GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10241/1
Permit Holder:	Shire of Manjimup
Duration of Permit:	From 6 October 2023 to 6 October 2033

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 road widening.

2. Land on which clearing is to be done

Channybearup Road Reserve (PIN 11597041)

3. Clearing authorised

The permit holder must not clear more than 0.02 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 6 October 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 activities in a slow, progressive manner 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. Vegetation management – revegetation

The permit holder must, within 24 months of undertaking clearing authorised under this permit:

(a) undertake deliberate *planting* of at least six (6) native marri trees (*Corymbia calophylla*) within Channybearup Road Reserve (PIN 11597041)

(b) ensure only *local provenance* propagating material of *Corymbia calophylla* is used;

(c) ensure *planting* is undertaken at the *optimal time*;

(d) ensure *plantings* are of a suitable size of at least one metre in height;

(e) undertake weed control and watering of *plantings* for at least three years post planting;

(f) the permit holder must, within 24 months of planting the native marri trees in accordance with condition 8(a) of this permit;

(i) engage an *environmental specialist* to make a determination that at least six (6) native marri trees will survive; and

(ii) if the determination made by the *environmental specialist* under condition 8(f)(i) that at least six (6) native marri trees will not survive, the permit holder must *plant* additional native marri trees that will result in at least six (6) native marri trees persisting within Channybearup Road Reserve (PIN 11597041).

(g) where additional *planting* of native marri trees is undertaken in accordance with condition 8(f)(ii), the permit holder must repeat the activities required by condition 8(b), 8(c), 8(d) and 8(e) of this permit.

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 System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 5; and (f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 6.
2.	In relation to vegetation management - revegetation	(a) revegetation activities undertaken in accordance with condition 8 of this permit including: (b) the date that revegetation activities commenced; (c) the number of plantings (d) the species planted, (e) weed control and watering activities undertaken; (f) determination by an environmental specialist; (g) the date and activities undertaken where additional planting is required.

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
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
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 *Phytophthora* species on native vegetation.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	*Environmental Protection Act 1986* (WA)
environmental specialist	Means a person who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit, or who is approved by the CEO as a suitable environmental specialist
fill	means material used to increase the ground level, or to fill a depression.
local provenance	means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same Interim Biogeographic Regionalisation for Australia (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.
optimal time	means the period from May to July for undertaking planting
planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species
revegetate/ed/ion	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.
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

13 September 2023

Schedule 1

Plan 10241/1

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

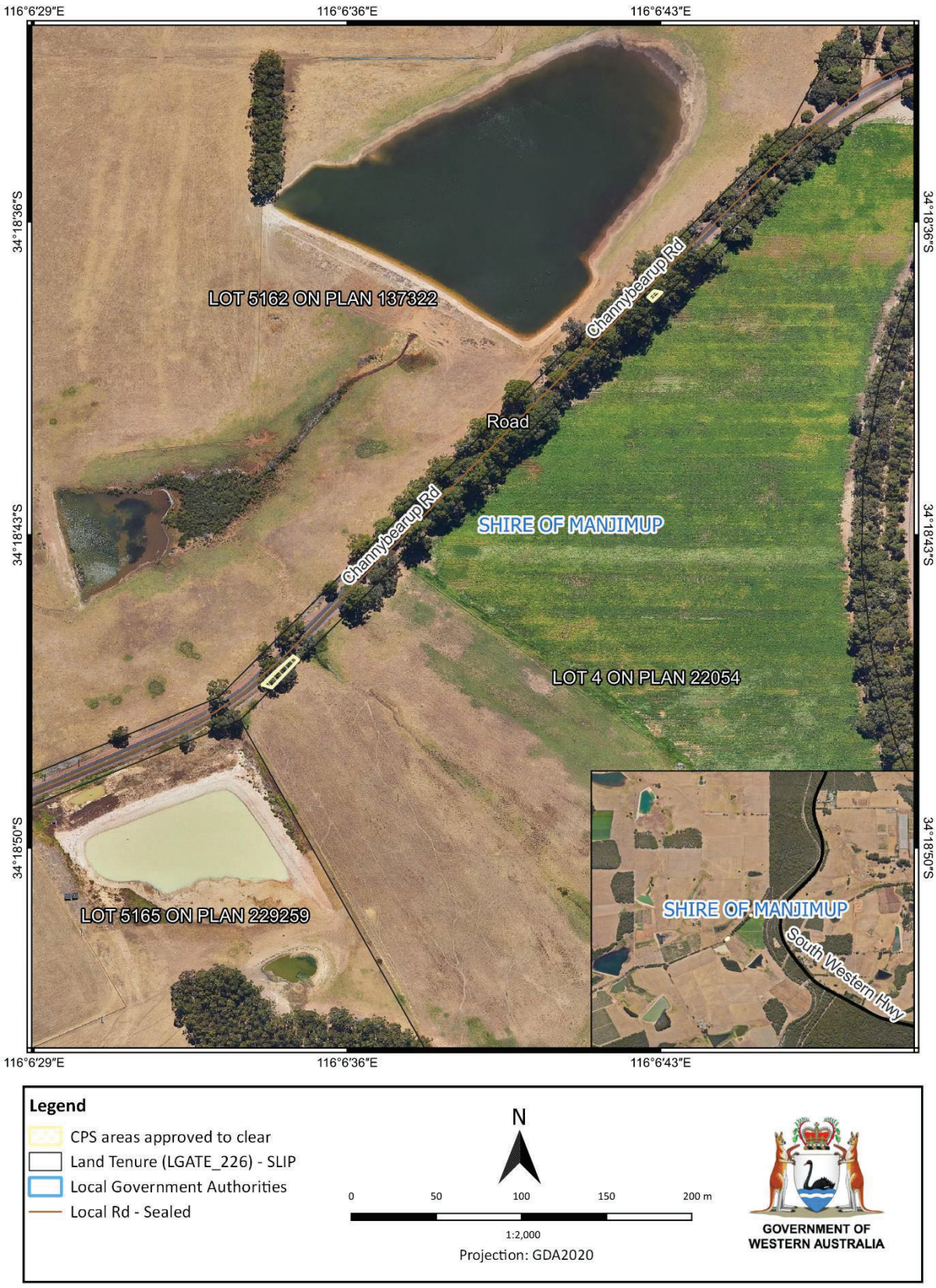

Figure 1: Map of the boundary of the area within which clearing may occur

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10241/1
Permit type:	Purpose permit
Applicant name:	Shire of Manjimup
Application received:	21 June 2023
Application area:	0.02 hectares of native vegetation
Purpose of clearing:	Road widening
Method of clearing:	Mechanical
Property:	Channybearup Road Reserve (PIN 11597041)
Location (LGA area/s):	Shire of Manjimup
Localities (suburb/s):	Diamond Tree

1.2. Description of clearing activities

The vegetation proposed to be cleared is 0.02 hectares of native vegetation across two areas for the purpose of road widening and removal of dangerous trees and trees within the drain line (see Figure 1, Section 1.5). The clearing comprises two Karri trees and up to three marri trees.

1.3. Decision on application

Decision:	Granted
Decision date:	13 September 2023
Decision area:	0.02 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 F.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 Delegated Officer also took into consideration the purpose of the clearing, which includes the removal of dangerous trees.

The assessment identified that the proposed clearing may result in:

- the loss of native vegetation that is suitable foraging habitat for all three threatened black cockatoo species;
- 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 environmental values.

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 six marri trees in the Channybearup Road Reserve (PIN 11597041)

1.5. Site map

Figure 1 Map of the application area

The areas cross-hatched yellow indicates the areas 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)
- *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

Evidence was submitted by the applicant, demonstrating that only high-risk trees would be removed with the majority of trees retained through the use of kerbing and signage (Shire of Manjimup, 2023a).

The department's assessment identified that the proposed clearing included the removal of three marri (*Corymbia calophylla*) trees which are a primary foraging resource for all three threatened black cockatoo species. Based on the above, the Shire was requested to revegetate to mitigate the impact of clearing. The Shire of Manjimup has committed to replanting six *Corymbia calophylla* trees within the Channybearup Road Reserve (Shire of Manjimup, 2023b).

The Delegated Officer was satisfied that the applicant has undertaken reasonable 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 B) 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 C) identified that the impacts of the proposed clearing present a risk to biological values (fauna). 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 (a) and (b)

Assessment

According to available databases, 22 conservation significant fauna are recorded in the local area (10 kilometre radius). The closest record is the forest red-tailed black cockatoo, recorded approximately 170 metres from the application area. Five conservation significant fauna are found in the same vegetation and habitat type as the application area, these are:

- *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo) - Vulnerable
- *Zanda baudinii* (Baudin's cockatoo) - Endangered
- *Zanda latirostris* (Carnaby's cockatoo) - Endangered
- *Phascogale tapoatafa wambenger* (south-western brush-tailed phascogale) – Conservation interest
- *Pseudocheirus occidentalis* (Western ringtail possum) – Critically Endangered

Black cockatoos

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 distribution of all three black cockatoo species.

Based on the photos of the application area supplied by the applicant, the trees proposed to be cleared are not of suitable diameter at breast height to develop a nest hollow (Shire of Manjimup, 2023a). The nearest confirmed breeding location for black cockatoos is located 23 kilometres from the application area.

Black cockatoo night roosts are usually located in the tallest trees of an area, and in close proximity to both a food supply and surface water (Commonwealth of Australia, 2012). There are two known black cockatoo roosting sites within the local area, with the closest 7.9 kilometres from the application area. Based on the estimated DBH of the trees proposed to be cleared, it is assumed that other vegetation within the local area, including within the DBCA managed estate, is more likely to provide roosting habitat.

Black cockatoos usually forage within 6 kilometres of a night roost and while the closest black cockatoo roosting site is 7.9 kilometres from the application area, marri trees are considered to be a primary foraging source and karri as a secondary foraging source for Black cockatoos (Commonwealth of Australia, 2022). This variable range indicates large areas of foraging habitat are required to support black cockatoo populations. Cumulative impacts of the loss of remnant vegetation restrict the availability of food sources for black cockatoos (Commonwealth of Australia, 2022). The revised referral guidelines identifies that any native vegetation that is used for foraging by black cockatoos at any time is important for the species recovery. Given the above, a total of 0.02 hectares, which includes up to three marri trees, is proposed to be cleared which could be used as foraging habitat for Black cockatoos.

Western Ringtail Possum

The Western Ringtail possum (WRP) is a small arboreal marsupial, listed as Critically Endangered under the BC Act (DPaW, 2017). The application area is within the Southern Forest Management zone for the WRP, and as such the WRP could be managed with the same priority as afforded to this management zone (DPAW, 2017). Populations of the WRP in the southern forest management zone include those recorded from karri (*Eucalyptus diversicolor*) forests from Northcliffe to west of Manjimup (DPAW, 2017). The possums almost exclusively consume the dominant or co-dominant upper and midstorey myrtaceous plants, the peppermint, marri and jarrah. Tree hollows are also important as diurnal resting sites. Habitat critical to the survival of the WRP comprises forests with limited anthropogenic disturbance (unlogged or lightly logged, and a low intensity and low frequency fire history) that are intensively fox baited and have low incidents of fragmentation (DPAW, 2017). Dense midstorey and/or canopy vegetation providing sufficient connectivity for arboreal travel is an important determinant of WRP habitat quality where introduced predators are present (Jones et al., 1994).

According to available databases, the WRP has 121 records in the local area, with the closest 780 metres from the application area in the nearby DBCA Timber Reserve. Based on the photographs provided by the applicant (see Appendix E), there is no evidence that the trees possess suitable hollows, while the application area has high anthropogenic disturbance along the road reserve and no midstorey to provide high quality habitat for the WRP. Given the above, the application area is unlikely to provide significant habitat to the WRP. However, the canopy cover along the road reserve may provide sufficient connectivity for the WRP to traverse through the application area to the nearby conservation areas in the region. Therefore, while the WRP may range through the application area, they are unlikely to be significantly impacted by the proposed clearing and slow, directional clearing will mitigate impacts to any individuals present at the time of clearing.

South-Western Brush-Tailed Phascogale

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, 2012). According to available databases, the south-western brush-tailed phascogale has 45 records within the local area with the closest 880 metres from the application area close to the DBCA State Forest. As with the Western Ringtail possum, the vegetation within the roadside corridor may provide suitable habitat for the south-western brush-tailed phascogale and contribute to the linkage between the conservation areas in the region. While the south-western brush-tailed phascogale may range through the application area, they are unlikely to be significantly impacted by the proposed clearing and slow, directional clearing will mitigate impacts to any individuals present at the time of clearing.

Ecological linkage

The application area is part of a roadside conservation area developed by the roadside conservation committee between 1996 and 2004 to support native vegetation conservation in local government areas and provide ecological

linkages in a fragmented landscape. The vegetation within the application area is also connected to the south-west regional ecological linkage through the roadside corridor that connects multiple larger conservation areas in the local area. The small scale of clearing proposed is unlikely to significantly impact ecological linkage function at a landscape level, noting that native vegetation will remain within the road reserve.

Conclusion
Based on the above assessment, the proposed clearing may result in the loss of up to three marri trees which provide suitable foraging habitat for the Black cockatoos. The proposed revegetation of six marri trees within the Channybearup Road Reserve is deemed to adequately counterbalance the residual impacts of the proposed clearing.

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

- avoid, minimise and reduce impacts and extent of clearing
- slow, directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity
- vegetation management for revegetation of six marri trees in the Channybearup Road Reserve
- weed and dieback management

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). It also falls within the Zone D Warren River Water Reserve surface water area and the Lefroy Brook Catchment Area as proclaimed under the *Country Areas Water Supply Act 1947* (CAWS Act).

DWER's Water Source Protection Planning branch and advised that no water licence or permit would be required to undertake the proposed clearing under the CAWS act (DWER, 2023a, b). The clearing is recommended to be consistent with best management practices to protect the water quality. These guidelines include:

- WQPN 10: *Contaminant spills – emergency response plan*
- WQPN 44: *Roads near sensitive water resources*
- Roads to reuse: Product specification – recycled road base and recycled drainage rock

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

End

Appendix A. Additional information provided by applicant

Summary of comments	Consideration of comment
Mitigation planting of six marri trees agreed to by the Shire (Shire of Manjimup, 2023b)	The Shire of Manjimup agreed to plant six marri trees within the Channybearup Road Reserve

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 the assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix C.

Characteristic	Details
Local context	The trees within the road reserve proposed to be cleared are located within the intensive land use zone of Western Australia. The application area is surrounded by agriculture. The proposed clearing area contributes to a linkage function along the road. Aerial imagery indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 47 per cent of the original native vegetation cover.
Ecological linkage	The application area is in a roadside conservation area and is connected to the south-west regional ecological linkage. The small scale of clearing proposed is unlikely to significantly impact ecological linkage function at a landscape level, noting that native vegetation will remain within the road reserve.
Conservation areas	The application area is approximately 310 metres from a DBCA legislated tenure timber reserve.
Vegetation description	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of karri and marri trees over weeds. Representative photos are available in Appendix E. This is partially consistent with the mapped vegetation type: • Pemberton (PM1) which is described as: tall open forest of *Eucalyptus diversicolor* with mixtures of *Corymbia calophylla* on valley slopes and low forest of *Agonis juniperina-Banksia seminuda-Callistachys lanceolata* on valley floors in the perhumid zone. The mapped vegetation type retains approximately 65 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in degraded (Keighery, 1994) condition. The full Keighery (1994) condition rating scale is provided in Appendix D. Representative photos are available in Appendix E.
Climate and landform	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). The elevation in the application area is gentle ranging from 235-250 metres and is on one landform the Pimelia Valleys System which is described as valleys, rises and low hills, in the west of the Warren-Denmark Southland with loamy gravel, loamy earth and loamy duplex in Karri-marri-jarrah forest.
Soil description	The soil is mapped as Pemberton Subsystem (Pimelia) which is described as 20 to 40 m deep. Flat to gently sloping floors. Few channels. 3 to 10 deg. Smooth slopes. Red or yellow gradational soils, not calcareous with some red duplex soils. Loamy

Characteristic	Details
	gravels, friable red/brown loamy earths, brown loamy earths and red deep loamy duplexes.
Land degradation risk	The one soil type has high subsurface acidification risk and low to medium risk for the remaining land degradation risks.
Waterbodies	The desktop assessment and aerial imagery indicated that two geomorphic wetlands and one minor non-perennial watercourse are within 100 metres of the application area.
Hydrogeography	The application area is within the Warren River and Tributaries surface water area proclaimed under the RIWI Act. The Zone D Warren River Water Reserve surface water area and the Lefroy Brook Catchment Area are proclaimed under the CAWSA Act.
Flora	Eight conservation significant flora records in local area, with the nearest record 7.09 kilometres from the application area. None of the conservation significant flora species have been recorded in the same soil or vegetation type as the application area.
Ecological communities	There is one priority ecological community in the local area, the Ridge Road Quartzite community almost 5 kilometres from the application area. The vegetation in the application area does not match the priority ecological community.
Fauna	There are 22 conservation significant fauna records in local area, with the nearest record of the forest red-tailed black cockatoo at 170 metres. Five conservation significant fauna are found in the same vegetation and habitat type as the application area. The application area is within the distribution range of all three black cockatoos. There are two black cockatoo roost sites in the local area, with the closest 7.9 kilometres from the application area. The closest black cockatoo breeding site is 23 kilometres away.

B.2. Fauna analysis table

Species name (common name)	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation 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]
Calyptorhynchus banksii naso (forest red-tailed black cockatoo)	VU	Y	Y	0.17	63	N/A
Zanda baudinii (Baudin's cockatoo)	EN	Y	Y	2.76	50	N/A
Zanda latirostris (Carnaby's cockatoo)	EN	Y	Y	3.86	16	N/A
Phascogale tapoatafa wambenger (south-western brush-tailed phascogale)	CD	Y	Y	0.88	45	N/A
Pseudocheirus occidentalis (Western ringtail possum)	CR	Y	Y	0.78	121	N/A

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

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared contains marri trees which are suitable foraging habitat for threatened black cockatoo species. Based on the	Not likely to be at variance	Yes *Refer to Section 3.2.1, above.*

Assessment against the clearing principles	Variance level	Is further consideration required?
completely degraded condition (Keighery, 1994), the native vegetation proposed to be cleared does not represent any conservation significant ecological communities, is unlikely to support threatened and priority taxa, and does not comprise a high level of biodiversity.		
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The application area is mapped within the modelled distribution of the three black cockatoo species. The marri trees are likely to provide foraging habitat for the black cockatoo species and unlikely to provide breeding and roosting habitat due to the size of the trees and the absence of visible signs of nesting and hollows. To mitigate the impact to foraging habitat, the Shire is proposing to plant marri trees within the road reserve.	At variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared is unlikely to contain habitat for threatened flora species listed under the BC Act.	Not likely to be at variance	No
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: The area proposed to be cleared does not contains species indicative of a threatened ecological community.	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of 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 part of an ecological linkage in the local area but due to the remaining native vegetation in the roadside corridor it is unlikely to be significantly impacted by the proposed clearing.	Not likely to be at variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: 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.	Not likely to be at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment:	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
While one minor watercourse and two geomorphic wetlands are recorded within 100 metres of the application area, the native vegetation is not considered to be riparian and so the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.		
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are highly susceptible to acid sulphate soils. Noting the extent of the application area, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	No
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: The application area is close to a watercourse, wetlands, and is within a Public Drinking Water Sources Areas and surface water area under the RIWI and CAWS Act. Given the limited extent of clearing, the proposed clearing is unlikely to impact surface or ground water quality.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: 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.	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.

Condition	Description
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 vegetation

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)
- 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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