



Native Vegetation Clearing Referral “RRG Fisheries Road SLK 10.24 - 13.61”

Site Inspection Report

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January 2024



Introduction

The Shire of Esperance recently acquired Regional Road Group (RRG) funding to widening Fisheries Road to serve road safety improvements. Roads in Esperance have progressively been modified to meet modern safety requirements. Providing a high level of safety along road networks is a priority for the Shire of Esperance. The project is located within the Fisheries Road Reserve between SLK 10.24 - 13.61 (Main Roads 2021). Only two small portions of the project area are currently vegetated and the project will involve the clearing of 0.86 ha of vegetation.

The site was initial submitted as part of the Shire of Esperance CPS7548/1 minor infrastructure permit which had expired in 2023.

Map

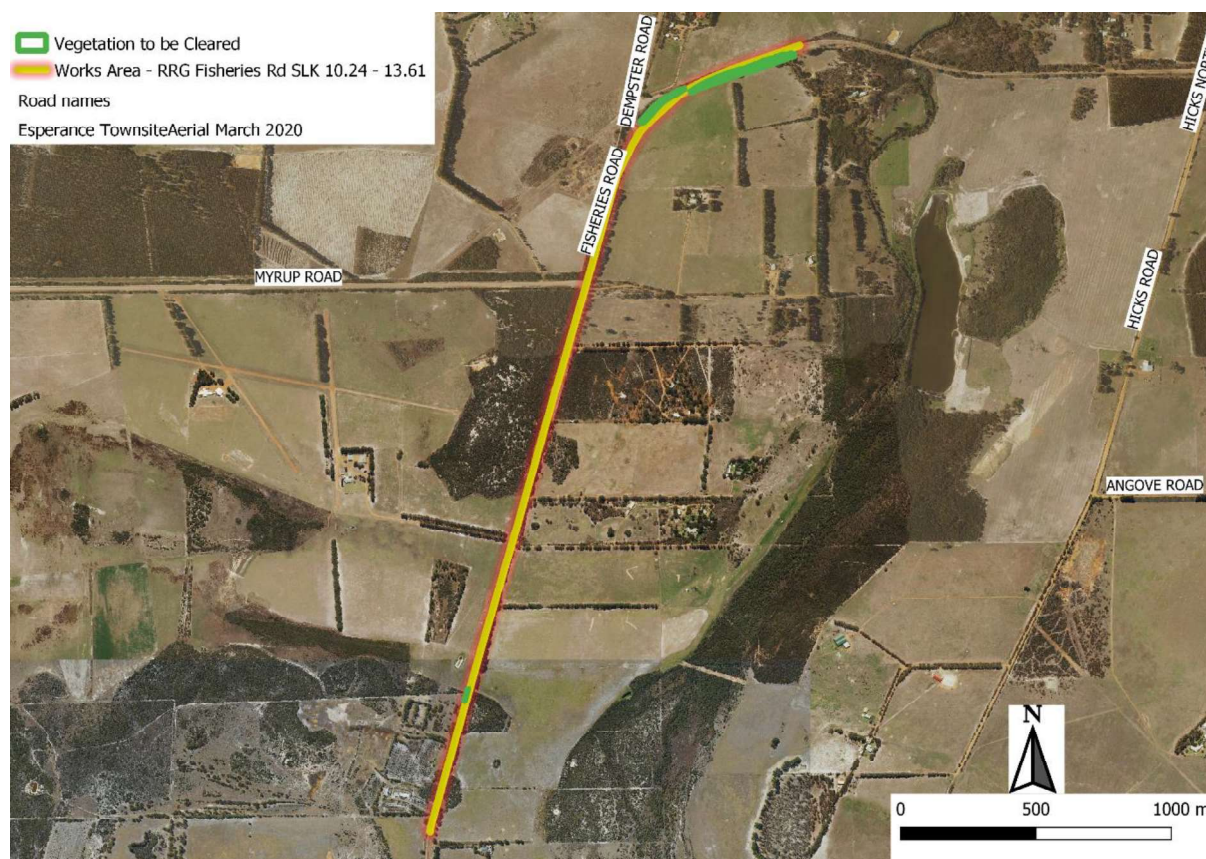


Figure 1. Map of RRG Fisheries Rd SLK 10.24 - 13.61 project with vegetation proposed to be cleared in green.

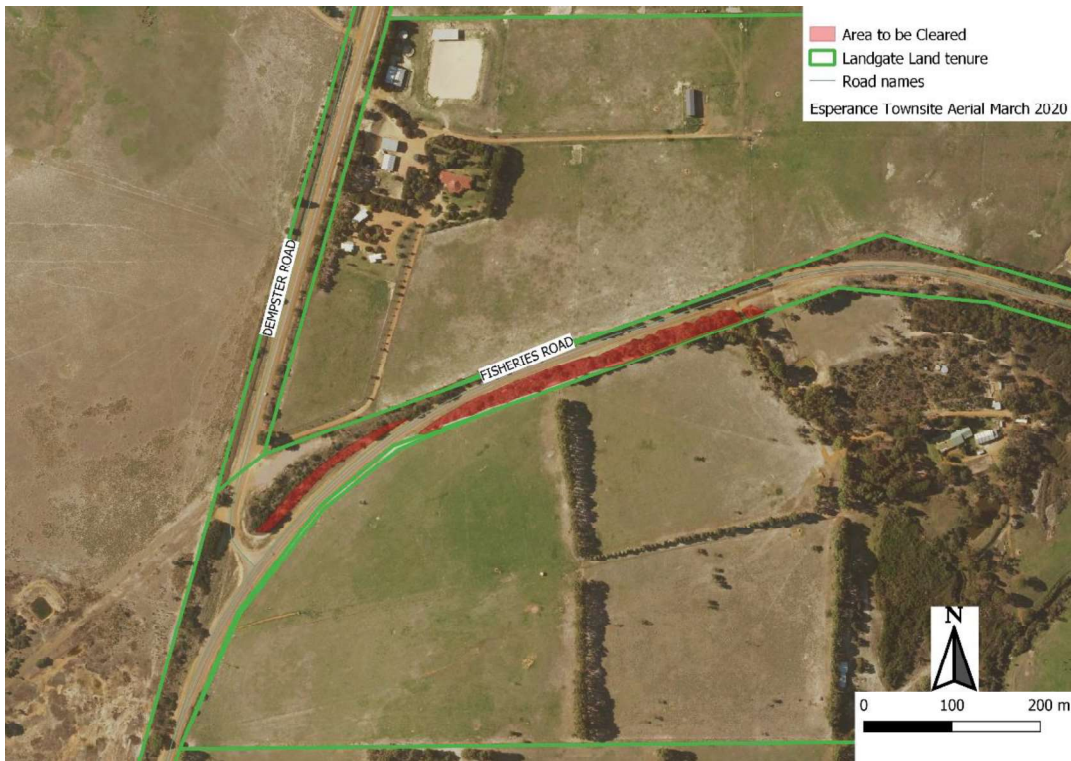


Figure 2. Northern portion of road project where clearing is required (SLK 12.93 to 13.6) under CPS 7548/1, SOE058 – RRG Fisheries Rd SLK 10.24 - 13.61



Figure 3. Southern portion of road project where clearing is required (SLK 10.73 to 10.79) under CPS 7548/1, SOE058 – RRG Fisheries Rd SLK 10.24 - 13.61

Desktop Summary

Prior to the site inspection the site was run through the Shire of Esperance's Desktop Environmental Impacts Spatial Interrogation Program (DEISIP). This program interrogates a number of Local, State and Federal spatial data sets to assess against the ten clearing principles for native vegetation regulated under Schedule of the *Environmental Protection Act 1986* (WA).

The site sits within the mapped within the Recherche subregion of the Esperance Plains IBRA region.

The site is mapped as forming a component of one Beard Vegetation Associations, namely Esperance 516. This vegetation community is adequately represented with 54.80% of the original extent remaining. A total of 36.79% of the vegetation association is remaining within the Shire of Esperance.

Table 1. Vegetation associations mapped by Beard (1973) within the 'RRG Fisheries Rd SLK 10.24 - 13.61' project area and statistics on pre-European remaining areas.

Vegetation Association	
Name	Esperance_516
Description	Shrublands; mallee scrub, black marlock
Pre-European extent	54.80
Pre-European extent in IBRA sub-region Esp2 (%)	36.79
Pre-European extent in LGA (%)	44.92
Current extent conserved in IUCN area (%)	24.00%

Threatened and Priority flora determined via the DEISIP within a 20 km buffer of the site area are depicted in Appendix 1. To improve identifiability in the field and ensure appropriate specimens were collected, scans of pressed herbarium specimens, photos and taxonomic keys were taken into the field.

To assess fauna, the following databases were searched with a 20km buffer from the center of the site; Department of Biodiversity, Conservation and Attractions (DBCAs). During the site inspection direct observations as well as observations on the suitability of habitat for listed species was undertaken.

The desktop search identified three soil descriptions;

- Deep uniform sand, Podzol > 80 cm (Corinup), Uc2.25
- Deep uniform sand (Corinup), Uc2.21
- Deep uniform sand, Podzol > 80 cm (Corinup), Uc2.22

Geology at the site was listed as;

- Tertiary sediments of the Pallinup formation with some Quaternary aeolian sands
- Quaternary aeolian sands over sediments
- Quaternary aeolian sand overlying Tertiary sediments of the Pallinup formation

Site Inspection

A site inspection was conducted by Katherine Walkerden and Julie Waters, Shire of Esperance's Environmental Officers and Coordinator, on 08/06/2021. The site was revisited on the 25/01/2023 by Katherine Walkerden to reassess vegetation condition.

Flora species present formed two distinct vegetation types, namely:

- A. Degraded *Melaleuca brevifolia* shrubland.
- B. *Nuytsia floribunda* low open woodland over *Acacia cyclops* and *Gaudium laevigatum* tall closed shrubland.

Vegetation Condition varied between a degraded and a good condition (Keighery 1994), with the majority (0.507 ha) in a degraded condition, 0.186 ha was in a good condition and 0.173 ha was in completely degraded condition. The areas mapped as degraded condition were observed to be afflicted with heavy weed invasion, *Gaudium laevigatum* was the most serious and prolific weed within the site. *Gaudium laevigatum* had formed dense thickets crowding out native vegetation. Secondary salinification/ historical clearing for fence lines and crossovers was evident.

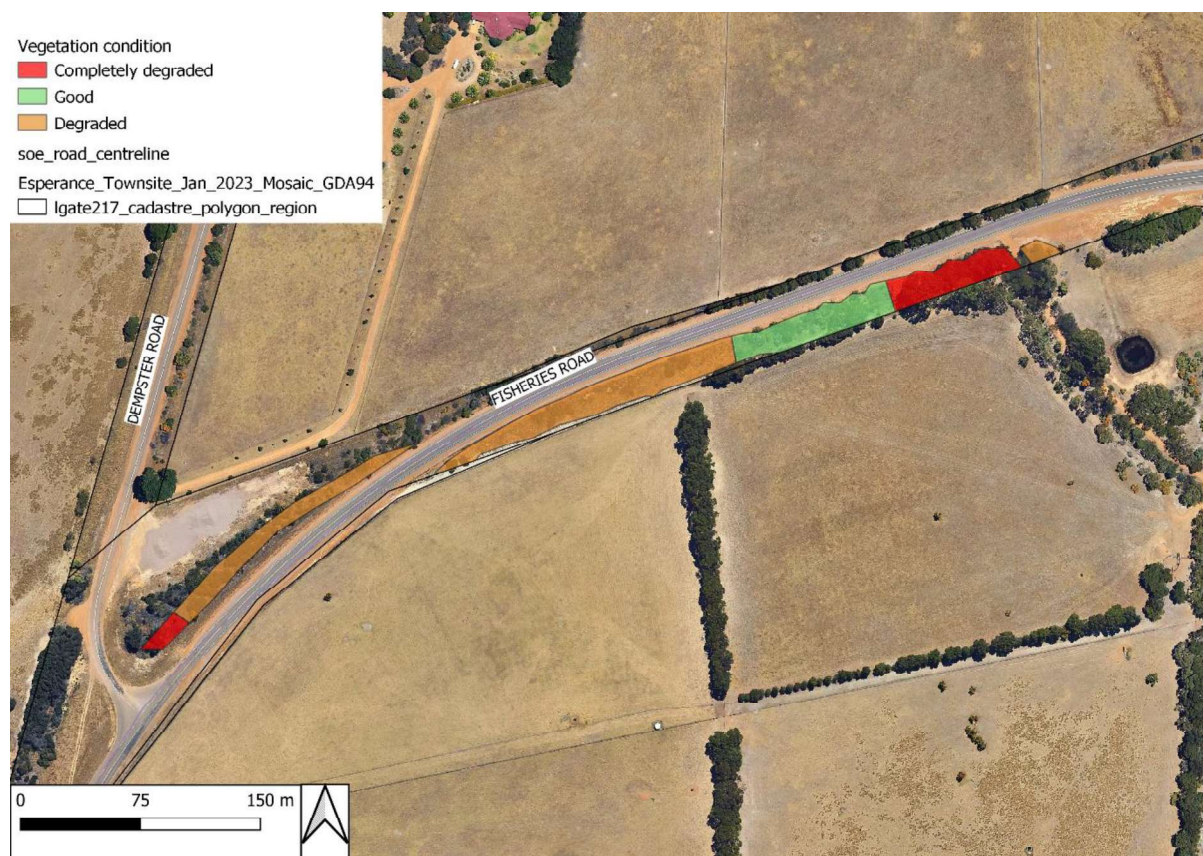


Figure 4. Vegetation Condition within proposed 'RRG Fisheries Rd SLK 10.24 - 13.61'

The desktop survey mapped the EPBC listed "Proteaceae dominated Kwongkan shrublands of the southeast coastal floristic province of Western Australia" Threatened Ecological community 75 metres away from the site.

The area did not meet the definition of the EPBC listed “Proteaceae dominated Kwongkan Shrublands of the southeast coastal floristic province of Western Australia” Threatened Ecological Community”, only having one non-planted Proteaceae species present at a low density. No other TECs or PECs were relevant to the site.

A total of 22 native flora species were found and additional 16 non-native flora species were identified during the survey. No threatened or priority flora were identified.

Table 1. Incidental list of species present within proposed RRG Fisheries Rd SLK 10.24 - 13.61

Family	Genus	Species	Invasive/ non-local	Northern Section	Southern Section
Anarthriaceae	<i>Anarthria</i>	<i>scabra</i>		x	
Asparagaceae	<i>Lomandra</i>	<i>hastilis</i>		x	
Asphodelaceae	<i>Xanthorrhoea</i>	<i>platyphylla</i>		x	
Asteraceae	<i>Hypochaeris</i>	<i>radicata</i>	x	x	
Asteraceae	<i>Sonchus</i>	<i>oleraceus</i>	x	x	
Brassicaceae	<i>Brassica</i>	<i>rapa</i>	x	x	
Casuarinaceae	<i>Allocasuarina</i>	<i>humilis</i>		x	
Cyperaceae	<i>Caustis</i>	<i>dioica</i>		x	
Cyperaceae	<i>Gahnia</i>	<i>trifida</i>			x
Dilleniaceae	<i>Hibbertia</i>	<i>cuneiformis</i>		x	
Fabaceae	<i>Acacia</i>	<i>cyclops</i>		x	
Fabaceae	<i>Jacksonia</i>	<i>spinosa</i>		x	
Fabaceae	<i>Ornithopus</i>	<i>sativus</i>	x	x	
Fabaceae	<i>Templetonia</i>	<i>retusa</i>		x	
Loranthaceae	<i>Nuytsia</i>	<i>floribunda</i>		x	
Myrtaceae	<i>Agonis</i>	<i>flexuosa</i>	x	x	
Myrtaceae	<i>Corymbia</i>	<i>ficifolia</i>	x	x	
Myrtaceae	<i>Corymbia</i>	<i>calophylla</i>	x	x	
Myrtaceae	<i>Eucalyptus</i>	<i>pleurocarpa</i>		x	
Myrtaceae	<i>Eucalyptus</i>	sp.	x	x	
Myrtaceae	<i>Eucalyptus</i>	sp.	x	x	
Myrtaceae	<i>Eucalyptus</i>	<i>gomphocephala</i>	x	x	
Myrtaceae	<i>Gaudium</i>	<i>laevigatum</i>	x	x	x
Myrtaceae	<i>Melaleuca</i>	<i>brevifolia</i>			x
Myrtaceae	<i>Melaleuca</i>	<i>striata</i>		x	
Myrtaceae	<i>Melaleuca</i>	<i>tuberculata</i>		x	
Onagraceae	<i>Oenothera</i>	<i>stricta</i>	x	x	
Pinaceae	<i>Pinus</i>	<i>pinaster</i>	x	x	
Poaceae	<i>Andropogon</i>	<i>distachyos</i>	x	x	
Poaceae	<i>Briza</i>	<i>maxima</i>	x	x	x
Poaceae	<i>Eragrostis</i>	<i>curvula</i>	x	x	x
Proteaceae	<i>Adenanthos</i>	<i>cuneatus</i>		x	
Proteaceae	<i>Hakea</i>	<i>laurina</i>		X	
Restionaceae	<i>Chordifex</i>	<i>crispatus</i>		X	
Restionaceae	<i>Chordifex</i>	<i>sphacelatus</i>		X	
Restionaceae	<i>Hypolaena</i>	<i>humilis</i>		X	
Solanaceae	<i>Solanum</i>	<i>nigrum</i>	x	X	
Zamiaceae	<i>Macrozamia</i>	<i>dyeri</i>		X	

Photos



Figure 5. Photo of southern section of proposed clearing. Showing vegetation type A: Degraded *Melaleuca brevifolia* shrubland. Taken by Katherine Walkerden on 25/01/2023



Figure 6. Photo of northern section of proposed clearing. Showing completely degraded vegetation consisting of planted non-native Eucalypts. Photo taken by Katherine Walkerden on 25/01/2024



Figure 7. Photo of vegetation type B in a degraded condition. Taken by Katherine Walkerden on 25/01/2024.



Figure 7. Photo completely degraded vegetation, vegetation consists entirely of *Gaudium laevigatum*. Taken by Katherine Walkerden on 25/01/2024.

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 2023 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 2023).
- Threatened and Priority Reporting (TPFL; DBCA 2023).
- Esperance District Threatened Flora (DBCA 2023).

Taxon	Status	Distance (km)
<i>Beyeria physaphylla</i>	P1	15.39
<i>Cyathostemon</i> sp. <i>Esperance</i> (A. Fairall 2431)	P1	13.15
<i>Dampiera sericantha</i>	P1	3.16
<i>Darwinia</i> sp. <i>Gibson</i> (R.D. Royce 3569)	P1	18.15
<i>Eucalyptus balanopelex</i>	P1	6.14
<i>Eucalyptus foliosa</i>	P1	13.96
<i>Hibbertia carinata</i>	P1	12.61
<i>Lobelia archeri</i>	P1	14.10
<i>Schoenus</i> sp. <i>Grey Rhizome</i> (K.L. Wilson 2922)	P1	16.31
<i>Stenanchera lacsalaria</i>	P2	17.79
<i>Comesperma griffinii</i>	P2	17.83
<i>Goodenia exigua</i>	P2	16.17
<i>Hibbertia turleyana</i>	P2	10.52
<i>Leucopogon corymbiformis</i>	P2	10.79
<i>Myriophyllum muelleri</i>	P2	13.71
<i>Paracaleana parvula</i>	P2	14.65
<i>Patersonia inaequalis</i>	P2	18.64
<i>Stenanchera lacsalaria</i>	P2	17.77
<i>Tecticornia indefessa</i>	P2	4.06
<i>Adelphacme minima</i>	P3	16.26
<i>Austrobaeckea uncinella</i>	P3	3.90
<i>Brachyloma mogin</i>	P3	17.61
<i>Comesperma calcicola</i>	P3	2.84
<i>Commersonia rotundifolia</i>	P3	18.15
<i>Dampiera triloba</i>	P3	15.60
<i>Daviesia pauciflora</i>	P3	2.90
<i>Eucalyptus famelica</i>	P3	18.16
<i>Eucalyptus semiglobosa</i>	P3	4.59
<i>Gonocarpus pycnostachyus</i>	P3	16.47
<i>Hopkinsia adscendens</i>	P3	13.15
<i>Kunzea salina</i>	P3	15.96

<i>Lepidium fasciculatum</i>	P3	13.15
<i>Leucopogon interruptus</i>	P3	14.28
<i>Persoonia scabra</i>	P3	17.84
<i>Pityrodia chrysocalyx</i>	P3	13.08
<i>Pterostylis faceta</i>	P3	16.29
<i>Styphelia rotundifolia</i>	P3	15.19
<i>Banksia prolata</i> subsp. <i>calcicola</i>	P4	13.08
<i>Caladenia arrecta</i>	P4	18.15
<i>Corysanthes limpida</i>	P4	14.65
<i>Eucalyptus dolichorhyncha</i>	P4	18.15
<i>Eucalyptus preissiana</i> subsp. <i>lobata</i>	P4	12.23
<i>Eucalyptus x missilis</i>	P4	12.39
<i>Grevillea baxteri</i>	P4	11.07
<i>Anigozanthos bicolor</i> subsp. <i>minor</i>	T	13.86

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

Taxon	Common name	Conservation code	Distance (km)
<i>Acanthophis antarcticus</i>	southern death adder	P3	13.89
<i>Actitis hypoleucos</i>	Common Sandpiper	MI	4.15
<i>Apus pacificus</i>	Fork-tailed swift	MI	10.26
<i>Arctocephalus forsteri</i>	New Zealand fur-seal, long-nosed fur-seal	OS	13.90
<i>Ardenna carneipes</i>	Flesh-footed Shearwater	VU	5.02
<i>Ardenna tenuirostris</i>	Short-tailed shearwater	MI	17.46
<i>Arenaria interpres</i>	Ruddy turnstone	MI	13.97
<i>Calidris acuminata</i>	Sharp-tailed sandpiper	MI	4.25
<i>Calidris alba</i>	sanderling	MI	4.32
<i>Calidris canutus</i>	Red knot	EN	11.29
<i>Calidris ferruginea</i>	Curlew Sandpiper	CR	4.35
<i>Calidris melanotos</i>	Pectoral Sandpiper	MI	6.28
<i>Calidris ruficollis</i>	Red-necked stint	MI	3.81
<i>Calidris tenuirostris</i>	Great knot	CR	13.97
<i>Calyptorhynchus latirostris</i>	Carnaby's cockatoo	EN	0.94

<i>Calyptorhynchus sp.</i> 'white-tailed black cockatoo'	white-tailed black cockatoo	EN	2.14
<i>Cereopsis novaehollandiae grisea</i>	Recherche Cape Barren goose	VU	5.02
<i>Charadrius bicinctus</i>	Double-banded Plover	MI	11.53
<i>Charadrius leschenaultii</i>	Greater sand plover	VU	7.48
<i>Charadrius mongolus</i>	Lesser Sand Plover	EN	11.53
<i>Dermochelys coriacea</i>	leatherback turtle	VU	8.92
<i>Diomedea exulans</i>	wandering albatross	VU	17.57
<i>Elanus scriptus</i>	Letter-winged kite	P4	5.02
<i>Eubalaena australis</i>	southern right whale	VU	11.17
<i>Falco peregrinus</i>	Peregrine falcon	OS	0.23
<i>Hydroprogne caspia</i>	Caspian Tern	MI	4.92
<i>Isoodon fusciventer</i>	quenda	P4	0.89
<i>Leipoa ocellata</i>	malleefowl	VU	7.61
<i>Limosa lapponica</i>	Bar-tailed godwit	MI	4.35
<i>Neophoca cinerea</i>	Australian sea-lion	EN	12.43
<i>Notamacropus irma</i>	western brush wallaby	P4	12.81
<i>Numenius phaeopus</i>	Whimbrel	MI	17.46
<i>Oceanites oceanicus</i>	Wilson's storm-petrel	MI	17.46
<i>Oxyura australis</i>	Blue-billed duck	P4	4.03
<i>Plegadis falcinellus</i>	Glossy ibis	MI	6.48
<i>Pluvialis fulva</i>	Pacific golden plover	MI	11.53
<i>Pluvialis squatarola</i>	Grey plover	MI	4.25
<i>Puffinus huttoni</i>	Hutton's shearwater	EN	17.46
<i>Stercorarius antarcticus lonnbergi</i>	Brown Skua	P4	12.43
<i>Stercorarius parasiticus</i>	Arctic jaeger, Arctic skua	MI	19.92
<i>Thalassarche cauta cauta</i>	Shy albatross	VU	17.46
<i>Thalassarche chlororhynchos</i>	Atlantic yellow-nosed albatross	VU	10.78
<i>Thalasseus bergii</i>	Crested tern	MI	5.02
<i>Thinornis rubricollis</i>	Hooded plover	P4	3.91
<i>Tringa brevipes</i>	Grey-tailed tattler	MI and P4	11.29
<i>Tringa glareola</i>	Wood sandpiper	MI	6.28
<i>Tringa nebularia</i>	Common greenshank	MI	3.78
<i>Tringa stagnatilis</i>	Marsh sandpiper	MI	9.72
<i>Westralunio carteri</i>	Carter's freshwater mussel	VU	12.43