GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9392/1

File Number: DWERVT8462

Duration of Permit: From 11 November 2021 to 11 November 2023

PERMIT HOLDER

Shire of Denmark

LAND ON WHICH CLEARING IS TO BE DONE

Lights Road Reserve (PIN 11746689), Ocean Beach

AUTHORISED ACTIVITY

The permit holder must not clear more than 2 native trees within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

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

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

(a) avoid the clearing of *native vegetation*;

(b) minimise the amount of native vegetation to be cleared; and

(c) reduce the impact of clearing on any environmental value.

2. Weed and dieback management

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

(a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

(b) ensure that no known *dieback* or *weed*-affected soil, mulch, fill, or other material is brought into the area to be cleared; and

(c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

3. Records that must be kept

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

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the number of native trees cleared; (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; and (f) actions taken to minimise the risk of the introduction and spread of weeds and dieback in accordance with condition 2.

4. Reporting

The permit holder must provide to the *CEO* the records required under condition 3 of this permit when requested by the *CEO*.

DEFINITIONS

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

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *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)
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
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

Jessica Burton
A/MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

14 October 2021

SCHEDULE 1

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

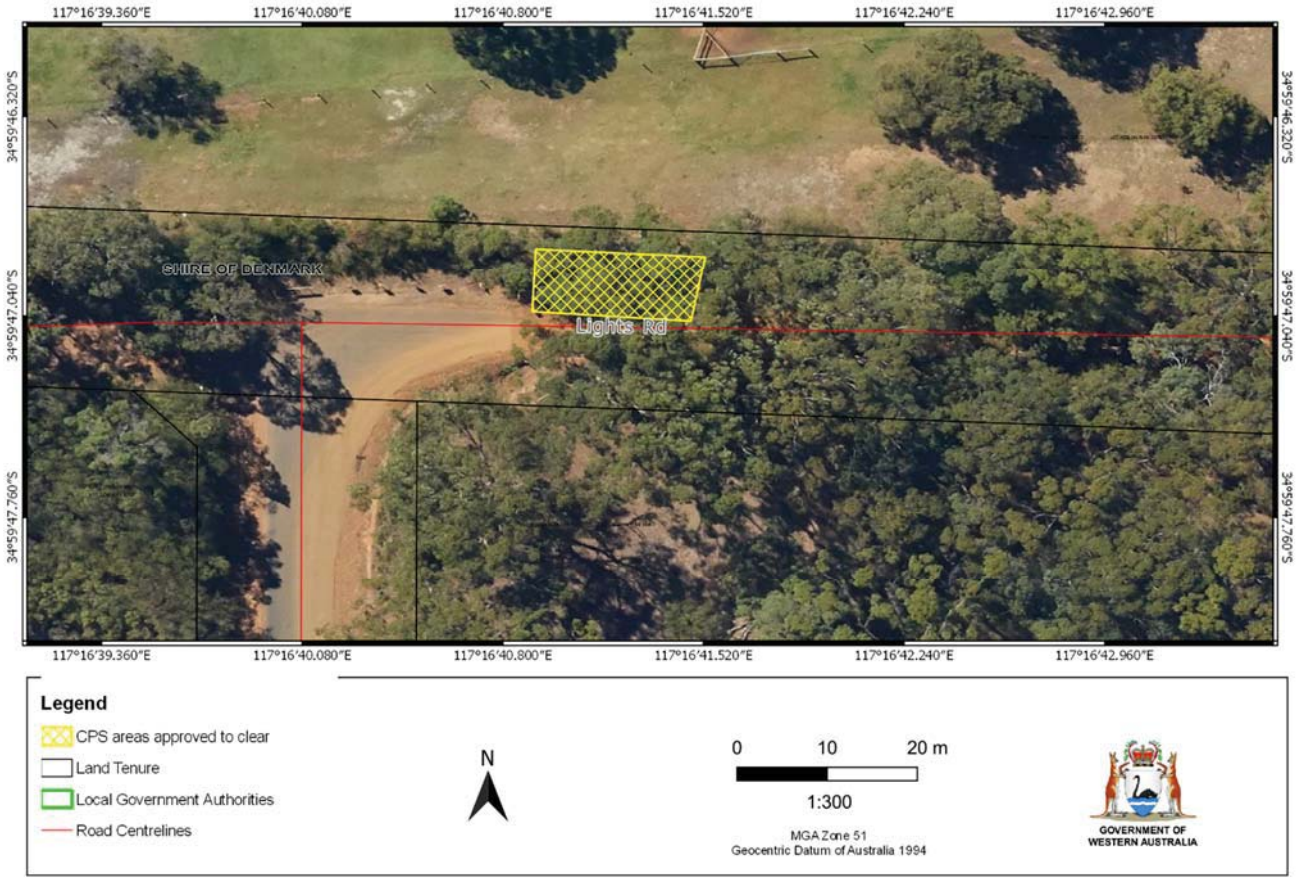

Figure 1: Map of the boundary of the area within which clearing may occur

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 9392/1
Permit type:	Area permit
Applicant name:	Shire of Denmark
Application received:	17 August 2021
Application area:	2 native trees
Purpose of clearing:	Road alignment
Method of clearing:	Mechanical
Property:	Lights Road Reserve PIN 11746689
Location (LGA area/s):	Shire of Denmark
Localities (suburb/s):	Ocean Beach

1.2. Description of clearing activities

The application area is located at the intersection of Lights Road and Lights Road West. The intersection has been identified as a blackspot and requires realignment. Removal of a mature Karri (*Eucalyptus diversicolor*) and one mature Sheoak (*Allocasuarina decussata*) is proposed. The trees proposed to be cleared are part of a contagious track of vegetation within the Lights Road Reserve.

1.3. Decision on application

Decision:	Granted
Decision date:	14 October 2021
Decision area:	Two trees 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 14 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), information provided by the applicant, 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 importance of road safety for which this clearing is proposed.

In particular, the Delegated Officer has considered the following:

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- The area may contain suitable habitat for conservation significant fauna including the Forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*), Baudin's black cockatoo (*Calyptorhynchus baudinii*), Carnaby's black cockatoo (*Calyptorhynchus latirostris*), Peregrine falcon *(Falco peregrinus*), South-western brush-tailed phascogale (*Phascogale tapoatafa wambenger*), and Western Australian pill millipede (*Cynotelopus notabilis*). Given the limited extent of clearing and the condition of the large tracks of intact vegetation surrounding it, the proposed clearing is unlikely to impact significant habitat for the fauna listed above.
- The Karri (*Euclayptus diversicolor*) and Sheoak (*Allocasuarina decussata*) trees proposed to be cleared are part of a contagious track of vegetation on the road reserve. Clearing may introduce and / or spread weeds and dieback to the adjacent vegetation. The likelihood of this impact can be minimised and mitigated by applying weed and dieback management measures.

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 appreciable long-term adverse impacts on fauna and remnant vegetation.

The Delegated Officer decided to grant a clearing permit subject to a condition to take hygiene steps to minimise the risk of the introduction and spread of weeds.

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1.5. Site map

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Figure 1 Map of the application area

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

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2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

The key guidance documents which inform this assessment are:

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

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The trees proposed to be cleared are part of a vegetation track situated on a road intersection that has been assessed as a road blackspot and in need for a realignment (Shire of Denmark, 2021a). The applicant has determined to limit the clearing extent to the two trees identified as necessary to be removed to improve road safety. Prior to making the application, the applicant had conducted an inspection on the trees to ensure that no significant environmental values would be adversely impacted (Shire of Denmark, 2021b).

Given the minimal extent of the proposed clearing, it is considered that no other practicable avoidance measures could be implemented within the clearing footprint. The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise clearing.

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 may present a risk to adjacent remnant vegetation and conservation significant 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 and Remnant Vegetation- Clearing Principles (b) and (e)

Assessment:
Seventy-five conservation significant fauna have been recorded within the local area. None of the fauna occurs within the application area. The fauna recorded within 20 km radius from the application area include marine, aquatic, and coastal species which are unlikely to occur within the application area. Many of these records are also historical. It is not considered for the application area to comprise significant habitat for the majority of the fauna species recorded within the local area based on the limited habitat values present and small extent of the proposed clearing area.

Peregrine falcon *(Falco peregrinus*) may utilise the area in its transit. Given the small extent of clearing, the large movement range of the Falcon, and the availability of the large tracks of vegetation nearby, the application area is unlikely to comprise a significant habitat for this fauna.

The Critically Endangered South-western brush-tailed phascogale (*Phascogale tapoatafa wambenger*) is known to inhabit dry sclerophyll forest and open woodlands with hollow bearing trees. The type and conditions of the

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vegetation, particularly the two trees proposed to be cleared, do not exhibit these characteristic and is unlikely to comprise habitat for the Brush-tailed phascogale.

The area may provide habitat for the Endangered Western Australian pill millipede (*Cynotelopus notabilis*). The invertebrate species is known to occur under deep leaf litter and logs in the wet karri country such as that of the application area. Most records of Pill millipede in the local area were made from 2006 and from within densely vegetated karri woodlands, including the William Bay National Park, approximately 2.5 kilometres from the application area. In the absence of an invertebrate survey, the Pill millipede's occurrence in the application area cannot be ruled out. The Pill millipede, however, has a very low vagility and lacks dispersive stage (Main, Harvey and Waldock, 2002) that the distribution of this fauna is highly localised and likely to concentrate to the recorded sites. Given the distance of records from the application area and the fauna's restrictive range, it is considered unlikely that the Pill millipede would disperse from the woodlands to the application area. In the event individual millipedes exist in the application area at the time of clearing, given the limited extent of clearing, it is considered that the impact of clearing on this invertebrate is unlikely to be significant.

Of the vertebrate fauna recorded, the Forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*) (listed as Vulnerable under the BC Act and EPBC Act), the Baudin's black cockatoo (*Calyptorhynchus baudinii*) (listed as Endangered under the BC Act and EPBC Act) and the Carnaby's black cockatoo (*Calyptorhynchus latirostris*) (listed as Endangered under the BC Act and EPBC Act), together referred to as Black cockatoos, are the most likely to be present within the application area and surround. The application area is within the mapped distribution area for all three Black cockatoo species.

Black cockatoo habitat can be considered in terms of breeding habitat, night roosting habitat, and foraging habitat. Black cockatoos will generally forage up to 12 kilometres from an active breeding site (DPaW 2013). Following breeding, they will flock in search of food, usually within six kilometres of a night roost (DPaW 2013) but may range up to 20 kilometres. 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.

According to spatial data, within the local area, seven roosting sites have been recorded, with the nearest site located approximately 3.2 km northeast of the application area. Two known White-tailed black cockatoo breeding sites are located approximately 4 km northeast of the application area, and one known Red-tailed Black cockatoo breeding site is located approximately 19 km north of the application area, within the Mount Lindsey National Park.

Photographs of the vegetation within the application area indicate that there may be vegetation that can be utilised by Black cockatoos for foraging and roosting purposes (Applicant 2021a). A field inspection by the Sustainability Officer of the Shire of Denmark, reported the absence of hollows from the trees proposed to be cleared (Shire of Denmark, 2021b).

The *Eucalyptus diversicolor* (karri), *Corymbia calophylla* (marri), and Banksia trees comprising the large extent of remnant vegetation within the local area may provide suitable foraging habitat for Black cockatoos. Given the small extent of clearing in comparison to the large extent of potential habitat in the surrounding remnant vegetation (see Figure 2), the area proposed to be cleared is unlikely to represent significant foraging or roosting habitat for Black cockatoos.

The two trees proposed to be cleared are situated on the edge of a patch of remnant vegetation in a local area that retains approximately 81% of its original vegetation cover. Removal of these trees is unlikely to result in the significant reduction to the vegetation cover or loss of habitat vegetation within the local context. Notwithstanding this, clearing may introduce and spread weeds and dieback to adjacent intact vegetation.

Conclusion:
Based on the above assessment, the proposed clearing is unlikely to result in significant impact to suitable habitat for Black cockatoos or other fauna species that have been recorded within the local area. The potential impact of clearing on the adjacent remnant vegetation due to the introduction and spread of weeds and dieback can be mitigated and minimised by applying appropriate management measures.

Conditions:
The permit holder is required to take:

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

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Figure 2. Remnant vegetation surround the application area

3.3. Relevant planning instruments and other matters

The application area occurs within the Lights Road Reserve and is managed by the applicant (the Shire of Denmark).

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.

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Appendix A. Site characteristics

A.1. Site characteristics

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Characteristic	Details
Local context	The area proposed to be cleared is part of road reserve vegetation in the intensive land use zone of Western Australia. It is surrounded by rural dwellings, farms, and large tracks of native vegetation. Spatial data indicates the local area (20-kilometre radius from the centre of the area proposed to be cleared) retains approximately 81 per cent of the original native vegetation cover.
Ecological linkage	The application area occurs within the mapped Strategic Zone A of the South Coast Macro Corridor. The application area, however, does not comprise a significant ecological linkage.
Conservation areas	The application area is not located within any conservation areas. Several conservation areas are recorded within 20 km radius from the application area. The nearest one is William Bay National Park, located approximately 2.5 km to the southwest.
Vegetation description	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of Karri (*Eucalyptus diversicolor)*, Sheoak (*Allocasuarina decussata)* over sparse understorey vegetation. The vegetation surrounding the application area consists of by *E. diversicolor, A.decussata, C.calophylla, A.flexuosa, E.marginata subsp. marginata, E.brevistylis, C.calophylla, B.attenuata, B.grandis, Xylomelum occidentale* (Shire of Denmark, 2021b). Representative photos are available in Appendix D. This is consistent with the mapped Keystone complex which is described as open forest of *Eucalyptus marginata* subsp. Marginata, *Corymbia calophylla*, *Banksia grandis* on mild slopes of hills in perhumid zone and open forest to tall open forest of *Eucalyptus brevistylis* on slopes below outcrops in hyperhumid and perhumid zones. open forest of *Eucalyptus marginata*, *Corymbia calophylla*, *Banksia grandis*. The mapped Keystone complex retains approximately 89.81 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	The vegetation within the proposed clearing area is in Degraded to Good condition (Keighery, 1994). The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos and mapping are available in Appendix D.
Climate and landform	The application area is situated on a gentle slope (16%) at an elevation of 95m above sea level. Mean annual rainfall is 925.2mm, mean temperature ranges between 11.8 and 19.5ºC.
Soil description	The soil is mapped as the Keystone yellow duplex phase described as gravelly yellow duplex soils with Jarrah-Marri forest (254WhKYy).
Land degradation risk	The soils within the application area are mapped as having the following land degradation risks: • Subsurface acidification: H2: >70% of map unit has a high risk or presently acid • Nutrient export: H1: 50-70% of map unit has a high to extreme risk • Salinity: L1: <3% of map unit has moderate to high risk • Waterlogging: L1: <3% of map unit has moderate to high risk • Wind erosion: H1: 50-70% of map unit has a high to extreme risk • Water erosion: M1: 10-30% of map unit has a high to extreme risk • Flood risk: L1: <3% of map unit has moderate to high risk
Waterbodies	The desktop assessment and aerial imagery indicate that no water courses or wetlands occur within the application area.

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Characteristic	Details
Hydrogeography	The application area is within the Water-Denmark hydrological zone of Western Australia with groundwater salinity of 500-1000 mg/L (TDS).
Flora	Several conservation significant flora have been recorded within 20 km radius from the application area. None of the records occur within 1 km radius of the application area. No threatened flora is recorded within the application area and surround.
Ecological communities	No priority (PEC) or threatened ecological community (TEC) have been mapped within the vicinity of the application area. The nearest PEC / TEC is located approximately 5 km from the application area and is associated with a saltmarsh.
Fauna	Seventy-five conservation significant fauna have been recorded within 20 km of the application area, many of which are either historical, migratory and / or of marine origins. Black cockatoos have been recorded from within 2 km radius from the application area.

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	833,981.98	667,164.84	79.99	550,362.11	82.49
Vegetation complex					
Key Stone	15,012.58	13,482.12	89.80	12,332.76	82.15
Local area					
20 km radius	62,000	44,025	70	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

A.3. Flora analysis table

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]
Anthocercis sylvicola	3	N	Y	Y	2.59	1	N/A
Banksia serra	4	N	Y	Y	3.51	3	N/A
Drosera fimbriata	4	N	Y	Y	2.15	2	N/A
Eucalyptus virginea	4	N	Y	Y	2.72	2	N/A
Lambertia rariflora subsp. lutea	3	N	Y	Y	10.49	3	N/A
Netrostylis sp. Blackwood River	3	N	N	Y	5.51	1	N/A
Pleurophascum occidentale	4	N	Y	Y	2.52	1	N/A
Stylidium sp. Kordabup	1	N	N	Y	1.78	1	N/A
Thomasia quercifolia	4	N	N	Y	2.69	1	N/A

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

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A.4. 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)	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	6.46	13	N/A
Calyptorhynchus baudinii (Baudin's cockatoo)	EN	Y	Y	3.33	14	N/A
Calyptorhynchus latirostris (Carnaby's cockatoo)	EN	Y	Y	2.47	11	N/A
Calyptorhynchus sp. 'white-tailed black cockatoo' (White-tailed black cockatoo)	EN	Y	Y	3.74	49	N/A
Cynotelopus notabilis (Western Australian pill millipede)	EN	N	N	2.50	19	N/A
Falco peregrinus (Peregrine falcon)	OS	N	Y	6.01	1	N/A
Phascogale tapoatafa wambenger (south-western brush-tailed phascogale, wambenger)	CD	N	Y	3.89	5	N/A
Setonix brachyurus (quokka)	VU	N	Y	2.59	4	N/A

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

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A.5. Ecological community analysis table

Community name	Conservation status (State)	Conservation status (Commonwealth)	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)
Coastal *Melaleuca incana* / *Taxandria juniperina* Shrubland/Closed Forest	Priority 1	N/A	N	N	N	18.91	1
Melaleuca spathulata/ *Melaleuca viminea* Swamp Heath	Priority 1	N/A	N	N	N	17.35	11
Mount Lindesay - Little Lindesay Vegetation Complex	Endangered	N/A	N	N	N	15.59	2
Subtropical and Temperate Coastal Saltmarsh	Priority 3	Vulnerable	N	N	N	5.59	8

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

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Appendix B. Assessment against the clearing principles

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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 consists of two native trees and does not contain significant flora, fauna, habitats, or assemblages of plants.	Not likely to be at variance	No
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 area proposed to be cleared is within the mapped distribution of the Baudin's, Carnaby's and Forrest red-tailed Black cockatoos. A roosting site is recorded at approximately 3 km northeast of the application area. The trees proposed to be cleared do not contain hollows. No other conservation significant fauna recorded in the vicinity.	Not likely to be 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: No threatened and priority flora is recorded within 1 km radius from the application area. Assessment based on the available data on the types of soils and habitats of the recorded flora indicated that the application area is unlikely to contain habitat for 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 contain any threatened ecological communities nor the species that can indicate 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 the mapped vegetation type and 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 not considered to be part of a significant ecological linkage in the local area. However, clearing may introduce weeds and dieback to adjacent remnant vegetation.	Not likely to be at variance#	Yes *Refer to Section 3.2.1, above.*
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:	Not likely to be at variance#	No

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Assessment against the clearing principles	Variance level	Is further consideration required?
The nearest conservation area is the William Bay National Park, located 2.5 km southwest of the application area. Given the distance, the proposed clearing is not likely to have an impact on the environmental values of any conservation areas.		
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: The proposed clearing will not intercept any watercourses or wetland.	Not likely to be at variance#	No
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 mapped as susceptible to wind erosion, nutrient export, and subsurface acidification. Noting the extent and location 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 proposed clearing will not intercept any watercourses or groundwater table. It 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 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.

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Condition	Description
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.

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Appendix D. Photographs of the vegetation and Proponent's site inspection report (Source: Shire of Denmark, 2021a)

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Figure 2. Vegetation proposed to be removed consists of one Karri tree (upper right) and one Sheoak tree (upper left)

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Appendix E. Sources of information

E.1. GIS databases

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

- Aboriginal Heritage Places (DPLH-001)
- 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
- IBRA Vegetation Statistics
- Imagery
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- 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

Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.

Department of Agriculture, Water and the Environment (DAWE) (2021). *Calyptorhynchus latirostris - Carnaby's Cockatoo, Carnaby's Black-Cockatoo, Short-billed Black-Cockatoo.* Department of Agriculture, Water and the Environment, Canberra. Available from: http://www.environment.gov.au/sprat. Accessed September 2021.

Department of Environment and Conservation (DoEC) (2013). *Quokka (Setonix branchyurus) Recovery Plan.* Bentley, Western Australia.

Department of Environment Regulation (DER) (2013). *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.

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Department of Parks and Wildlife (DPAW). (2013). *Carnaby's Cockatoo (Calyptorhynchus latirostris) Recovery Plan.* Western Australian Department of Parks and Wildlife (Now the Department of Biodiversity, Conservation and Attractions). Perth. Western Australia.

Department of Primary Industries and Regional Development (DPIRD) (2019). *NRInfo Digital Mapping. Department of Primary Industries and Regional Development.* Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/ (accessed 30 June 2021).

Department of Water and Environmental Regulation (DWER) (2019). *Procedure: Native vegetation clearing permits*. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF.

Government of Western Australia (2019) *2018 South West Vegetation Complex Statistics. Current as of March 2019*. WA Department of Biodiversity, Conservation and Attractions, Perth, https://catalogue.data.wa.gov.au/dataset/dbca

Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Main, B.Y, Harvey,MS., and Waldock, JM (2002). The distribution of the Western Australian pill millipede, *Cynotelopus notabilis* Jeekel (Sphaerotheriidae). In the *Records of the Western Australian Museum* 20: 883-385.

Shire of Denmark (2021a) *Clearing permit application CPS 9392/1 and supporting document*. received 17 August 2021 (DWER Ref: DWERDT491102).

Shire of Denmark (2021b) *Environmental Impact Assessment Checklist No. SLK1.68 – dated 29/06/2021.* received 17 August 2021 (DWER Ref: DWERDT491102).

Threatened Species Scientific Committee (2018). *Conservation advice: Phascogale calura – red-tailed phascogale.* Department of Environment and Conservation, Canberra.

Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed on September 2021)