



Native Vegetation Clearing Referral Wylie Beach Entrance Site Inspection Report

Prepared by:

Kahree Garnaut – BSc, Environmental Officer

Julie Waters – BEnvSc (Hons), Environmental Coordinator

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Introduction

The Shire of Esperance (SOE) has proposed to clear 0.04 ha of native vegetation at the entrance to Wylie Bay beach, located at the terminus of Wylie Bay Road within Reserve 15238. This reserve is vested by management order with the Shire of Esperance, and is currently purposed for Recreation and Parkland. Of the 0.04 ha of vegetation proposed to be cleared, an insignificant area (< 0.001 ha) occurs within the Wylie Bay Road reserve. The bend angle and undulation in the existing single-lane track creates a blind corner that poses a risk of collision for users, endangering motorists, pedestrians and horse riders. Clearing is required for the purpose of widening the existing 4WD access track to Wylie Bay and incorporating a designated pedestrian track to improve safety for both vehicle users and pedestrians. Refer to Figure 1 for a map of the proposed area.

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 Wylie Beach Entrance site. 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).

The proposed clearing site at the Wylie Beach Entrance is mapped as forming a component of one Beard Vegetation System Association (VSA), namely Fanny Cove 129. This VSA has been lightly cleared and is adequately conserved within the IUCN CAR reserve system, with >50% vested within conservation tenure. Approximately 95.6% of the original extent of the Fanny Cove 129 VSA remains.

Table 1. Quantifications of remaining extent of pre-European vegetation at the Wylie Beach Entrance proposed site.

Vegetation System Association	Fanny Cove 129
Description	Bare areas; dune sand.
Pre-European extent remaining within the Shire of Esperance	94.54%
Pre-European extent remaining within Recherche IBRA Sub-region	95.59%
Pre- European extent in land protected for conservation	53.97%

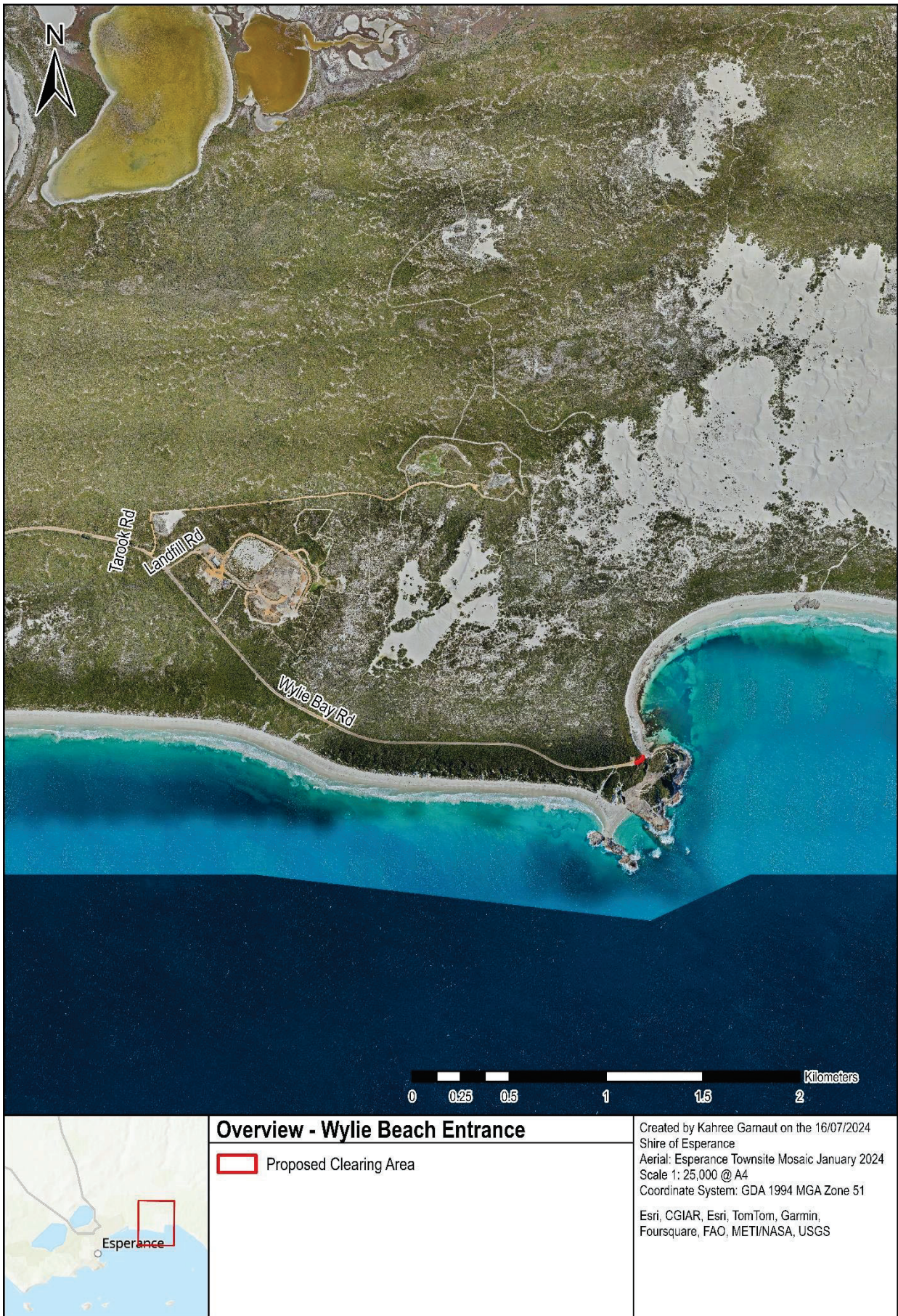


Figure 1. Location and vegetation to be cleared of proposed Wylie Beach Entrance site. A point within the site is 405,985.07m E, 6,255,577m N, GDA94, Zone 51.

Table 2. Desktop search results

Landform	Coastal dunes and sand sheet with a gentle to moderate incline. Adjacent to granitic inselberg of Wylie Head.
Soils	245To_4 (Tooregullup 4 Subsystem) – calcareous sands and sandy loams, tending to occur as mobile sands within deflation plains of blowouts within parabolic dunes.
Geology/Regolith	Quaternary coastal sands; predominantly calcareous and unconsolidated.
Vegetation remaining within 5km (%)	95.87% of vegetation remains within 5 km of the project area.
Threatened and Priority flora (Appendix 3)	Thirty-eight PF and one TF were recorded within 20km of the proposed clearing area. Of these, one species, <i>Tecticornia indefessa</i> , was recorded within 5 km.
Threatened Ecological Communities	Two TEC / PECs have records within 20 km of the reserve: <ul style="list-style-type: none"> • EN / P3 'Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia (Kwongkan) TEC / PEC; and • VU / P3 'Subtropical and Temperate Coastal Saltmarsh (Coastal Saltmarsh)' TEC / PEC.
Threatened and Priority fauna (Appendix 4)	Of the 54 conservation-listed fauna with records within a 20 km radius of the reserve, 50 were determined to have potential habitat within the proposed Wylie Beach entrance proposal area. Thirty-six species – predominantly migratory shorebirds, seabirds, pinnipeds, cetaceans and waterfowl – have records within 10 km of the site. There are seven known Carnaby's black cockatoo roost sites within 12 km of the reserve, the closest of which is located 9.95 km away within the Esperance townsite.
Closest conservation reserves	Mullet Lake Nature Reserve is 0.3 km from the proposed project site. The Recherche Archipelago Nature Reserve is 2.56 km from the site.
Aboriginal heritage	No listed Aboriginal heritage sites are currently documented within the proposed site. There are 72 registered Aboriginal heritage sites within 20 km of the reserve, including the Kepwari Dunes (valued by the Kapa Kurl Wudjari for their mythological values) located 0.18 km from the site.

Site Inspection

A site inspection was conducted by Julie Waters (Environmental Coordinator) and Kahree Garnaut (Environmental Officer) of the Shire of Esperance on the 16th of July 2024. The site was characterised by vegetated coastal calcareous sand dunes bisected by a calcareous sand 4WD track, with a gentle decline in slope towards the firm sandy beach and ocean. To the south and south-east the granitic inselberg of Wylie Head extruded.

Vegetation Types

Approximately 0.04 ha of native vegetation was present within the project site, which was classified during the site inspection into one vegetation type, namely Vegetation Type A: *Acacia cyclops* and *Melaleuca pentagona* var. *pentagona* shrubland over low coastal heath. The NVIS L5 description for this vegetation type is presented below:

U^{^^} *Acacia cyclops*, *Melaleuca pentagona* var. *pentagona*, *Myoporum insulare*\[^]medium shrubs\5\c; M^{^^} *Spyridium globulosum*, *Olearia axillaris*, *Scaevola crassifolia*\^{^^}low shrubs\3\c; G[^] *Tetragonia implexicoma*, *Lepidosperma gladiatum*, *Threlkeldia diffusa*\[^]vines, sedges, low shrubs\2\c.

Vegetation Condition

Vegetation condition varied between Degraded and Very Good (Keighery 1994), with the majority in Very Good condition. Primary causes of degradation observed to be afflicting the site were invasion by coastal weeds such as Dune Onion Weed (*Trachyandra divaricata*) and Treasure Flower (*Gazania linearis*); establishment of structure-altering non-endemic species such as the Norfolk Pine; and the irresponsible release of litter such as soft drink bottles and cans. The previous clearing to create the access track has encouraged the establishment of annual grasses such as *Ehrharta longiflora* by disturbing the soil and opening the understorey for disturbance-opportunists. Areas of higher-quality vegetation tended to occur within the cores of the vegetation remnants where weed coverage and litter were insignificant. Refer to Figure 3 for the map of vegetation condition across the project site, and Table 2 below for the quantitative distribution of vegetation condition across the vegetation types.

Table 2: Quantitative distribution of vegetation condition by vegetation type within the proposed Wylie Beach Entrance site.

Vegetation Type	Completely Degraded	Degraded	Good	Very Good	Excellent	Total (ha)
A: <i>Acacia cyclops</i> , <i>Melaleuca pentagona</i> var. <i>pentagona</i> and <i>Myoporum insulare</i> shrubland over low coastal heath	-	<0.01	<0.01	0.03	-	0.04

Threatened & Priority Ecological Communities

The desktop survey mapped two ecological communities, namely Kwongkan TEC / PEC and Coastal Saltmarsh TEC / PEC, both of which are listed as Priority 3 under the BC act, and Endangered and Vulnerable under the EPBC Act, respectively. Neither of these ecological communities were recognised as being represented by the single vegetation type present. No other Threatened Ecological Communities or Priority Ecological Communities were recognised as being resembled by any of the distinguished vegetation types.

A total of 24 flora species were identified during the field survey, of which seven were exotic species and one, the Norfolk Pine, was a non-endemic native Australian tree that had been planted for amenity.

Potentially problematic environmental weeds observed within the proposed Wylie Beach Entrance site area included *Euphorbia terracina*, *Gazania linearis*, and *Trachyandra divaricata*. *Gazania linearis* is a priority weed species prioritised for management in the *Shire of Esperance Environmental Weed Strategy 2009 – 2018* (Field 2008). A full species list is presented in Table 3. No 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 presence of suitable habitat.

Table 3. Incidental list of flora present within proposed Wylie Beach Entrance site.

Family	Taxon	Common Name	Introduced
Aizoaceae	<i>Tetragonia implexicoma</i>	Bower Spinach	
Araucariaceae	<i>Araucaria heterophylla</i>	Norfolk Island Pine	*
Asphodelaceae	<i>Trachyandra divaricata</i>	Dune Onion Weed	*
Asteraceae	<i>Arctotheca calendula</i>	Cape Weed	*
Asteraceae	<i>Gazania linearis</i>	Treasure Flower	*
Asteraceae	<i>Olearia axillaris</i>	Coastal Daisy-bush	
Brassicaceae	<i>Cakile maritima</i>	Sea Rocket	*
Chenopodiaceae	<i>Atriplex isatidea</i>	Coast Saltbush	
Chenopodiaceae	<i>Rhagodia baccata</i>	Berry Saltbush	
Chenopodiaceae	<i>Threlkeldia diffusa</i>	Coast Bonefruit	
Cyperaceae	<i>Lepidosperma gladiatum</i>	Coast Sword-sedge	
Euphorbiaceae	<i>Euphorbia terracina</i>	Geraldton Carnation Weed	*
Fabaceae	<i>Acacia cochlearis</i>	Red-eyed Wattle	
Fabaceae	<i>Templetonia retusa</i>	Cookies Tongue	
Goodeniaceae	<i>Scaevola crassifolia</i>	Thick-leaved Fanflower	
Lauraceae	<i>Cassytha</i> sp.	Laurel	
Myrtaceae	<i>Melaleuca pentagona</i> var. <i>pentagona</i>		
Poaceae	<i>Cenchrus clandestinus</i>	Kikuyu	*
Poaceae	<i>Ehrharta longiflora</i>	Annual Veldt Grass	*
Poaceae	<i>Spinifex hirsutus</i>	Hairy Spinifex	
Poaceae	<i>Poa porphyroclados</i>		
Rhamnaceae	<i>Spyridium globulosum</i>	Basket Bush	
Scrophulariaceae	<i>Myoporum insulare</i>	Blueberry Tree	
Zygophyllaceae	<i>Roepera billardierei</i>	Coast Twinleaf	



Figure 2. Vegetation type and condition present within proposed Wylie Beach Entrance site.
Site Inspection Report - Native Vegetation Clearing Referral - Wylie Beach Entrance

Fauna

During the site inspection, eight fauna were detected directly, of which one was introduced, the white Italian snail (*Theba pisana*). The majority of fauna consisted of birds such as honeyeaters, bush birds and seabirds. No conservation-significant fauna were detected during the survey.

Additional native fauna known to visit the site include the western grey kangaroo (*Macropus fuliginosus*), sooty oystercatcher (*Haematopus fuliginosus*), pied oystercatcher (*Haematopus longirostris*), white-bellied sea-eagle (*Haliaeetus leucogaster*), and Pacific black ducks (*Anas superciliosa*). Feral cats and foxes are abundant in the area surrounding the Wylie Bay Waste Facility several kilometres to the west, and are likely to impact the vegetation around the site. Wylie Bay is a well-used dog and horse-exercise area, and both species frequent the proposed clearing site.

Table 4: Incidental fauna list from Wylie Beach Entrance proposed clearing site.

Class	Family	Taxon	Common Name	Introduced
Aves	Acanthizidae	<i>Sericornis frontalis</i>	White-browed scrubwren or koorkal	
	Corvidae	<i>Corvus coronoides</i>	Australian raven or wardang	
	Laridae	<i>Chroicocephalus novaehollandiae</i>	Silver gull	
	Laridae	<i>Larus pacificus</i>	Pacific gull	
	Meliphagidae	<i>Manorina flavigula</i>	Yellow-throated miner	
	Meliphagidae	<i>Phylidonyris novaehollandiae</i>	New Holland honeyeater or bandiny	
	Zosteropidae	<i>Zosterops lateralis gouldi</i>	Western silvereye	
Mollusca	Helicidae	<i>Theba pisana</i>	White Italian snail	*

The proposed clearing area is not anticipated to significantly impact any fauna species listed as on the desktop assessment, as the tracks between the vegetation islands are frequented by vehicles, pedestrians, domestic dogs, and ridden horses. Whilst the vegetation was potentially suitable for the quenda (*Isoodon obesulus fusciventer*, P3), the area to be cleared (0.04 ha) does not comprise significant habitat and its exposure to disturbance and predation by domestic dogs and feral predators suggests this habitat is not utilised by the marsupial. Impacts to conservation-listed shorebirds likely to occur within the site or the immediate vicinity, such as the hooded plover (*Thinornis cucullatus*), are expected to be minimal, as these species will most likely use undisturbed areas of habitat further up the beach and around rocky headlands. The vegetation does not comprise valuable foraging habitat for the Carnaby's black cockatoo.

Photos

All photos were taken by Shire of Esperance Environmental Officer, Kahree Garnaut, on the 17th of July 2024.



Figure 3. Northern block of vegetation, as viewed from Wylie Bay beach. Note the established Norfolk Pine tree and *Ehrharta longiflora* on the left within the Degraded vegetation. *Atriplex isatidea* and *Myoporum insulare* dominate the area of vegetation in Very Good condition on the right.

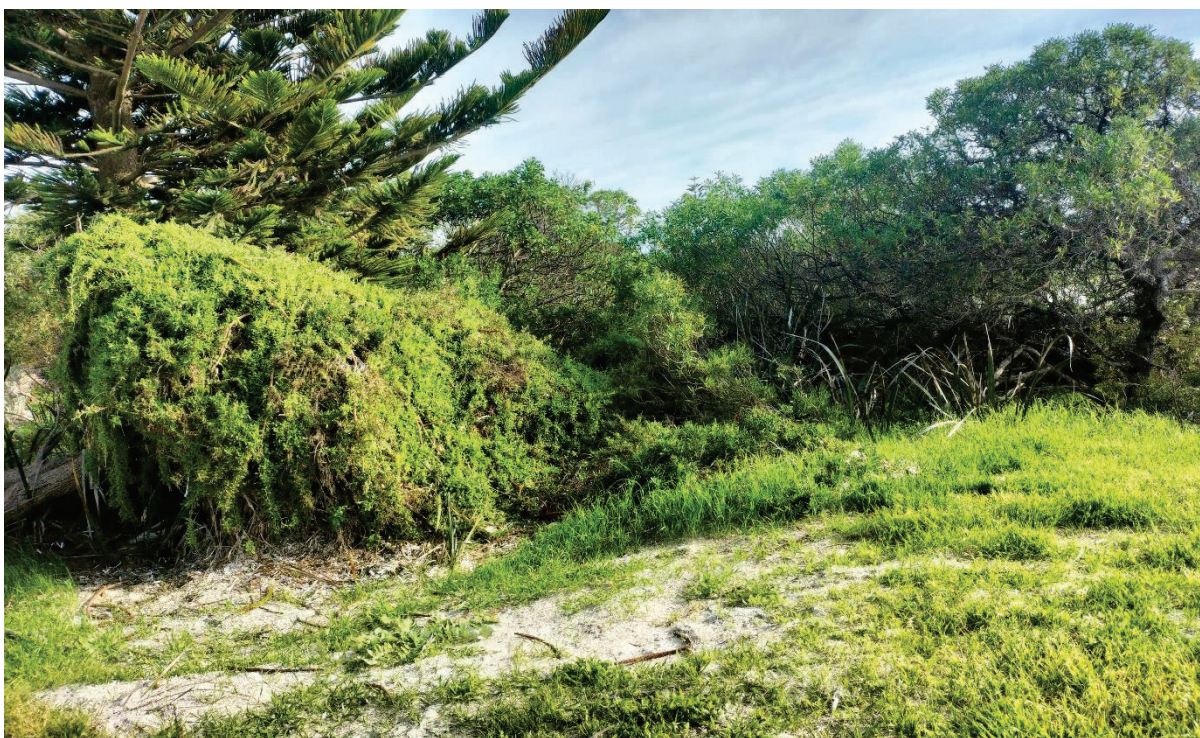


Figure 4. Closer inspection of degraded area on the north-eastern corner, showing the mound of annual grasses and boundary with Very Good vegetation where *Tetragonia implexicoma* is clambering over native shrubs.



Figure 5. North-western edge of existing entrance, looking towards Wylie Bay, illustrating *Melaleuca pentagona* var. *pentagona* and *Myoporum insulare* overstorey and *Lepidosperma gladiatum* sedgeland.



Figure 6. Mature *Myoporum insulare* and *Melaleuca pentagona* var. *pentagona* medium shrubs, looking west towards Wylie Bay Road.



Figure 7. Existing signage at the entrance to Wylie Bay, which is a gateway to Cape Le Grand National Park via the beach.



Figure 8. Horse hoof tracks on existing entrance to Wylie Bay beach. Horse riding is a popular permitted activity on this beach.

References

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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 2022 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 2022).
- Threatened and Priority Reporting (TPFL; DBCA 2022).
- Esperance District Threatened Flora (DBCA 2022).

Species	WA Status	Distance (km)
<i>Tecticornia indefessa</i>	P2	4.72
<i>Austrobaeckea uncinella</i>	P3	5.06
<i>Comesperma calcicola</i>	P3	5.63
<i>Carpobrotus</i> sp. Lateral Flowers (N. Gibson & M. Lyons 973)	P2	5.66
<i>Eucalyptus x missilis</i>	P4	7.09
<i>Banksia prolata</i> subsp. <i>calcicola</i>	P4	8.06
<i>Eucalyptus semiglobosa</i>	P3	8.41
<i>Pityrodia chrysocalyx</i>	P3	8.47
<i>Eucalyptus missilis x</i>	P4	8.94
<i>Cyathostemon</i> sp. Esperance (A. Fairall 2431)	P1	9.27
<i>Hopkinsia adscendens</i>	P3	9.27
<i>Lepidium fasciculatum</i>	P3	9.27
<i>Grevillea baxteri</i>	P4	9.30
<i>Leucopogon corymbiformis</i>	P2	9.43
<i>Corysanthes limpida</i>	P4	9.77
<i>Daviesia pauciflora</i>	P3	10.78
<i>Lobelia archeri</i>	P1	10.97
<i>Leucopogon interruptus</i>	P3	11.40
<i>Dampiera sericantha</i>	P1	12.27
<i>Hibbertia turleyana</i>	P2	12.86
<i>Hibbertia carinata</i>	P1	13.10
<i>Styphelia rotundifolia</i>	P3	13.24
<i>Myriophyllum muelleri</i>	P2	13.97
<i>Leucopogon apiculatus</i>	P3	14.14
<i>Goodenia quadrilocularis</i>	P2	14.17
<i>Dampiera decurrens</i>	P2	14.35
<i>Eucalyptus insularis</i> subsp. <i>insularis</i>	P4	14.38
<i>Myosotis australis</i> subsp. <i>australis</i>	P4	14.66
<i>Comesperma lanceolatum</i>	P2	17.22
<i>Adelphacme minima</i>	P3	17.40
<i>Acacia incanicarpa</i>	P2	17.98
<i>Utricularia helix</i>	P2	18.32
<i>Utricularia westonii</i>	P2	18.32
<i>Eucalyptus insularis</i> subsp. <i>continentalis</i>	EN	18.99
<i>Lepyrodia fortunata</i>	P2	19.09

Species	WA Status	Distance (km)
<i>Astartea elobata</i>	P2	19.16
<i>Eucalyptus foliosa</i>	P1	19.31
<i>Galium leptogonium</i>	P3	19.47
<i>Paracaleana parvula</i>	P2	19.48

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 2023x);
- EPBC Act 1986 PMST (DCCEEW, 2023).

Taxon	Common name	WA Status	EPBC Act Status	Distance (km)
<i>Thinornis cucullatus</i>	Hooded plover	P4	VU	0.57
<i>Thalasseus bergii</i>	Crested tern	MI	MI	3.45
<i>Limosa lapponica</i>	Bar-tailed godwit	MI	MI	3.47
<i>Tringa nebularia</i>	Common greenshank	MI	MI	3.47
<i>Hydroprogne caspia</i>	Caspian tern	MI	MI	3.47
<i>Calidris ruficollis</i>	Red-necked stint	MI	MI	3.47
<i>Calidris ferruginea</i>	Curlew sandpiper	CR	CR & MI	3.47
<i>Calidris acuminata</i>	Sharp-tailed sandpiper	MI	MI	4.18
<i>Pluvialis squatarola</i>	Grey plover	MI	MI	4.18
<i>Zanda latirostris</i>	Carnaby's black cockatoo	EN	EN	4.27
<i>Actitis hypoleucos</i>	Common sandpiper	MI	MI	4.29
<i>Oxyura australis</i>	Blue-billed duck	P4	Not listed	4.44
<i>Calidris alba</i>	Sanderling	MI	MI	4.65
<i>Puffinus huttoni</i>	Hutton's shearwater	EN		4.93
<i>Cereopsis novaehollandiae grisea</i>	Recherche Cape Barren goose	VU	VU	4.93
<i>Plegadis falcinellus</i>	Glossy ibis	MI	MI	5.79
<i>Tringa glareola</i>	Wood sandpiper	MI	MI	5.79
<i>Falco peregrinus</i>	Peregrine falcon	OS		5.81
<i>Neophoca cinerea</i>	Australian sea lion	EN	EN	5.92
<i>Dermodochelys coriacea</i>	Leatherback turtle	VU	EN & MI	6.09
<i>Calidris melanotos</i>	Pectoral sandpiper	MI	MI	6.10
<i>Charadrius leschenaultii</i>	Greater sand plover	VU	VU & MI	6.81
<i>Eubalaena australis</i>	Southern right whale or mamang	VU	EN & MI	7.13
<i>Apus pacificus</i>	Fork-tailed swift	MI	MI	7.39
<i>Charadrius bicinctus</i>	Double-banded plover	MI	MI	7.49
<i>Pluvialis fulva</i>	Pacific golden plover	MI	MI	7.75
<i>Charadrius mongolus</i>	Siberian sand plover	EN	EN & MI	7.75
<i>Thalassarche chlororhynchos</i>	Atlantic yellow-nosed albatross	VU	MI	8.67
<i>Isodon obesulus fusciventer</i>	Quenda or southwestern brown bandicoot	P4	Not listed	8.80
<i>Notamacropus irma</i>	Kwoora or western brush wallaby	P4	Not listed	8.81
<i>Calidris tenuirostris</i>	Great knot	CR	CR & MI	9.38
<i>Stercorarius antarcticus lonnbergi</i>	Brown skua	P4	Not listed	9.43
<i>Ardenna carneipes</i>	Sable shearwater or yowli	VU	MI	9.43
<i>Calidris canutus rogersi</i>	Red knot (subsp. <i>rogersi</i>)	EN	EN & MI	9.48

Taxon	Common name	WA Status	EPBC Act Status	Distance (km)
<i>Acanthophis antarcticus</i>	Southern death adder	P3	Not listed	9.90
<i>Arctocephalus forsteri</i>	New Zealand fur-seal	OS		9.90
<i>Tringa stagnatilis</i>	Marsh sandpiper	MI	MI	10.03
<i>Tringa brevipes</i>	Grey-tailed tattler	MI & P4	MI	10.62
<i>Calidris canutus</i>	Red knot	EN	EN & MI	10.63
<i>Numenius phaeopus</i>	Whimbrel	MI	MI	10.71
<i>Arenaria interpres</i>	Ruddy turnstone	MI	MI	10.71
<i>Thalassarche cauta cauta</i>	Shy albatross	VU	EN & MI	10.71
<i>Ardenna tenuirostris</i>	Short-tailed shearwater	MI	MI	10.71
<i>Oceanites oceanicus</i>	Wilson's storm-petrel	MI	MI	10.71
<i>Stercorarius parasiticus</i>	Artic skua	MI	MI	12.83
<i>Diomedea exulans</i>	Wandering albatross	VU	VU & MI	13.63
<i>Pandion haliaetus</i>	Osprey	MI	MI	14.24
<i>Botaurus poiciloptilus</i>	Australasian bittern	EN	EN	19.67
<i>Eretmochelys imbricata</i>	Hawksbill turtle	VU	VU & MI	19.77
<i>Ixobrychus dubius</i>	Australian little bittern	P4		19.79

Appendix 3: Threatened and Priority Ecological Communities

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

- DBCA Threatened and Priority Ecological Communities database (DBCA 2023c);
- EPBC Act 1986 PMST (DCCEEW, 2023).

Ecological Community	BC Act Status	EPBC Act Status	Distance (km)	Verdict
Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia (Kwongkan) TEC / PEC	P3	EN	2.00	Absent
Subtropical and Temperate Coastal Saltmarsh	P3	VU	4.64	Absent

Appendix 4: Infrastructure Proposal



NOTES		AMENDMENTS		Scale: North 1:100, West 1:100 Date: 04/07/2024 Revision 01 50100701 Sheet No. 1 of 1	
Date	Description	Date	Description	SHIRE OF ESPERANCE Entrance to Wylie Boy Beach Improvements, Wylie Boy Road LAYOUT BANDY CREEK	
				Survey: - Design: - Drawn: - Checked: - Scale: 200000:1 only Date for Plot: 10/11/2024	
			Issued for review - 12/07/2024		

