



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10235/1
Permit Holder:	Shire of Manjimup
Duration of Permit:	From 17 December 2023 to 17 December 2032

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of cemetery expansion.

2. Land on which clearing is to be done

Lot 512 on Deposited Plan 411205, Reserve 39600, Manjimup

3. Clearing authorised

The permit holder must not clear more than 1.19 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 17 December 2028.

PART II – MANAGEMENT CONDITIONS

5. 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.

6. 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.

7. Directional clearing

The permit holder must:

- (a) conduct clearing authorised under this permit in one direction towards adjacent *native vegetation*; and
- (b) allow a reasonable time for fauna present within the area being cleared to move into adjacent *native vegetation* ahead of the clearing activity.

8. Revegetation requirements

The permit holder shall take the following actions for the purpose of revegetation to provide suitable *foraging habitat* for *black cockatoo species* and for *salinity mitigation*:

- (a) Preparing 1.06 hectares of the revegetation area cross-hatched red in Figure 2 of Schedule 1 by:
 - (i) undertaking weed control;
 - (ii) ripping the soil; and
 - (iii) constructing or ensuring the good working order of a fence fully enclosing the area cross-hatched red in Figure 2 of Schedule 1.
- (b) within 12 months of the commencement of clearing authorised under this permit, commence revegetating the area cross-hatched red in Figure 2 of Schedule 1, by way of:
 - (i) deliberately *planting* tube stock and undertaking *direct seeding* that will result in the achievement of the completion criteria outlined in condition 8(f);
 - (ii) ensuring only endemic species are used to revegetate the area;
 - (iii) installing tree guards around the tube stock; and
 - (iv) installing a minimum of two (2) 10 x 10 metre quadrat monitoring sites
- (c) implement hygiene protocols by cleaning earth-moving machinery of soil and vegetation prior to entering and leaving the site;
- (d) undertake weed control activities on an 'as needs' basis to maintain a minimum of 20 per cent weed free state by the end of the project maintenance period;
- (e) undertake supplementary watering on an 'as needs' basis to ensure tube stock survival rates achieve the criteria outlined in condition 8(f);
- (f) achieve the completion criteria specified below after the four-year monitoring period for areas revegetated under this permit; and

Criterion	Aspect	Scale	Completion Criteria	Monitoring
1	Per cent weed cover	Average of reference quadrat data	< 20 per cent weed cover	Annually (April)
2	Vegetation density	Average of reference quadrat data	80 per cent of stems in average quadrat data	Annually (April)
3	Vegetation diversity	Average of reference quadrat data	80 per cent of number of species in average quadrat data, including foraging species for forest red-tailed black cockatoos	Annually (April)
4	Vegetation structure	Average of reference quadrat data	80 per cent overstorey, midstorey and understorey of average quadrat data	Annually (April)

- (g) undertake remedial actions for areas revegetated where monitoring indicates that revegetation has not met the completion criteria, outlined in 8(f), including:
- (i) revegetate the area by deliberately planting native vegetation that will result in the minimum target in condition 8(f) and ensuring only *local provenance* species are used;
 - (ii) undertake further weed control activities;
 - (iii) undertake supplementary watering; and
 - (iv) annual monitoring of each revegetated site through the monitoring sites installed under condition 8(b)(iv), until the completion criteria, outlined in condition 8(f) are met.

PART III - RECORD KEEPING AND REPORTING

9. 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	(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 2020 (GDA2020), 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);</p> <p>(e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 5;</p> <p>(f) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 6; and</p> <p>(g) fauna mitigation measures in accordance with condition 7.</p>
2.	In relation to the revegetation of areas pursuant to condition 8	<p>(h) a description of the revegetation activities;</p> <p>(i) the size of the area revegetated;</p> <p>(j) the date(s) on which the area revegetation was undertaken; and</p> <p>(k) actions taken in accordance with condition 8(g)</p>

10. Reporting

The permit holder must provide to the *CEO* the records required under condition 9 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
black cockatoo species	Means one or more of the following species: (a) <i>Zanda latirostris</i> (Carnaby's cockatoo); (b) <i>Zand baudinii</i> (Baudin's cockatoo); (c) <i>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo).
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.
direct seeding	means a method of re-establishing vegetation through establishment of a

Term	Definition
	seed bed and the introduction of seeds of the desired plant species
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.
foraging habitat	means foraging species for the black cockatoos as in the Referral guideline for 3 WA threatened black cockatoo species
local provenance	means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same IBRA subregion of the area cleared
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.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
planting	means the re-establishment of vegetation by creating soil conditions and planting seedlings of the desired species.
revegetate/ vegetated/ revegetation	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.
quadrat	means a sample plot established for the purpose of data collection and monitoring vegetation characteristics, for example species composition, structure, density and condition.
weeds	means any plant – <ul style="list-style-type: none"> (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.

END OF CONDITIONS


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 Mincham
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Ryan Mincham
 MANAGER
 NATIVE VEGETATION REGULATION

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

24 November 2023

Schedule 1

Plan 10235/1

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



Figure 2: Map of the boundary of the area which is subject to conditions



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10235/1
Permit type:	Purpose permit
Applicant name:	Shire of Manjimup
Application received:	15 June 2023
Application area:	1.19 hectares of native vegetation
Purpose of clearing:	Cemetery expansion
Method of clearing:	Mechanical
Property:	Lot 512 on Deposited Plan 411205, Reserve 39600
Location (LGA area/s):	Shire of Manjimup
Localities (suburb/s):	Manjimup

1.2. Description of clearing activities

The application is to clear 1.19 hectares of native vegetation in a single area within the Manjimup cemetery to allow for more grave sites and access tracks (see Figure 1 and Figure 2, Section 1.5; Shire of Manjimup, 2023a).

1.3. Decision on application

Decision:	Granted
Decision date:	24 November 2023
Decision area:	1.19 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 A), relevant datasets (see Appendix E.1), the clearing principles set out in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration the purpose of the clearing which will provide public benefit through the expansion of the cemetery.

The assessment identified that the proposed clearing may result in:

- the loss of native vegetation that is suitable habitat for threatened black cockatoos
- 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.

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 conservation significant fauna.

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

- avoid, minimise to reduce the impacts and extent of clearing
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity
- revegetation of 1.06 hectares of the proposed CAWS offset site on Lot 835 on Deposited Plan 193272, Reserve 47034.

1.5. Site map

CPS 12035/1

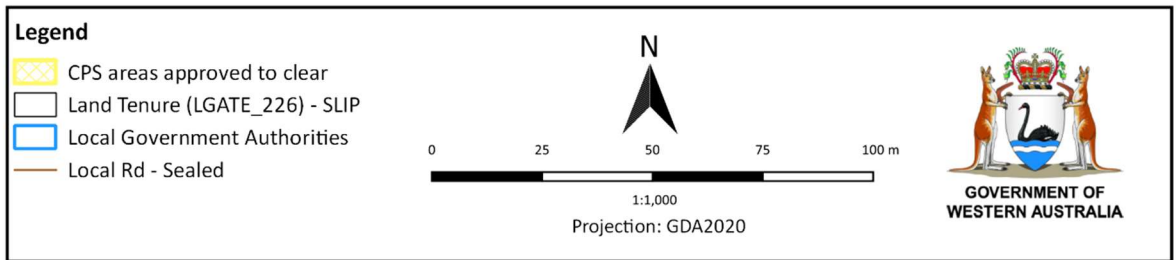


Figure 1 Map of the application area
 The area cross-hatched yellow indicate the area authorised to be cleared under the granted clearing permit.










Legend		 0 50 100 150 200 m 1:2,500 Projection: GDA2020	 GOVERNMENT OF WESTERN AUSTRALIA
	CPS subject to conditions		
	Land Tenure (LGATE_226) - SLIP		
	Local Government Authorities		
Roads			
	Minor		
	Other		

Figure 2 Map of the revegetation area
 The area cross-hatched red indicates the area that has been identified for revegetation.

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)
- *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 has committed to retaining vegetation where possible and clearing vegetation in stages as the cemetery expands (Shire of Manjimup, 2023a). The Delegated Officer was satisfied with the applicant's measures 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 A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see Appendix B) identified that the impacts of the proposed clearing present a risk to biological values (fauna, adjacent flora and vegetation). 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 (Flora) - Clearing Principle (a) and (c)

Assessment

According to available databases, there are records of eight conservation significant flora species within the local area. One of these species, *Amanita kalamundae* (P3) may have suitable habitat in the application area.

Amanita kalamundae is a fungi that grows in association with Eucalyptus forests, recorded from the south coast of WA to the Darling Scarp near Perth (Western Australian Herbarium, 1998-2023). Given the large distribution range and the likely presence of suitable habitat within the local area, the applied clearing is unlikely to impact on significant habitat for this species or its conservation status.

The south-west of Western Australia is recognised as one of the world's 25 global biodiversity hotspots with approximately 7400 species of vascular plants, half of which are endemic (Bradshaw, 2015). Overall, the karri forest supports a lower diversity of plants and animals than either the jarrah or wandoo forests, with higher rainfall areas considered as relatively species poor (Myers et al. 2000; Hopper et al. 2004).

Conclusion

Based on the above assessment, the proposed clearing of native vegetation is not considered likely to represent significant habitat for any threatened or priority flora species.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.

3.2.2. Biological values (fauna) - Clearing Principles (a) and (b)

Assessment

According to available databases, there are records of 21 conservation significant fauna species within the local area. The closest record to the application area is the forest red-tailed black cockatoo located 250 metres to the west. A total of 10 of the conservation significant fauna species are associated with similar habitat to the application area.

Carnaby's cockatoo, Baudin's cockatoo and forest red-tail black cockatoo (collectively known as black cockatoos) nest in hollows in live or dead trees of karri, marri, wandoo, tuart, salmon gum, jarrah, flooded gum, York gum, powder bark, bullich and blackbutt (Commonwealth of Australia, 2022). Breeding habitat or a 'habitat tree' is defined in the EPBC Act referral guidelines as 'trees of species known to support breeding within the range of the species which either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow' (Commonwealth of Australia, 2022). The application area is within the known breeding range of Baudin's and Carnaby's black cockatoo and the 'core' range of forest red-tail black cockatoo, and therefore, is within the known range for all three black cockatoo species.

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, 2022). Overlapping foraging ranges within 12 km also support roosting sites and maintain habitat connectivity and movement across the landscape (EPA, 2019). There are two Black cockatoo roosts in the local area, one less than 1 kilometre north from the application area and the other about 2 kilometres north. The local area does not contain any mapped black cockatoo breeding sites but does contain 158 records of Black cockatoos. The application area is predominately Karri and while *E. diversicolor* (karri) can develop hollows suitable for breeding and roosting by black cockatoos, it is not the preferred species for feeding (Department of Environment and Conservation, 2008a; DSEWPAC, 2012; Valentine and Stock, 2008). There are no published studies on the incidence of black cockatoo food resources the Karri forest and that the availability of marri for foraging is considered important for breeding success in the south-west forests (Biggs et al. 2011, Johstone and Kirkby, 2008). Removal of the karri trees from the application area, therefore, is not considered likely to significantly impact the availability of high-quality foraging habitat for black cockatoo species in the local area. Given the small diameter of the trees in the application area based on the visual assessment of the photographs, it is unlikely that breeding habitat for Black cockatoos will be significantly impacted by the proposed clearing.

Quenda (*Isoodon fusciventer*) prefer dense scrub (up to one metre high), with swampy vegetation but are found in a variety of other habitats (Menkhorst and Knight, 2011). The species is widely distributed near the south west coast from north of Geraldton to east of Esperance. Quenda have a patchy distribution throughout the Jarrah and Karri forest, the Swan Coastal Plain, and inland as far as Hyden (DEC, 2012). They will often feed in adjacent forest and woodland that is burnt on a regular basis, and in areas of open grassland, pasture and crop land lying close to dense cover (DEC, 2012a). Given the broad range of the species and relative abundance throughout, the clearing proposed under this application is unlikely to impact the conservation status of this species.

The Western ringtail possum (*Pseudocheirus occidentalis*) 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). Due to their small size, this species prefers smaller gaps of less than 100 metres between ecological linkages and considering the small patch size and non-continuous canopy with the closest large patch of remnant vegetation, it is unlikely that this species will be significantly impacted by the proposed clearing (Molloy, 2009).

The south-western brush-tailed phascogale (*Phascogale tapoatafa wambenger*) 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, 2012b). As per the Western ringtail possum, due to their small size, this species prefers smaller gaps of less than 100 metres between ecological linkages and considering the small patch size and non-continuous canopy with the closest large patch of remnant vegetation, it is unlikely that this species will be significantly impacted by the proposed clearing (Molloy, 2009).

Quokka (*Setonix brachyurus*) is a small wallaby listed as Vulnerable under both state and commonwealth legislation and is known as a habitat specialist. In the south of its range, quokkas are strongly linked to complex vegetation structure (minimum of three layers), low densities of woody debris and habitat patchiness (Bain et al. 2015). The most common Quokka habitat in the southern forest comprises jarrah (*E. marginata*), marri (*C. calophylla*), karri (*E. diversicolor*) or tingle (*E. jacksonii* or *E. guilfoylei*) forest and riparian habitats with a sedge dominated understorey (DEC, 2013). The quokka also has relatively high water requirements, which necessitates close proximity to fresh water throughout the year, hence, the species is often present in riparian and swamp habitat (Hayward et al. 2005).

While the habitat may be considered suitable for the Quokka, the large gap between ecological linkages in the area (>100 m) combined with the small patch size of the native vegetation proposed to be cleared it is unlikely that this species will be significantly impacted by the proposed clearing (Molloy, 2009).

The Woylie (*Bettongia penicillata ogilbyi*) is a small potoroid marsupial that was previously present across much of Australia but has since concentrated in the south-west of Western Australia. While the habitat may be suitable for the Woylie, this species needs adequate introduced predator control or exclusion to persist in an area, along with large habitat areas for their home ranges (Yeatman and Groom, 2012). Given the small patch size and proximity to the Manjimup townsite, it is unlikely that this species will be significantly impacted by the proposed clearing.

Muir's corella (*Cacatua pastinator pastinator*) is associated with woodlands, particularly those consisting of large live or dead marri, jarrah, flooded gum, Yate (*Eucalyptus cornuta*) and Melaleuca preissiana, including suitable nesting hollows and corms, tubers and seeds for foraging (DEC, 2008b). They feed on a wide variety of corms, tubers and seeds from both introduced and native plant species. It was previously listed as threatened due to being considered pest birds as they caused significant damage to grain crops, however, the population numbers recovered and they were taken off the list in 2012 (DPaW, 2015). Given the small size of the Karri trees and the presence of conservation areas in the local area, it is unlikely that this species will be significantly impacted by the proposed clearing.

Chuditch (*Dasyurus geofroi*) was identified as one of the conservation significant fauna influenced by the potential loss of an ecological linkage with a gap of less than 500 metres from a South west regional ecological linkage (Molloy, 2009). While the vegetation type of the application area may be suitable for the Chuditch, they occupy large home ranges and need large patch sizes to accommodate them and given the small patch size of the area proposed to be cleared it is unlikely that this species will be significantly impacted by the proposed clearing (DEC, 2012).

Ecological linkage

The south west regional ecological linkage outlines native vegetation that form a contiguous and non-contiguous patches to allow for the movement of fauna through the landscape (Molloy, 2009). Given the application area comprises 1.19 hectares within a 2.5 hectare patch of native vegetation near a cleared agricultural area and industrial zone, it may act as a 'stepping stone' for fauna as they move through the landscape.

Conclusion

Based on the above assessment, the proposed clearing may result in the loss of 1.19 hectares of suitable secondary foraging habitat for all three threatened black cockatoo species, however these impacts are unlikely to be significant considering the approximately 6,030 hectares of suitable black cockatoo feeding habitat in the local area. It is considered that potential direct impacts to ground-dwelling or arboreal fauna that may be present at the time of the clearing can be managed through the application of a directional clearing condition.

The applicant may have notification responsibilities under the EPBC Act for impacts to the threatened black cockatoos and their habitats, as set out in the EPBC Act referral guidelines for these species. The applicant has been advised to contact the federal Department of Climate Change, Energy, the Environment and Water (DCCEEW) to discuss EPBC Act referral requirements.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- undertake slow, progressive one-directional clearing to allow fauna to move into adjacent native vegetation ahead of the clearing.

3.3. Relevant planning instruments and other matters

The application area falls within the Warren River and Tributaries Surface Water Area as proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act). DWER's Water Licencing branch advised that no water licence or permit would be required to undertake the proposed clearing (DWER, 2023a).

The application area falls within Zone C of the Warren River Water Reserve as proclaimed under the *Country Areas Water Supply Act 1947* (CAWS Act). DWER's Water Source Protection branch advised that the application is supported with a 1.06 hectare offset on Lot 835 on Deposited Plan 193272, Reserve 47034 under the CAWS Act (DWER, 2023b; Shire of Manjimup, 2023b).

No Aboriginal sites of significance have been mapped within the application area. 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.



Figure 3: Proposed offset site on Lot 835 on Deposited Plan 193272, Reserve 47034

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is part of an isolated patch of native vegetation in the Manjimup cemetery which is part of the intensive land use zone of Western Australia. It is surrounded by an industrial land use zone and general agriculture on the edge of the Manjimup townsite.</p> <p>Aerial imagery indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 31.75 per cent of the original native vegetation cover.</p>
Ecological linkage	<p>The application area is in a level 2 proximity to the south west regional ecological linkage as it is within 500 metres from a patch of native vegetation associated with the linkage.</p>
Conservation areas	<p>The application area is not in a conservation area, with the closest DBCA legislated tenure approximately 240 metres north-west. The Tone State forest is located 930 metres east of the application area.</p>
Vegetation description	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of predominately <i>Eucalyptus diversicolor</i> (Karri) with some <i>Eucalyptus marginata</i> subsp. <i>marginata</i> (Jarrah) trees over native shrubland. Representative photos are available in Appendix D.</p> <p>This is partially consistent with the mapped vegetation type:</p> <ul style="list-style-type: none"> • Bevan 1, which is described as tall open forest of <i>Corymbia calophylla-Eucalyptus marginata</i> subsp. <i>marginata</i> on uplands in perhumid and humid zones. (Shepherd et al, 2001) <p>The mapped vegetation type retains approximately 81.79 per cent of the original extent (Government of Western Australia, 2019).</p>
Vegetation condition	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in Very Good to Excellent (Keighery, 1994) condition.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in Appendix D.</p>
Climate and landform	<p>The application area has a mean annual rainfall of 983.5 mm mostly received between May and September with a mean maximum temperature ranging from 14.4 degrees C in July to 27.3 in January. The mean minimum temperature is 6.5 in July and August and 13.4 in February (BOM, 2023).</p> <p>The elevation in the application area is gentle ranging from 27-290 metres and is on one landform the Manjimup Plateau System which is described as Lateritic plateau, in the north-west of the Warren-Denmark Southland. Sandy gravel, loamy gravel, non-saline wet soil and deep sand. Jarrah-marri forest and woodland.</p>
Soil description	<p>The soil is mapped as Bevan Subsystem (Manjimup) which is described as broad, gently sloping (3-15%) divides on laterite, soils are sandy gravels and loamy gravels</p>
Land degradation risk	<p>The one soil type is mapped with high wind and subsurface acidification risk with the other land degradation risks mapped as medium to low.</p>
Waterbodies	<p>The desktop assessment and aerial imagery indicated that there are no waterbodies in the application area with the closest minor non-perennial watercourses 260 metres and a manmade dam over 1 kilometre from the application area.</p>
Hydrogeography	<p>The application area is located within the Warren River and Tributaries surface water area as proclaimed under the RIWI Act and is in the Warren River Water Reserve Zone C as proclaimed under the CAWS Act. The groundwater in the area is mapped as 500-1000 mg per litre.</p>

Characteristic	Details
Flora	Eight conservation significant flora records in local area, with the nearest record 520 metres from the application area. Five species were found in the same soil and vegetation type, however, only one species was associated with a similar Eucalyptus forest habitat.
Ecological communities	No threatened or priority ecological communities were recorded in the local area.
Fauna	<p>A total of 21 conservation significant fauna species recorded in the local area, with the nearest record 250 metres from the application area. 10 conservation significant fauna species are associated with Eucalyptus woodland.</p> <p>There are two Black cockatoo roosts within the local area, one located approximately 1 kilometre north and the other 2 kilometres north of the application area. It is within the distribution for all three black cockatoo species with Carnaby's black cockatoo breeding likely to occur in the local area. The application area is located within a core distribution area for the Forest red tail black cockatoo. The closest Carnaby cockatoo breeding record is located 27 kilometres south.</p>

A.2. Flora analysis table

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

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [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>Amanita kalamundae</i>	3	Y	Y	Y	0.52	1	N/A
<i>Caladenia christineae</i>	T	N	Y	Y	1.42	1	N/A
<i>Calytrix pulchella</i>	3	N	Y	Y	1.38	1	N/A
<i>Chamelaucium forrestii</i>	2	N	Y	Y	0.52	1	N/A
<i>Stylidium roseonanum</i>	3	N	Y	Y	1.42	1	N/A

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

A.3. Fauna analysis table

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

Species name	Common Name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Year last recorded	Are surveys adequate to identify? [Y, N, N/A]
<i>Bettongia penicillata ogilbyi</i>	Woylie	CR	Y	0.52	25	2001	N/A
<i>Cacatua pastinator pastinator</i>	Muir's corella	CD	Y	0.52	3	2011	N/A

Species name	Common Name	Conservation status	Suitable habitat features ? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Year last recorded	Are surveys adequate to identify? [Y, N, N/A]
<i>Calyptorhynchus banksii naso</i>	forest red-tailed black cockatoo	VU	Y	0.25	19	2006	N/A
<i>Zanda baudinii</i>	Baudin's cockatoo	EN	Y	0.52	54	2018	N/A
<i>Zanda latirostris</i>	Carnaby's cockatoo	EN	Y	1.44	15	2018	N/A
<i>Dasyurus geoffroii</i>	Chuditch	VU	Y	0.52	15	2007	N/A
<i>Isoodon fusciventer</i>	quenda	P4	Y	0.52	19	2000	N/A
<i>Phascogale tapoatafa wambenger</i>	south-western brush-tailed phascogale	CD	Y	0.26	58	2001	N/A
<i>Pseudocheirus occidentalis</i>	Western ringtail possum	CR	Y	0.52	126	2019	N/A
<i>Setonix brachyurus</i>	quokka	VU	Y	0.52	11	2007	N/A

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

Appendix B. 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 is not representative of a priority or threatened ecological community and is not likely to contain conservation significant flora or represent significant habitat for fauna.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (b):</u> "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."</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared comprises trees which do not represent significant breeding habitat for black cockatoos. While secondary foraging habitat is present within the application area, the mapping of black cockatoo feeding habitat indicates that approximately 6,030 hectares of suitable foraging habitat remains within the local area.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<p><u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</p> <p><u>Assessment:</u></p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>

Assessment against the clearing principles	Variance level	Is further consideration required?
The area proposed to be cleared is unlikely to contain habitat for threatened flora species listed under the BC Act.		
<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 area proposed to be cleared does not contains species indicative of a threatened ecological community.</p>	Not 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 extent of the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is within proximity to a significant ecological linkage in the local area.</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>Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of conservation areas.</p>	Not likely to be at variance	No
Environmental value: land and water resources		
<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>:</p> <p>Given the closest watercourse is a minor non-perennial watercourse located 260 metres from the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.</p>	Not likely to be at variance	No
<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>:</p> <p>The mapped soils are highly susceptible to wind erosion and subsurface acidification. Noting the extent of the application area, 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>:</p> <p>Given no watercourses are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (j)</u>: “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</p> <p><u>Assessment</u>:</p> <p>The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.</p> <p>Given no watercourses are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.</p>	Not likely to be at variance	No

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.

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 D. Photographs of the vegetation





Appendix E. Sources of information

E.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)
- 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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