Native Vegetation Clearing Referral "Munglinup Beach Road Upgrades"

Site Inspection Report

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Shire of Esperance
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Introduction

The Shire of Esperance (SOE) has proposed to clear 0.519 ha of native vegetation located within Reserve 32337, East Munglinup for the purposes of widening and sealing Munglinup Beach Road. Munglinup Beach Road is currently a narrow gravel road providing access to Munglinup Beach and associated campgrounds. The current narrow road has significant safety issues due to the high use by caravans. Refer to Figure 1 for a map of the proposed area.

Map

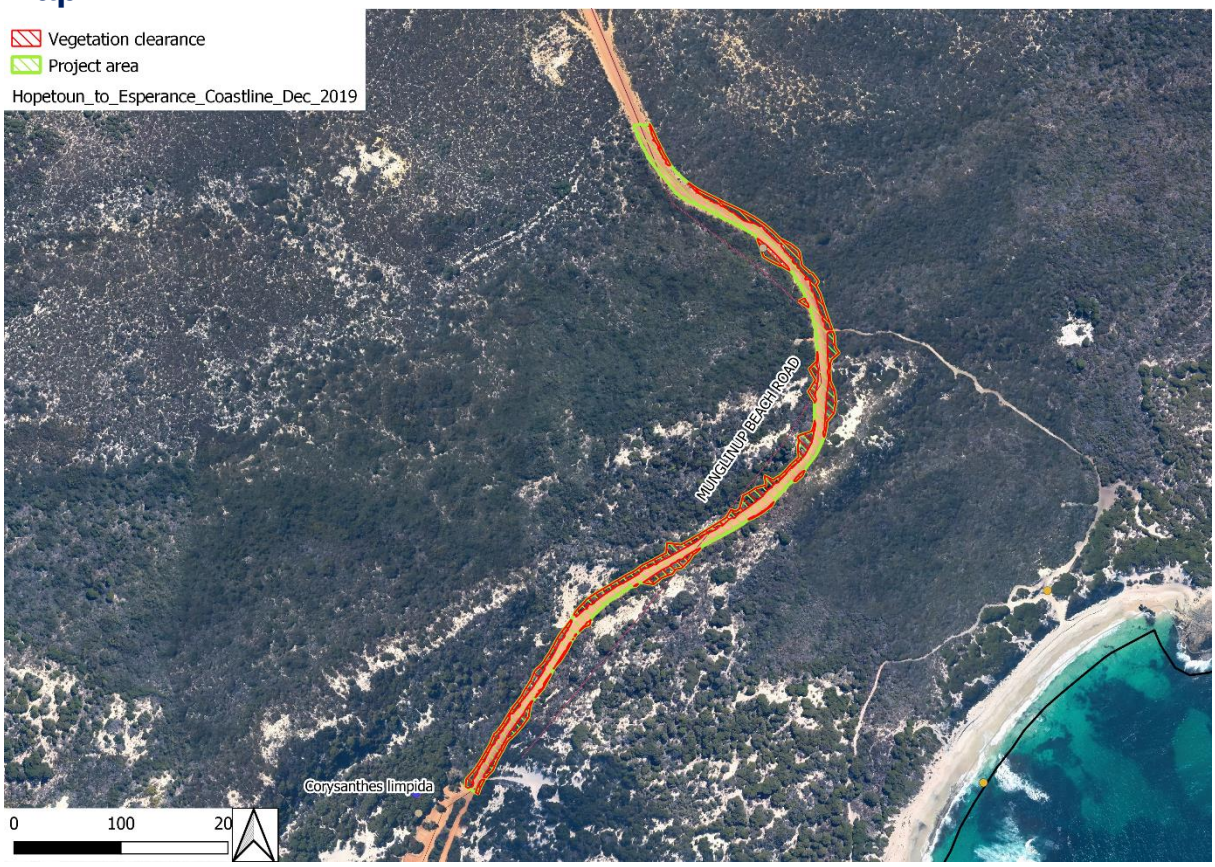


Figure 1. Location and vegetation to be cleared of proposed 'Munglinup Beach Road Upgrades' site. (A point within the site is 297280m E, 6248430m N, GDA94, Zone 51)

Desktop Summary

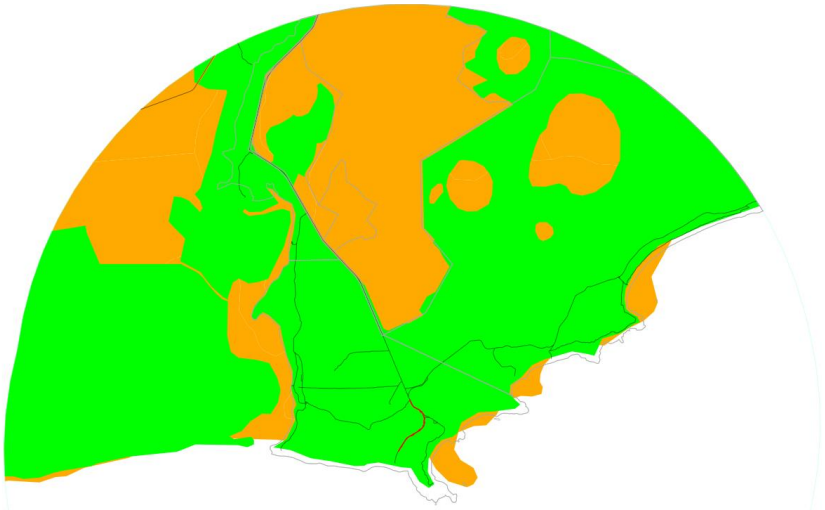
Prior to the site inspection, the Shire of Esperance's Desktop Environmental Impacts Spatial Interrogation Program (DEISIP) was utilised to conduct a comprehensive desktop search for an area encompassing a 20 km radius of the proposed 'Munglinup Beach Road Upgrades'. This program consults numerous Local, State and Federal government spatial data sets to provide valuable environmental, heritage and other relevant information required in the assessment of the project against the ten clearing principles for native vegetation, regulated under Schedule 5 of the *Environmental Protection Act 1986* (EPA 1986).

'Munglinup Beach Road Upgrades' is mapped as forming a component of one Beard Vegetation Association, namely Fanny Cove_42. This vegetation association is lightly cleared with 95% of its original extent remaining at all levels and is well represented in conservation estate with 45% of its pre-European extent in land protected for conservation.

Table 1. Vegetation associations within 'Munglinup Beach Road Upgrades' by percentage of pre-European extent remaining.

Vegetation Association	Fanny Cove_42
Description	Shrublands; mallee & acacia scrub on south coastal dunes
Pre-European extent remaining within the Shire of Esperance	94.87%
Pre-European extent remaining within Eastern Mallee/ Recherche IBRA Sub-region	95.56%
Pre- European extent in land protected for conservation	44.80%

Table 2. Desktop search results

Landform	Coastal dunes to 100 m in relief slopes vary from gently inclined to steep.
Soils	Calcareous shallow sand with associated calcareous deep sand and pale deep sand and minor bare rock.
Geology / Regolith	Quaternary sand deposits usually calcareous with headlands of Archean granite and gneiss.
Vegetation remaining within 5 km (%)	67.41% of vegetation remains within 5 km of the project.  Map of remnant vegetation within a 5 km buffer produced by DEISIP. Project is highlighted in red, remnant vegetation is in green and cleared vegetation is in orange, road centrelines are in black and cadastre boundaries are in grey.
Threatened and Priority Flora (Appendix 3)	8 PF and 3TF were recorded within 20 km of the project.
Threatened Ecological Communities	EPBC listed "Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia" was located 177 m from the project area.
Threatened and Priority Fauna (Appendix 4)	23 conservation listed species were recorded within 20 km of the Reserve.
Closest Conservation Reserve	590 m from Reserve 32339 'Lake Shaster Nature Reserve'

Aboriginal Heritage	No heritage sites were within the project area.

Site Inspection

A site inspection was conducted by Julie Waters (Environmental Coordinator) and Katherine Walkerden (Environmental Officer) of the Shire of Esperance on the 28/08/2024. The site was characterised by coastal sand dunes.

Approximately 0.519 ha of native vegetation was present within the project site, which was described during the field survey as scattered *Melaleuca lanceolata* over *Acacia cyclops* dominated mixed shrubland. This was consistent with the mapped Beard VA.

Vegetation condition varied between Good and Excellent condition (Keighery 1994), with the majority (0.435 ha) in Excellent condition. The primary cause of degradation observed to be afflicting the site was weed invasion with *Ehrharta villosa* (Pyp Grass) being the primary weed within the 'good' areas. Originally planted to assist in dune stabilization, this weed is particularly problematic in coastal dune ecosystems.

Quantifying vegetation condition:

- 0.453ha was in an Excellent condition
- 0.039ha was in a Very good condition
- 0.026ha was in a Good condition

Figure 2. Vegetation condition within proposed 'Munglinup Beach Road Upgrades' site.

The desktop survey mapped the EPBC Act listed TEC, 'Proteaceae Dominated Kwongkan Shrublands of the southeast coastal floristic province of Western Australia (Kwongkan)', as being 177 m from the

project area. Kwongkan TEC was present 100m to the north of the project area after the end of the coastal dune system. Vegetation within the project area contained two proteaceous species *Adenanthos cuneatus* and *Hakea nitida* in low proportions. However due to the fact that these were not dominant within the project area, the site could not be considered Kwongkan TEC.

A total of 46 native flora species were identified during the field survey, an additional 6 non-native species were recorded. Problematic environmental weeds observed within the proposed 'Munglinup Beach Road Upgrades' site area included *Ehrharta villosa* (Pyp Grass). This is a priority environment Weed in eh Shire of *Esperance's Environmental Weed Strategy 2009-2018* (Field, 2009). A full species list is presented in Table 1.

Corysanthes limpida (P4) was recorded on the desktop search as occurring 45 m from the project area. The survey was conducted during August to coincide with the flowering period of *Corysanthes limpida*. This known population was visited immediately prior to beginning the survey, the known population was in flower on the day of the survey. A small patch of orchid leaves consistent with *Corysanthes limpida* were detected several meters outside of the project area, there was no reproductive material on these plants and the species could not be determined. The plants were revisited on the 29th of September at which point there was still no reproductive material. The plants will not be impacted during by the project.

Figure 3. Photo of known population of *Corysanthes limpida* (P4). Photo taken by Katherine Walkerden on the 28/08/2024.

No other TF or PF identified in the desktop assessment were detected, and a post-survey likelihood of occurrence assessment indicated no species were likely to occur due to a lack of significant limitations in detectability or suitable habitat.

The desktop search identified a total of 23 conservation listed fauna species, the habitat requirements for these species were assessed against the vegetation at the site.

A record for Carnaby's cockatoo was present within the site, however given the lack of known food plants within the project area the vegetation was not suitable foraging habitat for the species.

A record for the Osprey (*Pandion haliaetus*) was 0.11 km from the project area, within the Munglinup Beach Campground. The nearby ocean, estuary and river provide large areas suitable hunting environments for the Osprey, there were large areas of large *Eucalyptus occidentalis* trees surrounding the Oldfield River providing suitable nesting and roosting habitat for the species. The vegetation within the project area did not provide suitable hunting or nesting habitat for the species.

A record of the Tammar Wallaby (P4) (*Notamacropus eugenii derbianus*) was 9.84 km from the project area. Habitat for this species is described as 'Low dense scrub vegetation for diurnal shelter, open grassy areas for feeding. Coastal scrub, heath, dry sclerophyll forest, and mallee and woodland thickets.' Vegetation within the project area is potentially suitable habitat for the species.

Table 1. Incidental list of flora species present within proposed 'Munglinup Beach Road Upgrades'

Family	Species	Invasive
Aizoaceae	*Tetragona implexicoma*	
Asparagaceae	*Thysanotus patersonii*	
Asteraceae	*Arctotheca calendula*	X
Asteraceae	*Hypochaeris radicata*	X
Asteraceae	*Olearia axillaris*	
Asteraceae	*Senecio pinnatifolius*	
Aizoaceae	*Carpobrotus virescens*	
Chenopodiaceae	*Enchylaena tomentosa*	
Colchicaceae	*Wurmbea sinora*	
Cyperaceae	*Caustis dioica*	
Cyperaceae	*Lepidosperma gladiatum*	
Dilleniaceae	*Hibbertia racemosa*	
Ericaceae	*Acrotriche cordata*	
Ericaceae	*Leucopogon parviflorus*	
Ericaceae	*Leucopogon obovatus*	
Euphorbiaceae	*Adriana quadripartita*	
Fabaceae	*Acacia cyclops*	
Fabaceae	*Acacia rostellifera*	
Fabaceae	*Acacia rostellifera*	
Fabaceae	*Jacksonia spinosa*	
Fabaceae	*Pultenaea heterochila*	
Fabaceae	*Templetonia retusa*	
Geraniaceae	*Pelargonium capitatum*	
Goodeniaceae	*Scaevola crassifolia*	
Hemerocallidaceae	*Dianella brevicaulis*	
Lauraceae	*Cassytha racemosa*	
Lauraceae	*Cassytha racemosa*	

Myrtaceae	*Calothamnus quadrifidus*	
Myrtaceae	*Eucalyptus angulosa*	
Myrtaceae	*Eucalyptus conglobata subsp. conglobata*	
Myrtaceae	*Eucalyptus ecostata*	
Myrtaceae	*Eucalyptus incrassata*	
Myrtaceae	*Eucalyptus pleurocarpa*	
Myrtaceae	*Melaleuca lanceolata*	
Orchidaceae	*Caladenia latifolia*	
Orchidaceae	*Disa bracteata*	X
Phyllanthaceae	*Lysiandra calycinus*	
Poaceae	*Ehrharta calycina*	X
Poaceae	*Ehrharta villosa*	X
Poaceae	*Poa poiformis*	
Polygonaceae	*Muehlenbeckia adpressa*	
Primulaceae	*Lysimachia arvensis*	X
Proteaceae	*Adenanthos cuneatus*	
Proteaceae	*Hakea nitida*	
Ranunculaceae	*Clematis pubescens*	
Restionaceae	*Desmocladus austrinus*	
Rhamnaceae	*Spyridium globulosum*	
Rubiaceae	*Opercularia spermacocea*	
Scrophulariaceae	*Myoporum insulare*	
Thymelaeaceae	*Pimelea ferruginea*	
Urticaceae	*Parietaria debilis*	
Zygophyllaceae	*Roepera billardierei*	
Aizoaceae	*Tetragona implexicoma*	
Asparagaceae	*Thysanotus patersonii*	

Photos

Figure 4. Photo of vegetation within “Munglinup Beach Road Upgrades” project area. Photo taken by Katherine Walkerden on 28/08/2024.

Figure 5. Photo of vegetation within “Munglinup Beach Road Upgrades” project area. Photo taken by Katherine Walkerden on 28/08/2024.

Figure 6. Photo of vegetation within “Munglinup Beach Road Upgrades” project area. Photo taken by Katherine Walkerden on 28/08/2024.

Figure 7. Photo of vegetation within “Munglinup Beach Road Upgrades” project area. Photo taken by Katherine Walkerden on 28/08/2024.

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Appendix 1: Threatened and Priority flora species identified within 20 km

Data provided by Department of Biodiversity, Conservation and Attractions (DBCA) and Western Australian Herbarium in May 2024 was used to assess threatened flora (TF), priority flora (PF), and threatened (TEC) and priority (PEC) ecological communities within 20 km radius of the site. Specifically, spatial data included;

- WAHerb extract (DBCA 2024).
- Threatened and Priority Reporting (TPFL; DBCA 2024).
- Esperance District Threatened Flora (DBCA 2024).

Species	Status	Distance (km)
Cyanicula sp. Esperance (G. Brockman 735)	P1	10.32
Carpobrotus sp. Lateral Flowers (N. Gibson & M. Lyons 973)	P2	18.69
Astartea reticulata	P3	12.04
Hopkinsia adscendens	P3	18.41
Corysanthes limpida	P4	0.05
Eucalyptus preissiana subsp. lobata	P4	11.62
Daviesia pauciflora	P3	17.66
Dampiera sericantha	P3	18.38
Anigozanthos bicolor subsp. minor	T	13.31
Conostylis lepidospermoides	T	16.62
Rhizanthella johnstonii	T	19.94

Appendix 2: Threatened fauna species identified within 20 km

Assessment of Threatened and Priority fauna potentially occurring within 20 km of the site was conducted utilising the following sources:

- DBCA Threatened Fauna database (DBCA 2024);
- EPBC Act 1986 PMST (DCCEEW, 2024).

Taxon	Common name	WA status	EPBC status	Distance (km)
Zanda latirostris	Carnaby's cockatoo	EN	EN	0.00
Pandion haliaetus	Osprey	MI	MI	0.11
Hydroprogne caspia	Caspian tern	MI	MI	0.11
Thalasseus bergii	Crested tern	MI	MI	0.19
Thinornis cucullatus	Hooded plover	P4		0.40
Numenius phaeopus	Whimbrel	MI	MI	0.50
Dasyurus geoffroii	Chuditch	VU	VU	2.04
Apus pacificus	Fork-tailed swift	MI	MI	2.26
Tringa nebularia	Common greenshank	MI	MI	2.73
Calidris ruficollis	Red-necked stint	MI	MI	3.03
Oxyura australis	Blue-billed duck	P4		7.09
Calidris ferruginea	Curlew sandpiper	CR	CR & MI	8.45
Calidris acuminata	Sharp-tailed sandpiper	MI	MI	8.45
Notamacropus irma	Western brush wallaby	P4		9.66
Notamacropus eugenii derbianus	Tammar wallaby	P4		9.84
Pluvialis fulva	Pacific golden plover	MI	MI	10.95
Actitis hypoleucos	Common sandpiper	MI	MI	10.95
Limosa limosa	Black-tailed godwit	MI	MI	14.68
Tringa stagnatilis	Marsh sandpiper	MI	MI	14.68
Daphnia jollyi	Water flea	P1		17.48
Falco peregrinus	Peregrine falcon	OS		18.38
Neophoca cinerea	Australian sea lion	EN	EN	19.24