



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 10198/1
File Number: DWERVT12663
Duration of Permit: From 2 October 2023 to 2 October 2030

PERMIT HOLDER

Shire of Denmark

LAND ON WHICH CLEARING IS TO BE DONE

Mount Shadforth Road Reserve (PIN 11247005), Denmark

AUTHORISED ACTIVITY

The permit holder must not clear more than 1 (one) native tree within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. Period within which clearing is authorised

The permit holder must not clear any *native vegetation* after 2 October 2025.

2. Weed and dieback management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

3. Rehabilitation – Mitigation planting

The permit holder must within 12 months of undertaking clearing authorised under this permit:

- (a) undertake deliberate *planting* of at least 2 (two) *Corymbia calophylla* (marri) trees within the area shaded red on Figure 1 of Schedule 1, by;
 - (i) ensuring only *local provenance* species are used;
 - (ii) ensuring *planting* is undertaken at the *optimal time*
- (b) undertake *weed* control and watering of *plantings* for at least three years post *planting*;
- (c) the permit holder must within 24 months of *planting* the 2 trees in accordance with condition 3(a) of this permit:
 - (i) engage an *environmental specialist* to make a determination that the 2 trees will survive.
 - (ii) if the determination made by the *environmental specialist* under condition 3(c)(i) is that 2 trees will not survive, the permit holder must *plant* additional trees that will result in 2 trees persisting within the area shaded red on Figure 1 of Schedule 1.
- (d) where additional *planting* of trees is undertaken in accordance with condition 3(c), the permit holder must repeat the activities required by condition 3(a), 3(b) and 3(c) of this permit.

4. 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 System (GPS) unit set to 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 minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 3.
2.	In relation to <i>planting</i> pursuant to condition 3	<ol style="list-style-type: none">(f) the date(s) on which <i>planting</i> was undertaken;(g) the boundaries of the area <i>planted</i> (recorded digitally as a shapefile);(h) a description of the <i>planting</i> activities undertaken,

No.	Relevant matter	Specifications
		<p>including actions taken to implement watering and <i>weed</i> control;</p> <p>(i) a copy of the <i>environmental specialist's</i> monitoring report and determination; and</p> <p>(j) a description of any remedial actions undertaken pursuant to conditions 3(c)(ii) and 3(d), where <i>the environmental specialist</i> indicates that planted trees will not survive.</p>

5. Reporting

The permit holder must provide to the *CEO* the records required under condition 4 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.
fill	means material used to increase the ground level, or to fill a depression.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
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.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
local provenance	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.

Term	Definition
optimal time	means the period from May to July/early August for undertaking planting.
planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
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

Meenu Vitarana
MANAGER
NATIVE VEGETATION REGULATION

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

8 September 2023

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 (yellow) and the boundary of the area within which specific conditions apply (red)



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10198/1
Permit type:	Area permit
Applicant name:	Shire of Denmark
Application received:	17 May 2023
Application area:	1 native tree
Purpose of clearing:	Road maintenance and hazard reduction
Method of clearing:	Mechanical
Property:	Mount Shadforth Road Reserve (PIN 11247005)
Location (LGA area/s):	Shire of Denmark
Localities (suburb/s):	Denmark

1.2. Description of clearing activities

The Shire of Denmark are proposing to clear one native tree (a marri tree) within Mount Shadforth Road Reserve which is damaging the pavement and is a potential hazard to road users (see Figure 1, Section 1.5).

1.3. Decision on application

Decision:	Granted
Decision date:	8 September 2023
Decision area:	1 native tree, 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 seven 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), photographs of the application area (see Appendix D), 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 proposed clearing is to improve road safety.

The assessment identified that the proposed clearing will result in:

- the loss of native vegetation that is suitable habitat for black cockatoos, and
- the potential introduction and spread of weeds 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 lead to an unacceptable risk to the environment.

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 to adjacent vegetation
- undertake planting of two trees within Lot 1093 on Deposited Plan 217468 (R45623)

1.5. Site map



Figure 1 Map of the application area

The area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit. The areas cross-hatched red indicate areas within which specific conditions apply.

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 polluter pays principle
- 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)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Planning and Development Act 2005* (WA) (P&D Act)

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy* (2011)

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)
- *Environmental Offsets Guidelines* (August 2014)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant demonstrating one tree is required to be cleared to enable maintenance of the road and address road safety concerns. No other vegetation will be damaged during the proposed clearing.

After consideration of avoidance and minimisation measures, it was determined that mitigation measures were required to counterbalance impacts to black cockatoo habitat. To mitigate the loss of one marri tree, the Shire has committed to planting two marri trees within Lot 1093 on Deposited Plan 217468 (R45623), within the vicinity of the application area.

Planting two native trees, which are suitable foraging species for black cockatoos, is considered sufficient to adequately mitigate the impacts of the proposed clearing on black cockatoo habitat. The adequacy of the proposed revegetation was determined using the Western Australian Environmental Offset Calculator and Guide.

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, and that residual impacts have been appropriately mitigated.

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). 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 Principle (b)

Assessment

Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is a *Corymbia calophylla* (marri) tree and occurs in an area that is in a Completely Degraded (Keighery, 1994) condition. Representative photographs are available in Appendix D.

The desktop assessment identified 77 conservation significant fauna species recorded within the local area (20-kilometre radius from the application area). In forming a view on the likelihood of each species occurring within the application area, the following was considered:

- the preferred habitat and vegetation types of the species,
- their recorded proximity to the application area, and
- date of record (See Appendix A.3).

The likelihood analysis identified three fauna species which may occur within or near the application area: *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo), *Zanda latirostris* (Carnaby's cockatoo) and *Zanda calyptorhynchus* (Baudin's cockatoo) (see Appendix A.3).

Black cockatoos

The application area is within the mapped distribution of forest red-tailed black cockatoo, Carnaby's cockatoo and Baudin's cockatoo. According to available databases, the closest confirmed breeding site is approximately 14 kilometres north of the application area. There are nine known black cockatoo roost sites within the local area, the closest is approximately five kilometres southwest of the application area. According to available datasets, potential black cockatoo feeding habitat is recorded within a 12-kilometre radius of the application area.

The referral guideline for threatened black cockatoo species, published by the Department of Agriculture, Water and the Environment (2022), specifies habitat critical for recovery of black cockatoos includes foraging habitat (including remnant patches of vegetation), night roosting habitat and nesting trees for breeding. Suitable breeding habitat for black cockatoos includes trees with a suitable nest hollow or of a suitable diameter at breast height (DBH) to develop a nest hollow (DAWE, 2022). Night roosting sites are often located near food and water resources.

The tree proposed to be cleared is a marri of 600-millimetre DBH. Marri is considered a suitable foraging species for black cockatoos (DAWE, 2022). As the application area is mapped near a minor nonperennial river, the tree is considered suitable roosting habitat for black cockatoos. Photographs of the tree indicate it is not likely to contain a hollow of suitable size for breeding by black cockatoos (see Appendix D). Additionally, as the tree is near the edge of the road, there is increased risk of car strike to young birds if breeding was to occur (DBCA, 2023). Given the above, the application area is considered to contain suitable foraging and roosting habitat for black cockatoos.

To mitigate the loss of one black cockatoo habitat tree, the Shire has proposed to plant two marri trees near the application area. The planting will ensure the clearing does not contribute to the decline of black cockatoo habitat within the local area. Further details are available in section 3.1.

Ecological linkage

The application area is mapped within Strategic Zone A of the South Coast Macro Corridor Network. The Macro Corridor Network links native vegetation along major river systems to protected areas and uncleared bushland at a regional scale (Wilkins, et al., 2006). The purpose of the corridor is to improve the long-term future of wildlife within national parks and nature reserves within the South Coast Region of Western Australia (Wilkins, et al., 2006). Given the application is to selectively clear one tree along the edge of a cleared road, the proposed clearing is unlikely to alter the functioning of the South Coast Macro Corridor.

Conclusion

Based on the above assessment, the proposed clearing will result in the removal of one tree considered suitable foraging and roosting habitat for black cockatoos. The planting of two marri trees near the application area is considered sufficient to ensure significant residual impacts of the proposed clearing do not remain (see section 3.1).

There is potential the proposed clearing activities could result in the introduction or spread of weeds and dieback into adjacent vegetation. It is considered that impacts to adjacent vegetation can be managed by requiring the applicant to undertake weed and dieback management.

The applicant may have notification responsibilities under the EPBC Act for impacts to Baudin's black cockatoo, Carnaby's cockatoo, and forest red-tailed black cockatoo and their habitats, as set out in the EPBC Act. The applicant has been advised to contact the federal Department of Water, Agriculture and the Environment (DAWE) 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:

- avoidance and minimisation to reduce the impacts and extent of clearing
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback to adjacent vegetation

- undertake planting of two trees within Lot 1093 on Deposited Plan 217468 (R45623)

3.3. Relevant planning instruments and other matters

Several Aboriginal sites of significance have been mapped within 400 metres of the application area. It is the permit holder's responsibility to comply with relevant legislation and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is part of a 1.2-hectare patch of native vegetation located along a road. The application area is in the intensive land use zone of Western Australia and is surrounded by areas cleared for residential use.</p> <p>Spatial data indicates the local area (20-kilometre radius from the centre of the area proposed to be cleared) retains approximately 62.94 per cent of the original native vegetation cover.</p>
Ecological linkage	The application area is mapped within Strategic Zone A of the South Coast Macro Corridor ecological linkage.
Conservation areas	The application area does not intersect a mapped conservation area. The closest mapped conservation area is McLean Road Nature Reserve (R 35621) approximately 1.2 kilometres northwest of the application area.
Vegetation description	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is a <i>Corymbia calophylla</i> (marri) tree. Representative photos are available in Appendix D.</p> <p>This is broadly consistent with the mapped vegetation type:</p> <ul style="list-style-type: none"> Redmond Siltstone Plain (Trent) (271), which is described as woodland of <i>Allocasuarina fraseriana</i> - <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Banksia grandis</i> with some <i>Corymbia calophylla</i> on low rises of sedimentary rocks in the perhumid zone (Shepherd et al, 2001). <p><i>The mapped vegetation type retains approximately 78.79 per cent of the original extent (Government of Western Australia, 2019).</i></p>
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"> 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 C. Representative photographs are available in Appendix D.</p>
Climate and landform	The average annual rainfall received over the application area from 1991 to 2020 is 1000 to 1500 millimetres (Commonwealth of Australia, 2021). The application area is at an altitude of 10 - 15 meters above sea level.
Soil description	The soil is mapped as South Coast and hinterland landforms and soils, described as flat topped hills; <40 m relief; gently sloping flanks. Gravelly yellow duplex soils and laterite on crests: Jarrah-Marri forest. Leached sands with iron pan on flanks; Jarrah-Sheoak woodland.
Land degradation risk	The mapped soils are highly susceptible to wind erosion, waterlogging, water repellence, subsurface acidification and phosphorous export (DPIRD, 2019).
Waterbodies	The desktop assessment and aerial imagery indicate no waterbodies transect the area proposed to be cleared. The nearest watercourse is Millars Creek, a nonperennial minor river approximately 50 metres north of the application area.
Hydrogeography	The application area is within the Warren - Denmark hydrological zone and within the Wilson Inlet – Denmark River catchment. The application area is not within an area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act) or protected under the <i>Country Water and Supply Act 1917</i> (CAWS Act). The groundwater salinity level is mapped as 500-1000 milligrams per litre.
Flora	The desktop assessment identified 76 conservation significant flora species within the local area which comprises of seven threatened and 69 priority flora taxa. The nearest

Characteristic	Details
	record is the Priority 3 <i>Borya longiscapa</i> , approximately 500 metres northeast of the application area.
Ecological communities	No conservation significant ecological communities are mapped over the application area. The closest mapped threatened ecological community is the Mount Lindesay – Little Lindesay Vegetation Complex, located approximately 11.5 kilometres north of the application area.
Fauna	<p>The desktop assessment identified 77 conservation significant fauna species in the local area. The closest record is a <i>Pandion cristatus</i> (eastern osprey) recorded 100 metres east of the application area.</p> <p>The application area is mapped within Baudin’s cockatoo, Carnaby’s cockatoo and forest red-tailed black cockatoo known distribution zones. There are nine known black cockatoo roost sites within the local area, the closest is approximately five kilometres southwest of the application area. The closest confirmed breeding site is approximately 14 kilometres north of the application area.</p>

A.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*					
Warren	833,985.56	659,432.21	79.07	558,485.38	66.97
Vegetation complex**					
Redmond Siltstone Plain Trent (271)	6,413.91	5,053.27	78.79	4,125.65	65.55
Local area					
20km radius	93,739.82	59,002.55	62.94	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

A.3. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)
<i>Zanda latirostris</i> (Carnaby’s cockatoo)	EN	Y	Y	0.24
<i>Zanda calyptorhynchus</i> (Baudin’s cockatoo)	EN	Y	Y	0.55
<i>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo)	VU	Y	Y	1.02

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> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u> Given the extent and condition of the vegetation proposed to be cleared, it is unlikely to comprise a high level of biodiversity. The application area does not contain suitable habitat for conservation significant ecological communities or flora.</p>	Not likely to be at variance	No.
<p><u>Principle (b):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.”</i></p> <p><u>Assessment:</u> The application area contains habitat for conservation significant fauna and is part of a mapped ecological linkage.</p>	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> The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act. The application area is highly degraded with little to no native understorey present.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.”</i></p> <p><u>Assessment:</u> The area proposed to be cleared does not contain species that can indicate a threatened ecological community.</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> The extent of native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia.</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> Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of any 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> Given no water courses or wetlands are recorded within 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

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (g):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</p> <p><u>Assessment:</u> The mapped soils are highly susceptible to wind erosion, waterlogging, water repellence, subsurface acidification and phosphorous export (DPIRD, 2019). Noting the extent and condition 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> “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.”</p> <p><u>Assessment:</u> Given no water courses, wetlands or Public Drinking Water Source Areas 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
<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> The soils mapped over the application area indicate the proposed clearing is unlikely to contribute to increased incidence or intensity of flooding. Given no natural or permanent water courses or wetlands 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.

Condition	Description
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



Figure 2. Marri tree proposed to be cleared in clearing permit application CPS 10198/1 (Shire of Denmark, 2023).



Figure 3. Tree proposed to be cleared (right). Image captured August 2022 (Google Maps, 2023).

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)

E.2. References

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