant habitat for quenda.

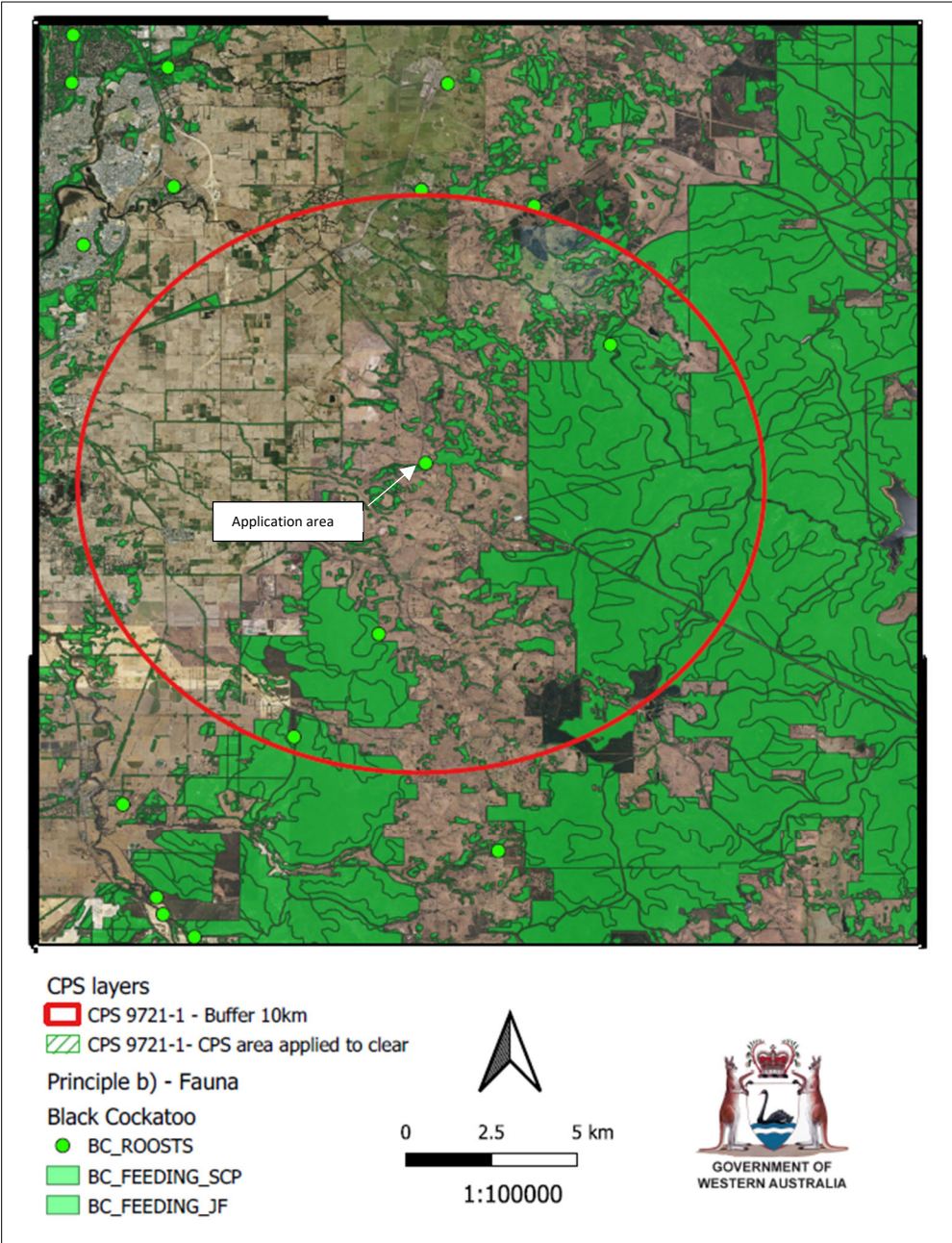


Figure 2. Mapped black cockatoo roosting and feeding within ten kilometres of the application area.

Conclusion

Given the size of the clearing and the 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 trees within the application area represent an 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.

Conditions: No conditions are required.

3.2.2. Biological values (flora) - Clearing Principles (c)

Assessment

A review of the site characteristics (see Appendix B) and habitat preferences of the conservation significant flora species recorded in the local area identified that the application area may provide suitable habitat for the following species:

- *Eleocharis keigheryi* (T)
- *Synaphea* sp. *Fairbridge Farm* (D. Papenfus 696) (T)

Eleocharis keigheryi grows in small clumps in a substrate of clay or sandy loam, emergent in freshwater creeks, and transient waterbodies such as drainage lines and claypans (DEWHA, 2008). The closest record of *Eleocharis keigheryi* is approximately 5.7 kilometres from the application area.

Synaphea sp. *Fairbridge Farm* (D. Papenfus 696) occurs on grey, clayey sand with lateritic pebbles in low woodland areas near winter flats (DEWHA, 2009). The closest record of Selena's *Synaphea* is approximately 3.5 kilometres from the application area.

Given that the application area has experienced significant grazing pressure, consists of paddock trees over pasture weeds and occurs in completely degraded condition, it is not considered for the proposed clearing to impact on habitat for these two species.

Conclusion

Based on the above assessment, the proposed clearing is not considered likely to represent significant habitat for any threatened flora species or to be critical for the continuation of these species. For the reasons set out above, it is considered that impacts to conservation significant flora species are unlikely to result from the proposed clearing and that this does not constitute a significant residual impact.

Conditions

No flora management conditions required.

3.2.3. Water resources - Clearing Principles (f) and (i)

Assessment

The application area intersects a mapped non-perennial tributary of the Collie River. However, it is acknowledged that the vegetation along the non-perennial tributary has been highly modified through historical clearing for agriculture and grazing, it is unlikely that the vegetation within the application area is contributing significantly to the function of riparian communities associated with the Collie River system or within in the local area. Photographs of the vegetation indicate that no riparian vegetation occurs within the application area. Given this, it is not considered for the proposed clearing to impact vegetation growing in association with a watercourse or wetland.

Given the presence of a non-perennial watercourse within the application area, the proposed clearing also has the potential to result in impacts to surface water quality through turbidity and sedimentation, if the vegetation within the application area is inundated or water is present in the tributary at the time of the clearing. However, given the extent of the proposed clearing, the condition of the vegetation and the final land use as a dam, it is likely that impacts to surface water resulting directly from the proposed clearing will be minor, localised, and short-term.

Accordingly, it is noted that the application area does not occur within a proclaimed groundwater area and the proposed clearing is not considered likely to result in significant impacts to groundwater quality, given its nature and extent.

Conclusion

Based on the above assessment, the proposed clearing may cause minor short-term impacts to surface water quality, if present during the time of clearing.

For the reasons set out above, the proposed clearing is unlikely to result in any significant or long-term impacts to surface water quality or to the ecological values associated with the mapped watercourse given the lack of riparian

vegetation occurring within the application area. It is considered that the impacts of the proposed clearing does not constitute a significant residual impact to riparian vegetation or water quality.

Conditions

No conditions required

3.3. Relevant planning instruments and other matters

The Shire of Dardanup advised that local government approvals are required, and that the proposed clearing is consistent with the Shire's Local Planning Scheme. An approval (subject to conditions) has been granted requiring the applicant to provide further detailed plans for construction of the wall and spillway. In view of the development approval granted for the construction of the dam, the Shire has no objection to the clearing proposal (Shire of Dardanup, 2022).

The application area lies in the Gnaala Karla Booja Indigenous Land Use Agreement Area (WI2015/005). 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

Summary of comments	Consideration of comment
<p>The applicant provided representative photographs of the vegetation communities within the application area, as well as detailed photographs of all habitat trees within the application area on 15 July 2022 (Madigan, 2022b).</p>	<p>The information provided by the applicant was considered as follows:</p> <ul style="list-style-type: none"> The representative photographs of the vegetation communities within the application area were considered to provide context to the site characteristics (see Appendix C) and were used to inform the detailed assessment of impacts to biological and water resource values (see Section 3). The representative photographs are available at Appendix E, and The detailed photographs of all habitat trees within the application area were considered in the detailed assessment of the application under <i>Biological values (fauna)</i> (see Section 3.2.1).

Appendix B. Site characteristics

B.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is a 0.72-hectare isolated area of native vegetation comprising of two trees (see Appendix E) in the intensive land use zone of Western Australia. It is surrounded by historically cleared paddock and is adjacent to an existing dam to the east.</p> <p>Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 36.75 per cent of the original native vegetation cover (See Appendix B.2).</p>
Ecological linkage	<p>The application area does not intersect any formally mapped ecological linkages. Given the application area consists of two isolated trees (see Appendix E), it is not considered to be contributing significantly to the values of the nearby mapped linkages or to any formal or informal ecological linkages in the local area.</p>
Conservation areas	<p>The closest conservation area is Wellington National Park, located approximately three kilometres west of the application area.</p>
Vegetation description	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of two isolated paddock trees, <i>Corymbia Calophylla</i>, over pasture grass and weed species along a non-perianal minor tributary. Representative photos are available in Appendix E.</p> <p>This is consistent with the mapped South West Forest vegetation association Darling Scarp (DS2) which is described as a mosaic of open forest of <i>Eucalyptus marginata</i> subsp. <i>marginata-Corymbia calophylla</i>, with some admixtures with <i>Eucalyptus laeiliae</i> in the north (subhumid zone), with occasional <i>Eucalyptus marginata</i> subsp. <i>elegantella</i> (mainly in subhumid zone) and <i>Corymbia haematoxylon</i> in the south (humid zone) on deeper soils adjacent to outcrops, woodland of <i>Eucalyptus wandoo</i> (subhumid and semiarid zones), low woodland of <i>Allocasuarina huegeliana</i> on shallow soils over granite outcrops, closed heath of <i>Myrtaceae-Proteaceae</i> species and lithic complex on or near granite outcrops in all climate zones (Mattiske and Havel, 1998).</p>

Characteristic	Details
	The mapped vegetation type retains approximately 41.87 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in completely degraded (Keighery, 1994) condition, described as:</p> <ul style="list-style-type: none"> • 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. <p>The full Keighery (1994) condition rating scale is provided in Appendix D. Representative photos are available in Appendix E.</p>
Landform	<p>Landform: The application area occurs on generally flat topography with some undulating low hills. The valleys in the local area are gently incised (30-70 m) upper reaches with low slopes (5-15% gradients). They occur high in the landscape, above nick points and just below the plateau surface, and tend to be fairly short. The valley floors are occasionally swampy (DPIRD, 2019)</p> <p>Rainfall: The mean annual rainfall is 800 millimetres</p>
Soil description	The soil is mapped within the Balingup Subsystem (255LvBLu), described as valleys with gentle slopes (5-15%), relief 30-70 m, where soils are friable red-brown loamy earths, loamy gravels and brown deep loamy duplexes.
Land degradation risk	The soil types within the application area are mapped as having a low risk of land degradation resulting from salinity, waterlogging, and flooding, but as having a high to extreme risk of phosphorus export and subsurface acidification (DPIRD, 2021).
Waterbodies and Hydrogeography	<p>The desktop assessment and aerial imagery indicated that application area intersects non-perennial tributary of the Collie River and is adjacent to a manmade perennial earth dam.</p> <p>Groundwater salinity within the application area is mapped at 500 to 1000 milligrams per litre total dissolved solids.</p>
Flora	There are records of 23 flora species within 10-kilometre radius of the application area, comprising three Priority 1 (P1) flora, four Priority 2 (P2) flora, eight Priority 3 (P3) flora, six Priority 4 (P4) flora, and two threatened flora (<i>Synaphea sp. Fairbridge Farm (D. Papenfus 696)</i> and <i>Eleocharis keigheryi</i>). None of these existing records occur within the application area, with the closest record being an occurrence of <i>Stylidium perplexum</i> (P1) approximately 1.8 kilometres from the application area.
Ecological communities	<p>The closest state-listed priority ecological community (PEC) is an occurrence of the Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region PEC, located approximately 2.5 kilometres north-west of the application area</p> <p>The desktop assessment identified that the closest state-listed threatened ecological community (TEC) is an occurrence of the <i>Corymbia calophylla - Xanthorrhoea preissii</i> woodlands and shrublands, Swan Coastal Plain (floristic community type 3c as originally described in in Gibson et al. (1994)) TEC located approximately 8.7 kilometres north-west of the application area.</p>
Fauna	The desktop assessment identified that a total of 22 threatened or priority fauna species have been recorded within the local area, including 10 threatened fauna species, seven priority fauna species, and three specially protected fauna species (DBCA, 2007).

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	19,962.06	7,187.97	36.01	2,318.61	11.62
South-west Forest (Mattiske) vegetation complex*					
Darling Scarp, DS2	32,448.29	13,586.40	41.87	3,287.66	10.13
Local area					
10km radius	31,788.1	11,682.81	36.75	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

B.3. Land degradation risk table

Risk categories	Land Unit 1
Wind erosion	M1: 10-30% of the map unit has a high to extreme hazard
Water erosion	M2: 30-50% of map unit has a high to extreme water erosion risk
Salinity	L1: <3% of the map unit has a moderate or high hazard or is presently saline
Subsurface Acidification	H2: >70% of map unit has a high subsurface acidification risk or is presently acid
Flood risk	L1: <3% of the map unit has a moderate to high hazard
Water logging	L1: <3% of map unit has a moderate to very high waterlogging risk
Phosphorus export risk	H1: 50-70% of map unit has a high to extreme phosphorus export risk

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared comprises of isolated paddock trees that has been subject to significant disturbance through historical clearing activities. The application area is not considered likely to comprise a high level of biodiversity.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<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></p> <p>The area proposed to be cleared may contain potential foraging and roosting, habitat for conservation significant fauna. The closest Black cockatoo roosting record is 700 metres from the application area. However, given the small amount of potential habitat it is not considered significant habitat.</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></p> <p>The area proposed to be cleared occurs in a completely degraded condition and is not likely to contain habitat for two flora species listed under the BC Act.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<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></p> <p>The closest record of a threatened ecological community is of <i>Corymbia calophylla</i> - <i>Xanthorrhoea preissii</i> woodlands and shrublands, Swan Coastal Plain (floristic community type 3c as originally described in Gibson et al. (1994)) approximately 8.7 kilometres from the application area. The area proposed to be cleared comprises degraded marri woodland, and isolated paddock trees, that have been subject to significant disturbance through historical clearing activities, grazing and weed invasion, and is not considered to comprise vegetation representative of any threatened ecological community (TEC) listed under the BC Act or EPBC Act. Given the distance and separation from the nearest TEC, the proposed clearing is not likely to impact or be necessary for the maintenance of any TEC.</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<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></p> <p>The vegetation proposed to be cleared comprises isolated vegetation within a historically cleared paddock and is not considered to be part of a significant ecological linkage in the local area. The application area does not occur within an extensively cleared landscape.</p>	Not likely to be at variance	No
<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></p> <p>Wellington National Park is the closest conservation area, approximately 3.1 kilometres from the application area. Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>	Not likely to be at variance	No
Environmental value: land and water resources		

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (f)</u>: <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 occurs within a mapped non-perennial watercourse. The vegetation along the non-perennial tributary has been highly modified through historical clearing for agriculture and grazing, it is unlikely that the vegetation within the application area is contributing significantly to the function of riparian communities associated with the Collie River system or within in the local area. No riparian vegetation occurs within the application area.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.3, above.</i>
<p><u>Principle (g)</u>: <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>: The mapped soils are susceptible to phosphorus export risk and subsurface acidification. Noting the extent of the proposed clearing and that the final land use will be a constructed dam that will not leave bare ground exposed to weathering for extended periods, the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	Not likely to be at variance	No
<p><u>Principle (i)</u>: <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 the application area intersects a mapped water body, the proposed clearing may result in short-term impacts surface water quality, if present at the time of clearing.</p>	May be at variance	Yes <i>Refer to Section 3.2.3, above.</i>
<p><u>Principle (j)</u>: <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 soils and topographic contours in the surrounding area do not indicate that the application area is susceptible to flooding. Noting this, the extent of the proposed clearing, and the condition of the vegetation, the proposed clearing itself is unlikely to contribute to increased incidence or intensity of flooding. It is noted that the purpose of the proposed clearing is to construct a dam. The applicant has proposed the installation of a spillway to manage floods.</p>	Not likely to be 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 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 E. Photographs of the trees

The application area comprises of two trees. These two trees have been labelled as trees A and B for the ease of identification.

- Tree A - marri tree, trunk infested by termites at the base
- Tree B – damaged by storm



Photograph 1: Tree- A (Madigan,2022b)



Photograph 2: Tree- A (Madigan,2022b)



Photograph 3: Tree- A (Madigan,2022b)



Photograph 4: Tree- A (Madigan,2022b)



Photograph 5: Tree- B (Madigan,2022b)



Photograph 6: Tree- B (Madigan,2022b)

Appendix F. Sources of information

F.1. GIS databases

Publicly available GIS Databases used (sourced from 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)
- Pre-European Vegetation Statistics
- Remnant Vegetation, All Areas
- 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

Restricted GIS Databases used:

- 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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