

30th May 2023

Arup Australia Services Pty Ltd
Level 6 77 Castlereagh Street,
Sydney NSW 2000

Attention: Alec Farragher
By email – Alec.Farragher@arup.com

Dear Alec,

**RE: PORT OF HASTINGS
MIGRATORY AND OTHER WATERBIRDS
DESKTOP ASSESSMENT
NATURE ADVISORY REPORT NO. 22209.1 (1.2)**

Introduction

Thank you for engaging Nature Advisory Pty Ltd to undertake a desktop fauna assessment for the proposed development at Long Is Point, near Hastings – referred to hereafter as the ‘study area’ and shown in Figure 1. This assessment is required to inform a proposed redevelopment of the site. Specifically, the scope of this assessment was to review existing information on the migratory shorebirds and other waterbirds of the study area and surrounds.

Methods

Existing Information

The existing information below, relating to the study area was reviewed:

- *Port of Hastings: Hydrodynamic and Sediment Plume Preliminary Assessment*, (Royal Haskoning DHV 2022);
- Request for Proposal (RFP) – Western Port Green Energy Terminal - (Port of Hastings Corporation 2022);
- Short Form Business Case – Western Port Green Terminal Package 1, (Port of Hastings Corporation 2022);
- Western Port Ramsar Site Boundary Description Technical Report, (DEPI 2013);
- Western Port Ramsar Site Management Plan, (DELWP 2017);
- Aerial and Street View imagery (provided by Google);
- Victorian Biodiversity Atlas (DELWP 2022); and
- Protected Matters Search Tool (DAWE 2022).
- Birdlife Data Westernport Shorebirds requested 2022



Figure 1: Project area

Project: Port of Hastings **Client:** Arup Australia Services Pty Ltd **Date:** 25/11/2022

- ★ Project Site
- ▭ Project area



Metres
0 100



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Listed Species

Existing fauna species records and information about the potential occurrence of listed matters was obtained from an area termed the 'search region', defined here as an area with a radius of ten kilometres from the boundaries of the study area.

A list of the fauna species recorded in the search region was obtained from the Victorian Biodiversity Atlas (VBA), a database administered by the Department of Environment, Land, Water and planning (DELWP) (DELWP 2022).

The online Environment, Protection and Biodiversity Conservation Act 1999 (EPBC Act) Protected Matters Search Tool (DCCEEW 2022) was consulted to determine whether nationally listed species potentially occurred in the search region based on habitat modelling.

The Victorian Flora and Fauna Guarantee Act 1988 (FFG Act) lists threatened and protected species and ecological communities (DELWP 2021).

Birdlife data

Data for the past 20 years was analysed for each site. Years where populations exceeded 0.1% of total population of shorebirds were identified for each site.

Please note text below from **EPBC Act Policy Statement 3.21 Industry guidelines for avoiding, assessing and mitigating impacts on EPBC Act listed migratory shorebird species** Commonwealth of Australia 2017:

Under the EPBC Act, 'important habitat' is a key concept for migratory species, as identified in EPBC Act Policy Statement 1.1 Significant Impact Guidelines—Matters of National Environmental Significance. Defining this term for migratory shorebirds in Australia is important to ensure that sites necessary for the ongoing survival of the 37 migratory shorebird species that regularly visit Australia each year are appropriately managed.

Important habitats in Australia for migratory shorebirds under the EPBC Act include those recognised as nationally or internationally important (see below). The widely accepted and applied approach to identifying internationally important shorebird habitat throughout the world has been through the use of criteria adopted under the Ramsar Convention on Wetlands.

According to this approach, wetland habitat should be considered internationally important if it regularly supports:

- 1 per cent of the individuals in a population of one species or subspecies of waterbird OR
- a total abundance of at least 20 000 waterbirds.

Nationally important habitat for migratory shorebirds can be defined using a similar approach to these international criteria, i.e., if it regularly supports:

- 0.1 per cent of the flyway population of a single species of migratory shorebird OR
- 2000 migratory shorebirds OR
- 15 migratory shorebird species.

Limitations

This assessment has been undertaken on a desktop review basis only. No site visit associated with this investigation has been undertaken. Therefore, this assessment relies on the accuracy of published information. A site survey would be required to confirm the presence or otherwise of native vegetation and habitat suitable for listed threatened species.

Wherever appropriate, a precautionary approach was adopted in determining the likelihood of the presence of listed under the EPBC Act or the Victorian Flora and Fauna Guarantee Act 1988 (FFG Act). That is, where insufficient evidence was available on the potential occurrence of native vegetation or the occurrence of listed matters, it is assumed that these could be present.

Results

Site description

The study area for this investigation is approximately 25 hectares at Long Is Point, near Hastings, approximately 60 kilometres southeast of Melbourne, Victoria. The study area is bound by the Esso Fractionation Plant to the south and west, Western Port Bay to the east, and Bayview Road to the north. It lies within the Gippsland Plain bioregion and falls within the Port Phillip and Westernport Catchment Management Authority. The study area borders Western Port, a Ramsar Convention listed wetland of international importance. Western Port supports 115 waterbird species considered a significant element of the Western Port Ramsar Site's ecological character (Kellogg Brown & Root 2010). As wetland occurs as a small area of saltmarsh in the reclamation area (see Figure 1) and in the narrow intertidal zone and nearshore shallow waters in which the project is planned, some of these waterbirds may occur in the study area.

Waterbird Population Trends

The Birdlife Australia and its predecessors have conducted waterbird counts of Western Port from 1974 (Loyn *et al.* 2002). This data was analysed by Hansen *et al.* (2011). This has determined that the dominant trend has been a decrease in total counts of each waterbird species with few increases (Hansen *et al.* 2011).

Of the 19 sites considered, 16 had more than 10% of the species (regularly recorded during counts) declining between 1974 and 2009 (Hansen *et al.* 2011). There were a number of cases where a species appeared to reach a peak in numbers during the middle of the survey (usually around the late 1980's to the early 1990's) with a subsequent decrease after this period (Hansen *et al.* 2011).

Waterbird and migratory bird likelihood of occurrence

This report focuses on the likelihood of occurrence of listed threatened and migratory waterbird species within the study area. The likelihood of occurrence analysis of waterbird species listed under the EPBC Act and/or the FFG Act was undertaken based on species found in a Victorian Biodiversity Atlas search and an EPBC Act Protected Matters search of a 5 kilometre radius area around the study area. This yielded a long-list of 54 waterbird species for the search region. The review of likelihood of occurrence eliminated some of them and determined that **34** listed waterbird species have the potential to occur within the study area and its immediate surroundings (see Attachment 1 – shaded species).

This analysis excluded oceanic bird species (such as albatrosses and petrels). Since the study area is on land and the immediate embayment waters, it was considered unlikely that the project will significantly impact oceanic habitats outside Western Port most used by these species.

Of the total number of listed species, a total of 26 EPBC Act listed migratory waterbird and non-migratory waterbird species have been identified as having the potential to occur within the study area (including in the area of saltmarsh within the reclamation area, or along the shoreline (intertidal saltmarshes and mudflats) or the shallow marine waters adjacent to and within a kilometre or so of the study area. The proximity of the study area and the wetland to coastal habitats may see some of these species occasionally foraging in the study area (i.e., development footprint). Studies will shortly commence to ascertain the extent of waterbird use of the study area and surrounding habitats.

- **Australasian Bittern** – (EPBC Act: Endangered);
- **Australian Gull-billed Tern** – (EPBC Act: Migratory)
- **Bar-tailed Godwit** – (EPBC Act: Vulnerable & Migratory);
- **Black-tailed Godwit** – (EPBC Act: Migratory);
- **Caspian Tern** – (EPBC Act: Migratory);
- **Common Greenshank** – (EPBC Act: Migratory);
- **Common Sandpiper** – (EPBC Act: Migratory);
- **Crested Tern** – (EPBC Act: Migratory);
- **Curlew Sandpiper** – (EPBC Act: Critically Endangered & Migratory);
- **Double-banded Plover** - (EPBC Act: Migratory);
- **Eastern Curlew** – (EPBC Act: Critically Endangered & Migratory);
- **Fairy Tern** – (EPBC Act: Vulnerable);
- **Great Knot** – (EPBC Act: Critically Endangered & Migratory);
- **Grey Plover** – (EPBC Act: Migratory);
- **Grey-tailed Tattler** – (EPBC Act: Migratory);
- **Latham’s Snipe** – (EPBC Act: Migratory);
- **Lesser Sand Plover** - (EPBC Act: Endangered & Migratory);
- **Little Tern** – (EPBC Act: Migratory);
- **Pacific Golden Plover** – (EPBC Act: Migratory);
- **Red Knot** – (EPBC Act: Migratory);
- **Red-necked Stint** – (EPBC Act: Migratory);
- **Ruddy Turnstone** – (EPBC Act: Migratory);
- **Sharp-tailed Sandpiper** – (EPBC Act: Migratory);
- **Short-tailed Shearwater** – (EPBC Act: Migratory);
- **Terek Sandpiper** - (EPBC Act: Migratory)
- **Whimbrel** – (EPBC Act: Migratory);

In addition, eight FFG Act listed waterbird species have the potential to occur along the shoreline or waters adjoining the study area or in the small saline wetland in the study area. Many waterbirds venture into grassy areas near wetlands to forage, especially at night. The following FFG Act listed waterbird species have the potential to occur in the study area:

- **Australian Shoveler** (FFG Act: Vulnerable);
- **Blue-billed Duck** (FFG Act: Vulnerable);
- **Eastern Great Egret** (FFG Act: Vulnerable);
- **Hardhead** (FFG Act: Vulnerable);

- **Lewin's Rail** (FFG Act: Vulnerable);
- **Musk Duck** (FFG Act: Vulnerable);
- **Plumed Egret** (FFG Act: Critically Endangered); and
- **White-bellied Sea-Eagle** (FFG Act: Endangered).

Table 1 below summarises each of the above listed species' potential interaction with the study area. Species names are as per their listings on legislation.

Table 1 Listed species and the potential interaction of each species with the study area.

Species	Listing	Habitat utilization within the study area
Australasian Bittern	EPBC Act: Endangered	Small marsh area in the southern section of the study area
Australian Gull-billed Tern	EPBC Act: Migratory	Could potentially forage on open water of marsh area in southern section of study area. Likely to forage on the open water of the bay and potentially roost on the intertidal zone adjacent to the study area.
Australian Shoveler	FFG Act: Vulnerable	Could potentially forage on open water of marsh area in southern section of study area.
Bar-tailed Godwit	EPBC Act: Vulnerable & Migratory	Could potentially forage on edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Black-tailed Godwit	EPBC Act: Migratory	Could potentially forage on edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Blue-billed Duck	FFG Act: Vulnerable	Could potentially forage on open water of marsh area in southern section of study area.
Caspian Tern	EPBC Act: Migratory	Could potentially forage on open water of marsh area in southern section of study area. Likely to forage on the open water of the bay and potentially roost on the intertidal zone adjacent to the study area.
Common Greenshank	EPBC Act: Migratory	Could potentially forage on edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Common Sandpiper	EPBC Act: Migratory	Could potentially forage on edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.

Species	Listing	Habitat utilization within the study area
Crested Tern	EPBC Act: Migratory	Could potentially forage on open water of marsh area in southern section of study area. Likely to forage on the open water of the bay and potentially roost on the intertidal zone adjacent to the study area.
Curlew Sandpiper	EPBC Act: Critically Endangered & Migratory	Could potentially forage on edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Double-banded Plover	EPBC Act: Migratory	Could potentially forage on edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Eastern Curlew	EPBC Act: Critically Endangered & Migratory	Could potentially forage on edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Eastern Great Egret	FFG Act: Vulnerable	Could potentially forage on edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Fairy Tern	EPBC Act: Vulnerable	Could potentially forage on open water of marsh area in southern section of study area. Likely to forage on the open water of the bay and potentially roost on the intertidal zone adjacent to the study area.
Great Knot	EPBC Act: Critically Endangered & Migratory	Could potentially forage on edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Grey Plover	EPBC Act: Migratory	Could potentially forage on edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.

Species	Listing	Habitat utilization within the study area
Grey-tailed Tattler	EPBC Act: Migratory	Could potentially forage along edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Hardhead	FFG Act: Vulnerable	Could potentially forage on open water of marsh area in southern section of study area.
Latham's Snipe	EPBC Act: Migratory	Could potentially forage and roost along edges of marsh area in southern section of study area.
Lesser Sand Plover	EPBC Act: Endangered & Migratory	Could potentially forage along edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Lewin's Rail	FFG Act: Vulnerable	Could potentially forage and roost along edges of marsh area in southern section of study area.
Little Tern	EPBC Act: Migratory	Could potentially forage on open water of marsh area in southern section of study area. Likely to forage on the open water of the bay and potentially roost on the intertidal zone adjacent to the study area.
Musk Duck	FFG Act: Vulnerable	Could potentially forage on open water of marsh area in southern section of study area. Likely to forage on the open water of the bay adjacent to the study area.
Pacific Golden Plover	EPBC Act: Migratory	Could potentially forage along edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Plumed Egret	FFG Act: Critically Endangered	Could potentially forage along edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.

Species	Listing	Habitat utilization within the study area
Red Knot	EPBC Act: Endangered & Migratory	Aerial space over study area. Could potentially forage along edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Red-necked Stint	EPBC Act: Migratory	Could potentially forage along edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Ruddy Turnstone	EPBC Act: Migratory	Likely to forage on the intertidal zone adjacent to the study area.
Sharp-tailed Sandpiper	EPBC Act: Migratory	Could potentially forage along edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Short-tailed Shearwater	EPBC Act: Migratory	Likely to forage on the open water of the bay in and adjacent to the study area.
Terek Sandpiper	EPBC Act: Migratory	Could potentially forage along edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
Whimbrel	EPBC Act: Migratory	Could potentially forage along edges of marsh area in southern section of study area. Likely to forage on the intertidal zone adjacent to the study area.
White-bellied Sea-Eagle	FFG Act: Endangered	Likely to forage on the open water of the bay and adjacent to the study area.

Susceptibility of waterbirds to impacts

Waterbirds in Western Port utilise intertidal sand and mudflats, including seagrass beds, for foraging on a range of vegetation and benthic invertebrate prey species. At high tide, most move to sheltered, undisturbed, sandy beaches above high tide mark to wait for the tide to fall again, often roosting in large numbers, communally. It is noteworthy that the study area does not support extensive intertidal mudflats or a sandy beach and there are no existing records of significant numbers of waterbirds foraging or roosting in the study area. However, grass and saltmarsh in the reclamation area may be used at high tide or for occasional supplementary foraging by some

waterbirds. The nearshore waters in and adjacent to the study area may also be used by waterbirds for foraging. An investigation to ascertain the extent of waterbird usage of the study area and its surrounds has been commissioned.

Although this account concentrates on species listed under relevant legislation, a further fifty or more waterbird species utilise habitats in Western Port and it is likely that the bay is of importance as a habitat for many of these species' populations, even though they are not threatened. This includes common ducks, Black Swans, herons and ibis, cormorants, gulls, terns and resident shorebirds.

The following overview identifies the susceptibility of listed waterbird species that may utilise the study area to impacts from the proposed development. This analysis includes consideration of the following factors:

- Mobility of the species;
- Availability and extent of other suitable habitat in the region and degree to which each species may rely on habitat in the study area; and

Waterbirds (FFG Act listed threatened species)

Suitable habitat is present in the proximity of the study area for four FFG Act-listed duck species, two listed egret species and a listed rail species, the White-bellied Sea Eagle may forage over the waters and shoreline close to the study area.

Waterbirds (EPBC Act listed threatened and migratory species)

A total of 26 EPBC Act listed waterbirds were considered to have the potential to occur in the area of study area.

There are important roosting and foraging areas for waterbirds, particularly migratory shorebirds, in the vicinity of the study area (Figures 2 and 3). The significance of impacts will depend on the number of individuals of these species on and near the study area and whether these represent a significant proportion of the regional (Western Port) and/or national and/or flyway populations.

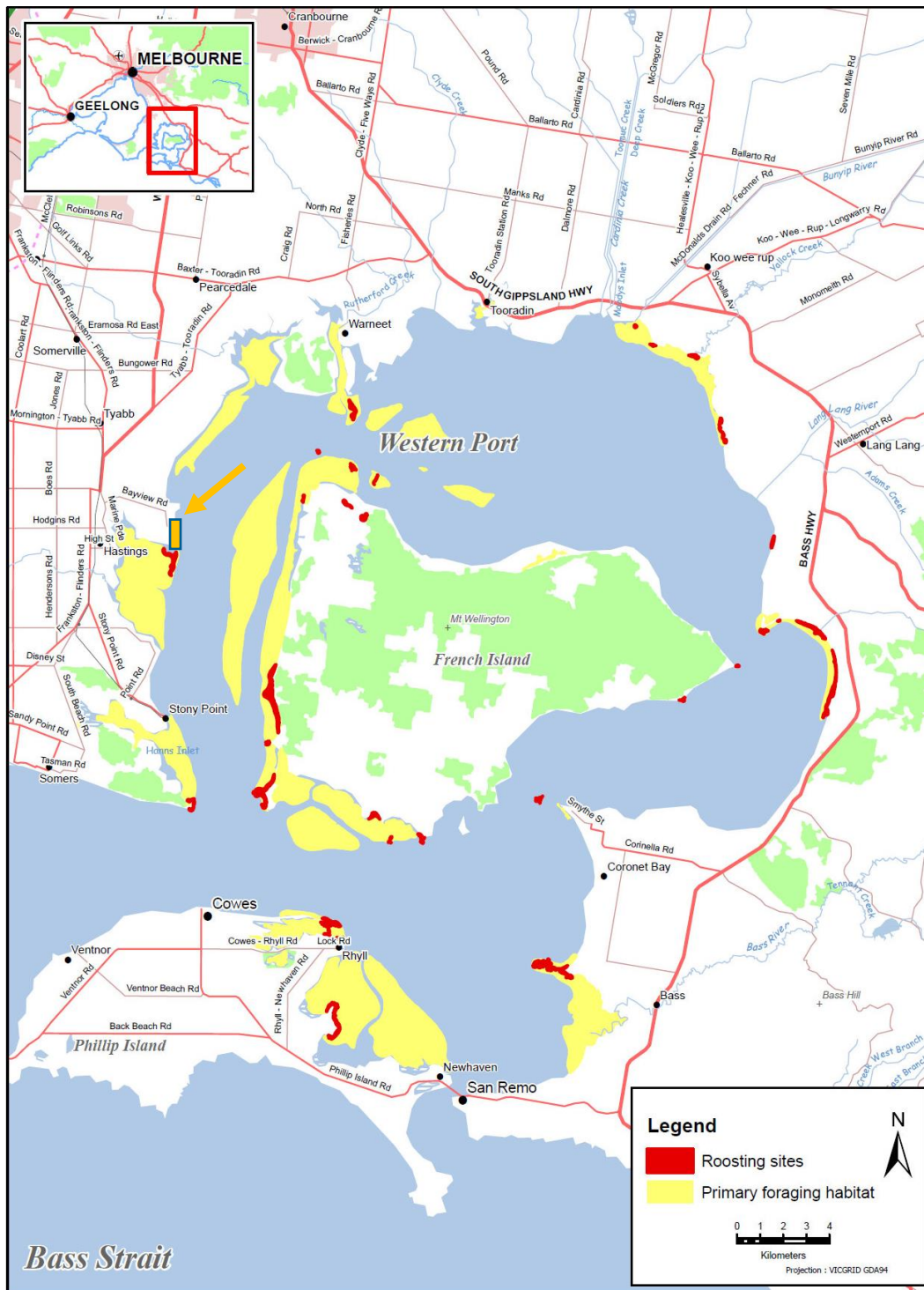


Figure 2: The location of shorebird roosting sites and foraging sites in the vicinity if the study area. (source: Hansen et al 2011). The orange square and arrow indicate the study area.

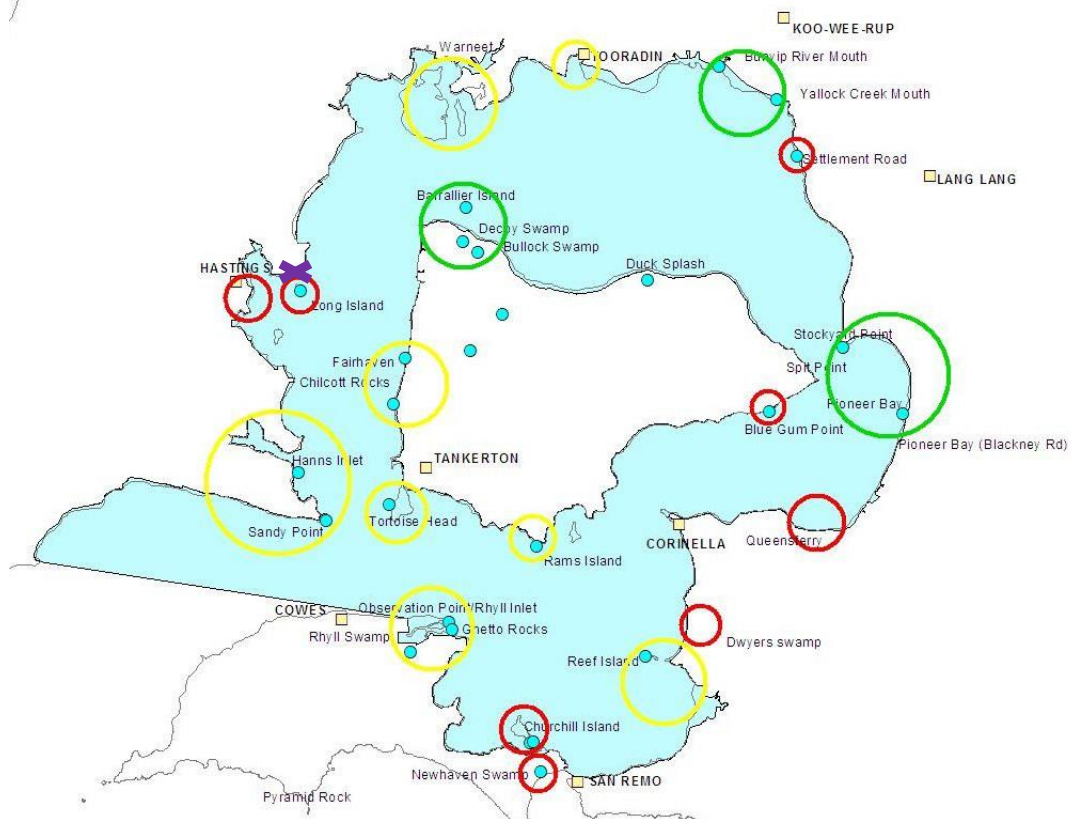


Figure 3: Location of shorebird roosting sites in Western Port Bay and their relative importance.

(The green circles are the most important, yellow of middle importance and red of least importance (source: Hansen et al. 2011). The purple “x” indicates the location of the study area.)

The use by waterbirds of the study area and immediate surrounds will shortly be investigated to ascertain:

- The numbers of each species over the peak summer period for waterbird numbers;
- The relative importance of the numbers of waterbirds in the study area and its surrounds within Western Port and for each species’ population.

Sites that are regularly used by migrating shorebirds on the western side of Western Port Bay (Tables 2 and 3).

Species populations of shorebirds of the East Asian – Australasian Flyway that regularly visit Western Port Bay are in decline (Hansen et al 2016). Western Port Bay contains many important roosting and feeding sites that are utilized by nationally significant populations of shorebirds. The tables below identify sites that are regularly used by nationally significant populations (0.1%) of migrating shorebird species and sites that are regularly used by nationally significant numbers (over 2000) of migrating shorebirds on the western side of Western Port Bay.

Table 2: Sites that are regularly used by nationally significant populations of migrating shorebirds on the western side of Western Port Bay

Site	Species	Years site held nationally important populations (0.1%) of shorebird species
Barrallier Is	Curlew Sandpiper	2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2012, 2014, 2015, 2020, 2022.
	Double-banded Plover	2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2020, 2021.
	Far Eastern Curlew	2005, 2013
	Red Knot	2003.
	Red-necked Stint	2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2016, 2017, 2018, 2019, 2020, 2021, 2022.
	Sharp-tailed Sandpiper	2002, 2003, 2004
Fairhaven, French Is	Curlew Sandpiper	2002, 2003, 2004.
	Double-banded Plover	2002, 2006, 2007, 2009, 2010, 2012, 2015, 2016, 2022.
	Far Eastern Curlew	2002, 2003, 2010, 2015.
	Red-necked Stint	2002, 2003, 2004, 2005, 2006, 2007, 2009, 2010, 2011, 2014.
Hanns Inlet & Sandy Point	Far Eastern Curlew	2002, 2003, 2012
Hastings Marina	Red-necked Stint	2021, 2022.
Long Is	Far Eastern Curlew	2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010
	Red-necked Stint	2017
	Ruddy Turnstone	2005
Long Reef WP	Curlew Sandpiper	2014
	Far Eastern curlew	2016
	Red-necked Stint	2013, 2016, 2017
North-west French Is	Common Greenshank	2007
	Curlew Sandpiper	2014
	Far Eastern Curlew	2007
	Sharp-tailed Sandpiper	2014
Scrub Point	Red-necked Stint	2015, 2016, 2017, 2018
Tortoise Head	Double-banded Plover	2002, 2004, 2005, 2006, 2009, 2010, 2021
	Far Eastern Curlew	2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022.
	Red-necked Stint	2004
	Ruddy Turnstone	2003, 2006, 2007

Table 3 Sites that are regularly used by nationally significant numbers (over 2000) of migrating shorebirds on the western side of Western Port Bay

Site	Year	Number of Shorebirds
Barrallier	2002	6352
	2004	3003
		5071
	2005	2209
		3331
	2006	4195
	2007	3187
		3081
	2008	3225
		3318
	2009	2136
	2011	5001
	2012	3101
	2014	4133
	2020	3101
2021	3101	
2022	3537	
Long Reef	2013	5731
	2016	2069
Scrub Point	2015	3525
	2017	2037

Yours sincerely,

Brett Lane
Principal Consultant

Nature Advisory Pty Ltd

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Appendix 1: Likelihood of occurrence of waterbirds species listed under the EPBC Act and FFG Act

Common Name	Scientific name	EPBC-T	EPBC-M	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Birds								
Arctic Jaeger	<i>Stercorarius parasiticus</i>		M (CAMBA, JAMBA, ROKAMBA)		Marine, Antarctic to subantarctic waters. Adults present near Antarctic breeding colonies all year (Marchant & Higgins 1990).	3	10/02/1990	The study area and immediate surroundings do not support suitable habitat, it could occasionally chase gulls or terns into the Western Port Bay but the ecology of this species and the lack of records in the search area suggests this would be a rare event and this species is Unlikely to occur .
Australasian Bittern	<i>Botaurus poiciloptilus</i>	Endangered		Critically Endangered	Terrestrial wetlands, including a range of wetland types but prefers permanent water bodies with tall dense vegetation, particularly those dominated by sedges, rush, reeds or cutting grass (Marchant & Higgins 1990).	6	24/08/2007	Suitable habitat in the study area and immediate surroundings and a modest number of recent records in the immediate vicinity of the study area suggests this species has the Potential to occur .
Australasian Shoveler	<i>Spatula rhynchotis</i>			Vulnerable	Large and deep permanent bodies of water and aquatic flora abundant. Also occurs on billabongs, watercourses and flood waters on alluvial plains, freshwater meadows, shallow swamps, reed swamps, wooded lakes, sewage farms and farm dams (Marchant & Higgins 1990).	96	16/05/2021	Suitable habitat in the study area and immediate surroundings and a number of recent records in the immediate vicinity of the study area suggests this species is Likely to occur .
Australian Gull-billed Tern	<i>Gelochelidon macrotarsa</i>		M (CAMBA)	Endangered	Shallow freshwater and saline wetlands; intertidal mudflats, also in sheltered inshore marine waters where they roost on sandbars and beaches (Higgins & Davies 1996).	1	17/02/2007	Suitable habitat in the study area and immediate surroundings suggests this species is Likely to occur .
Australian Painted-snipe	<i>Rostratula australis</i>	Endangered		Critically Endangered	Generally inhabits shallow terrestrial freshwater wetlands, including temporary and permanent lakes, swamps and claypans. They also use inundated or waterlogged grassland or saltmarsh, dams, rice crops, sewage farms and bore drains. Typical sites include those with rank emergent tussocks of grass, sedges, rushes or reeds, or samphire; often with scattered clumps of <i>Lignum muehlenbeckia</i> or canegrass or sometimes tea-tree (<i>Melaleuca</i>). Sometimes utilises areas that are lined with trees, or that have some scattered fallen or washed-up timber (DAWE 2020).	None	N/A	Suitable habitat in the study area and immediate surroundings, however the absence of historical records in the immediate vicinity of the study area suggests this species is Unlikely to occur .
Bar-tailed Godwit	<i>Limosa lapponica</i>	Vulnerable	M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Vulnerable	Mainly coastal species, usually in sheltered bays, estuaries and lagoons with large intertidal mudflats or sandflats (Higgins & Davies 1996).	64	30/03/2015	Suitable habitat in the study area and immediate surroundings and a number of recent records in the immediate vicinity of the study area suggests this species is Likely to occur .
Black-tailed Godwit	<i>Limosa limosa</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Critically Endangered	Mainly coastal species, usually in sheltered bays, estuaries and lagoons with large intertidal mudflats or sandflats. In Vic. Found mainly round Port Phillip Bay (Higgins & Davies 1996).	3	23/03/1997	Suitable habitat in the study area and immediate surroundings and a modest number of recent records in the vicinity of the study area suggests this species has the Potential to occur .
Blue-billed Duck	<i>Oxyura australis</i>			Vulnerable	Terrestrial wetlands and prefers deep permanent, well vegetated water bodies. V (Marchant & Higgins 1990).	44	1/04/2020	Suitable habitat in the study area and immediate surroundings and a number of recent records in the immediate vicinity of the study area suggests this species is Likely to occur .

Common Name	Scientific name	EPBC-T	EPBC-M	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Broad-billed Sandpiper	<i>Limicola falcinellus</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)		Sheltered coastal embayment, including lagoons. Often near sewerage ponds, saltworks, creeks, swamps, and lakes near coast, usually with bare flats (Marchant & Higgins 1993).	None	N/A	Suitable habitat in the study area and immediate surroundings, however the absence of historical records in the vicinity of the study area suggests this species is Unlikely to occur .
Caspian Tern	<i>Hydroprogne caspia</i>		M (JAMBA)	Vulnerable	Sheltered coastal embayment, including harbours, lagoons, inlets, estuaries and river deltas, usually with sandy or muddy margins (Higgins & Davies 1996).	194	3/02/2020	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Common Greenshank	<i>Tringa nebularia</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Endangered	Inhabits wide range of coastal or inland wetlands with varying levels of salinity; mainly muddy margins or rocky shores of wetlands (Higgins & Davies 1996).	252	6/05/2019	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Common Sandpiper	<i>Actitis hypoleucos</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Vulnerable	Inhabits a wide range of coastal or inland wetlands with varying levels of salinity; mainly muddy margins or rocky shores of wetlands. In Victoria, mostly found Westernport and Port Phillip Bay (Higgins & Davies 1996).	36	18/01/2019	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Crested Tern	<i>Thalasseus bergii</i>		M (JAMBA)		Common along Australian coastlines. Almost always strictly marine, though occasional records do emanate from inland Australia (Marchant & Higgins 1990).	351	26/03/2021	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Curlew Sandpiper	<i>Calidris ferruginea</i>	Critically Endangered	M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Critically Endangered	Inhabits wide range of coastal or inland wetlands with varying levels of salinity; mainly muddy margins or rocky shores of wetlands (Higgins & Davies 1996).	281	30/03/2015	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Double-banded Plover	<i>Charadrius bicinctus</i>		M (Bonn A2H)		Inhabits wide range of coastal or inland wetlands with varying levels of salinity; mainly muddy margins or rocky shores of wetlands (Marchant & Higgins 1993).	101	30/03/2015	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Eastern Curlew	<i>Numenius madagascariensis</i>	Critically Endangered	M (Bonn A1, ROKAMBA, JAMBA, CAMBA)	Critically Endangered	Inhabits sheltered coasts, especially estuaries, embayment, harbours, inlets and coastal lagoons with large intertidal mudflats or sandflats, often with beds of sea grass (Higgins & Davies 1996).	325	3/02/2020	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Eastern Great Egret	<i>Ardea alba modesta</i>			Vulnerable	Terrestrial wetlands, estuarine and littoral habitats, and moist grasslands. Inland, use variety of habitats: prefer permanent waterbodies on floodplains (billabongs, watercourses, pools); shallows of deep permanent lakes, either open or vegetated, semi-permanent swamps with tall emergent vegetation and herb-dominated seasonal swamps with abundant aquatic flora (Marchant & Higgins 1990).	34	23/06/2019	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .

Common Name	Scientific name	EPBC-T	EPBC-M	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Eastern Osprey	<i>Pandion cristatus</i>		M (Bonn A2S)		Rare vagrant to Victoria (Marchant & Higgins 1993). Littoral and coastal habitats and terrestrial wetlands. They are mostly found in coastal areas but occasionally travel inland along major rivers (Johnstone & Storr 1998; Marchant & Higgins 1993; Olsen 1995). They require extensive areas of open fresh, brackish or saline water for foraging (Marchant & Higgins 1993).	1	9/08/2017	Suitable habitat in the study area and immediate surroundings, however only one historical record in the vicinity of the study area suggests this species is Unlikely to occur .
Fairy Tern	<i>Sternula nereis</i>	Vulnerable		Critically Endangered	Generally restricted to sheltered coasts both on the mainland, and inshore and offshore Islands. Occurs in embayment, such as harbours, inlets, bays, estuaries, lagoons, and ocean beaches. Also found on lakes and salt ponds (Higgins & Davies 1996).	70	26/03/2021	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Fork-tailed Swift	<i>Apus pacificus</i>		M (Bonn A1, ROKAMBA, JAMBA, CAMBA)		The species can occur in wet sclerophyll forest but mainly prefers open forest or plains. It is almost exclusively aerial and feeds up to hundreds of metres above the ground, but can feed among open forest canopy. The species breeds internationally and seldom roosts in trees (Higgins 1999).	2	24/05/1905	Suitable habitat in the study area and immediate surroundings, however only two historical records in the vicinity of the study area suggests this species is Unlikely to occur .
Freckled Duck	<i>Stictonetta naevosa</i>			Endangered	Terrestrial wetlands; prefer fresh, densely vegetated waters, particularly floodwater swamps and creeks vegetated with lignum or cane grass. During dry seasons or droughts, move off ephemeral breeding swamps and occupy large permanent waters (Marchant & Higgins 1990).	10	18/05/2019	No suitable habitat in the study area and immediate surroundings. Unlikely to occur .
Great Knot	<i>Calidris tenuirostris</i>	Critically Endangered	M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Critically Endangered	In Australasia, the species typically prefers sheltered coastal habitats, with large intertidal mudflats or sandflats. This includes inlets, bays, harbours, estuaries and lagoons. They are occasionally found on exposed reefs or rock platforms, shorelines with mangrove vegetation, ponds in saltworks, at swamps near the coast, saltlakes and non-tidal lagoons. The Great Knot rarely occurs on inland lakes and swamps (DAWE 2020).	21	2/05/1992	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Greater Sand Plover	<i>Charadrius leschenaultii</i>	Vulnerable	M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Vulnerable	Entirely coastal; mainly on sheltered sandy, shelly or muddy beaches with large intertidal mudflats or sandbanks. In Vic. Mostly in Corner inlet, Westernport and Port Phillip Bay (Marchant & Higgins 1993).	None	N/A	Suitable habitat in the study area and immediate surroundings, however the absence of historical records in the immediate vicinity of the study area suggests this species is Unlikely to occur .
Grey Plover	<i>Pluvialis squatarola</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Vulnerable	Entirely coastal, but occasionally inland. Mainly on marine shores, inlets, estuaries and lagoons where there are nearby large tidal mudflats for feeding and sandy beaches for roosting (Marchant & Higgins 1993).	16	28/11/1999	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .

Common Name	Scientific name	EPBC-T	EPBC-M	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Grey-tailed Tattler	<i>Tringa brevipes</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Critically Endangered	Often found on sheltered coasts with reefs and rock platforms or with intertidal mudflats. It can also be found at intertidal rocky, coral or stony reefs as well as platforms and islets that are exposed at low tide. It has been found around shores of rock, shingle, gravel or shells and also on intertidal mudflats in embayments, estuaries and coastal lagoons, especially fringed with mangroves. The species is rarely recorded in Victoria; however sightings have been reported in Gippsland, and east of McLaughlans Beach. The largest populations in Victoria are located at Corner Inlet, west to Westernport and Port Phillip Bays (DAWE 2020).	93	7/03/2008	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Hardhead	<i>Aythya australis</i>			Vulnerable	Inhabits large, deep waters where vegetation is abundant; particularly deep swamps and lakes, pools and creeks. Also occur on freshwater meadows, seasonal swamps with abundant aquatic flora, reed swamps, wooded lakes and swamps, rice fields, and sewage ponds (Marchant & Higgins 1990).	93	16/05/2021	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Hooded Plover	<i>Thinornis cucullatus</i>	Vulnerable		Vulnerable	Inhabits sandy ocean beaches, especially those that are broad and flat, with a wide wave-wash zone for feeding. Widespread and scattered across coastal Victoria. Numbers reduced due to disturbance by recreational activities on beaches (Marchant & Higgins 1993).	None	N/A	The study area and immediate surroundings do not support suitable habitat, this species prefers the high wave action and broad ocean side beaches thus this species is Unlikely to occur .
Latham's Snipe	<i>Gallinago hardwickii</i>		M (Bonn A2H, ROKAMBA, JAMBA)		Occurs in wide variety of permanent and ephemeral wetlands; it prefers open freshwater wetlands with dense cover nearby, such as the edges of rivers and creeks, bogs, swamps, waterholes. The species is widespread in southeast Australia and most of its population occurs in Victoria, except in the northwest of the state (Naarding 1983; Higgins & Davies 1996).	55	30/12/2018	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Lesser Sand Plover	<i>Charadrius mongolus</i>	Endangered	M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Endangered	Inhabits beaches of sheltered bays, harbours, and estuaries with large intertidal sandflats or mudflats. Regularly seen in Corner Inlet, Westernport and Port Phillip Bay (Marchant & Higgins 1993).	5	8/02/1997	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Lewin's Rail	<i>Lewinia pectoralis</i>			Vulnerable	Occurs in a variety of densely vegetated wetland habitats, fresh or saline, and usually with areas of standing water. Requires shallow water areas for foraging (Marchant & Higgins 1993).	34	25/08/2018	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Little Curlew	<i>Numenius minutus</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)		Occurs in short, dry grasslands and sedgeland with scattered shallow freshwater pools. Occasionally occurs in open woodland with grassy or burn understorey. Can be found in coastal swamps and on sheltered coasts on mudflats or sandflats (Higgins & Davies 1996).	None	N/A	Suitable habitat in the study area and immediate surroundings, however no historical record in the vicinity of the study area suggests this species is Unlikely to occur .
Little Tern	<i>Sternula albifrons</i>		M (Bonn A2S, ROKAMBA, JAMBA, CAMBA)	Critically Endangered	Sheltered coastal environments, including lagoons, estuaries, river mouths and deltas, lakes, bays, harbours and inlets, especially those with exposed sandbanks or sand spits. In Victoria, they are found mainly on the east coast between Mallacoota and Corner Inlet, rare elsewhere (Higgins & Davies 1996).	22	19/03/2000	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .

Common Name	Scientific name	EPBC-T	EPBC-M	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Magpie Goose	<i>Anseranas semipalmata</i>			Vulnerable	Terrestrial and aquatic habitats, but activities centered on wetlands, mainly those on floodplains of rivers (Marchant & Higgins 1990).	1	22/04/2020	Suitable habitat in the study area and immediate surroundings, however just one historical record in the vicinity of the study area suggests this species is Unlikely to occur .
Marsh Sandpiper	<i>Tringa stagnatilis</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Endangered	Inhabits sandy, muddy or rocky shores, usually coastal, rarely far inland. Often on beaches and mudflats, sandflats and occasionally rock shelves (Higgins & Davies 1996).	1	2/05/1992	Suitable habitat in the study area and immediate surroundings, however just one historical record in the vicinity of the study area suggests this species is Unlikely to occur .
Musk Duck	<i>Biziura lobata</i>			Vulnerable	It inhabits terrestrial wetlands, estuarine habitats and sheltered inland waters. Almost entirely aquatic; preferring deep water of large swamps, lakes and estuaries, where conditions are stable and aquatic flora abundant (Marchant & Higgins 1990).	132	8/01/2021	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Pacific Golden Plover	<i>Pluvialis fulva</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Vulnerable	Inhabits sandy, muddy or rocky shores, usually coastal, rarely far inland. Often on beaches and mudflats, sandflats and occasionally rock shelves (Marchant & Higgins 1993).	75	17/11/2018	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Plumed Egret	<i>Ardea intermedia plumifera</i>			Critically Endangered	It mainly inhabits terrestrial wetlands; only occasionally visit coastal wetlands and forages amongst aquatic vegetation in shallow water and requires trees for roosting and nesting. It often occurs in wetlands that contain vegetation, including bulrush (Marchant & Higgins 1990).	6	27/05/2021	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Red Knot	<i>Calidris canutus</i>	Endangered	M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Endangered	In Australasia, the Red Knot mainly inhabits intertidal mudflats, sandflats and sandy beaches of sheltered coasts, in estuaries, bays, inlets, lagoons and harbours; sometimes on sandy ocean beaches or shallow pools on exposed wave-cut rock platforms or coral reefs. They are occasionally seen on terrestrial saline wetlands near the coast, such as lakes, lagoons, pools and pans, and recorded on sewage ponds and saltworks, but rarely use freshwater swamps. They rarely use inland lakes or swamps (DAWE 2020).	24	28/11/1999	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Red-necked Stint	<i>Calidris ruficollis</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)		Inhabit shallow fresh to saline wetlands, usually coastal to near-coastal, but occasionally farther inland. Wetlands often have open fringing mudflats and low emergent or fringing vegetation (Higgins & Davies 1996).	342	28/11/2015	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Ruddy Turnstone	<i>Arenaria interpres</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Endangered	Inhabit shallow fresh to saline wetlands, usually coastal to near-coastal, but occasionally farther inland. Wetlands often have open fringing mudflats and low emergent or fringing vegetation (Higgins & Davies 1996).	61	10/06/2000	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Ruff	<i>Calidris pugnax</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)		Inhabit shallow fresh to saline wetlands, usually coastal to near-coastal, but occasionally farther inland. Wetlands often have open fringing mudflats and low emergent or fringing vegetation (Higgins & Davies 1996).	2	14/02/1998	Suitable habitat in the study area and immediate surroundings, however just two historical records in the vicinity of the study area suggests this species is Unlikely to occur .

Common Name	Scientific name	EPBC-T	EPBC-M	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
Sharp-tailed Sandpiper	<i>Calidris acuminata</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)		Inhabit shallow fresh to saline wetlands, usually coastal to near-coastal, but occasionally farther inland. Wetlands often have open fringing mudflats and low emergent or fringing vegetation (Higgins & Davies 1996).	156	3/02/2019	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Short-tailed Shearwater	<i>Ardenna tenuirostris</i>		M (JAMBA, CAMBA, ROKAMBA)		Marine, pelagic seabird that migrates from subantarctic and antarctic waters to breed in Australia, most notably on mainland Victoria and Bass Strait (Marchant & Higgins 1990). Breeds in large colonies, with nests constructed within burrows in the ground. Known to cover great distances to forage, with feeding locations sometimes hundreds of kilometres from the coast (Einoder & Goldsworthy 2005).	18	1/02/2010	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
South Polar Skua	<i>Catharacta maccormicki</i>		M (Bonn A2H, ROKAMBA, JAMBA)		Inhabit shallow fresh to saline wetlands, usually coastal to near-coastal, but occasionally farther inland. Wetlands often have open fringing mudflats and low emergent or fringing vegetation (Higgins & Davies 1996).	1	16/02/1997	The study area and immediate surroundings do not support suitable habitat, it could occasionally occur within the vicinity of the study area but the ecology of this species and the lack of records in the study area suggests this would be a rare event and this species is Unlikely to occur .
Southern Giant-Petrel	<i>Macronectes giganteus</i>	Endangered	M (Bonn A2S)	Endangered	Marine, Antarctic to subantarctic waters. Adults present near Antarctic breeding colonies all year (Marchant & Higgins 1990).	4	10/09/1988	The study area and immediate surroundings do not support suitable habitat, it could occasionally occur within the vicinity of the study area but the ecology of this species and the lack of records in the study area suggests this would be a rare event and this species is Unlikely to occur .
Terek Sandpiper	<i>Xenus cinereus</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Endangered	Inhabits saline intertidal mudflats in sheltered estuaries, harbours and lagoons; on islets, mudbanks, sandbanks or spits. In Victoria, they occur in Corner Inlet, Westernport Bay and Port Phillip Bay (Higgins & Davies 1996).	33	2/12/2010	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
Wandering Tattler	<i>Tringa incana</i>		M (Bonn A2H, JAMBA)		Essentially rocky coasts with reef and platforms, spits, piers, offshore islands and shingle beaches (Higgins & Davies 1996).	None	N/A	Suitable habitat in the study area and immediate surroundings, however no historical record in the vicinity of the study area suggests this species is Unlikely to occur .
Whimbrel	<i>Numenius phaeopus</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Endangered	Inhabit intertidal mudflats of sheltered coasts, harbours, lagoons, estuaries and river deltas. Prefer mudflats with mangrove, but also occur on open, unvegetated mudflats. In Victoria, small numbers occur at Gippsland lakes; most from Corner Inlet, Westernport and Port Phillip Bays (Higgins & Davies 1996).	24	20/11/2010	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>			Endangered	Maritime habitats, terrestrial large wetlands and coastal lands of tropical and temperate Australia and offshore islands, ranging far inland only over large rivers and wetlands. The eagles usually breed on coast and offshore islands and inland beside large lakes or rivers, usually in tall trees in or near water, also in cliffs, rock pinnacles and escarpments (Marchant & Higgins 1993).	72	28/12/2019	Suitable habitat in the study area and immediate surroundings and recent records in the vicinity of the study area suggests this species is Likely to occur .

Common Name	Scientific name	EPBC-T	EPBC-M	FFG	Habitat	Number of records	Date of last record	Likelihood of occurrence
White-winged Black Tern	<i>Chlidonias leucopterus</i>		M (CAMBA, JAMBA, ROKAMBA)		Inhabits coastal seas, exposed rocky coasts, and sandy beaches of sheltered coasts, especially those with banks, spits or flats composed of sand or shingle. In Victoria, this species is regularly recorded in Port Phillip Bay at Altona, Werribee and Lake Connewarre, and further west at Lake Murdeduke and L. Terangpom (Higgins & Davies 1996).	None	N/A	Suitable habitat in the study area and immediate surroundings, however no historical record in the vicinity of the study area suggests this species is Unlikely to occur.
Wood Sandpiper	<i>Tringa glareola</i>		M (Bonn A2H, ROKAMBA, JAMBA, CAMBA)	Endangered	Inhabits well vegetated, shallow, freshwater wetlands, such as swamps, lakes, pools, and waterholes; typically, with emergent, aquatic plants or grass, and dominated by taller fringing vegetation, such as dense stands of rushes or reed. In Victoria, they are mostly from Port Phillip Bay and in mid-Murray valley (Higgins & Davies 1996).	None	N/A	Suitable habitat in the study area and immediate surroundings, however no historical record in the vicinity of the study area suggests this species is Unlikely to occur.

Appendix 2: Barrallier Is - Migratory shorebird species and species counts.

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
12/02/2005	Bar-tailed Godwit	37	Barralliar Is	-38.27667	145.31389	0.01%	325,000
18/02/2006	Bar-tailed Godwit	7	Barralliar Is	-38.27667	145.31389	0.00%	
17/02/2007	Bar-tailed Godwit	35	Barralliar Is	-38.27667	145.31389	0.01%	
9/02/2008	Bar-tailed Godwit	48	Barralliar Is	-38.27667	145.31389	0.01%	
6/07/2013	Bar-tailed Godwit	1	Barralliar Is	-38.27667	145.31389	0.00%	
30/07/2016	Bar-tailed Godwit	4	Barralliar Is	-38.2765191	145.3139502	0.00%	
25/11/2018	Bar-tailed Godwit	13	Barralliar Is	-38.2765191	145.3139502	0.00%	
1/02/2003	Common Greenshank	33	Barralliar Is	-38.27667	145.31389	0.03%	110,000
25/11/2006	Common Greenshank	70	Barralliar Is	-38.27667	145.31389	0.06%	
15/11/2008	Common Greenshank	1	Barralliar Is	-38.27667	145.31389	0.00%	
14/02/2009	Common Greenshank	30	Barralliar Is	-38.27667	145.31389	0.03%	
21/11/2009	Common Greenshank	1	Barralliar Is	-38.27667	145.31389	0.00%	
13/02/2010	Common Greenshank	80	Barralliar Is	-38.27667	145.31389	0.07%	
21/07/2012	Common Greenshank	2	Barralliar Is	-38.27667	145.31389	0.00%	
15/02/2014	Common Greenshank	22	Barralliar Is	-38.27667	145.31389	0.02%	
21/02/2015	Common Greenshank	3	Barralliar Is	-38.27667	145.31389	0.00%	
29/01/2016	Common Greenshank	18	Barralliar Is	-38.2765191	145.3139502	0.02%	
15/03/2021	Common Greenshank	6	Barralliar Is	-38.2765191	145.3139502	0.01%	
29/03/2021	Common Greenshank	20	Barralliar Is	-38.2765191	145.3139502	0.02%	
10/07/2021	Common Greenshank	1	Barralliar Is	-38.27615591	145.3134325	0.00%	
16/02/2002	Curlew Sandpiper	1500	Barralliar Is	-38.27667	145.31389	1.67%	90,000
1/02/2003	Curlew Sandpiper	90	Barralliar Is	-38.27667	145.31389	0.10%	
22/02/2004	Curlew Sandpiper	400	Barralliar Is	-38.27667	145.31389	0.44%	
27/11/2004	Curlew Sandpiper	1000	Barralliar Is	-38.27667	145.31389	1.11%	
12/02/2005	Curlew Sandpiper	100	Barralliar Is	-38.27667	145.31389	0.11%	
11/11/2005	Curlew Sandpiper	300	Barralliar Is	-38.27667	145.31389	0.33%	
18/02/2006	Curlew Sandpiper	150	Barralliar Is	-38.27667	145.31389	0.17%	
25/11/2006	Curlew Sandpiper	170	Barralliar Is	-38.27667	145.31389	0.19%	
17/02/2007	Curlew Sandpiper	100	Barralliar Is	-38.27667	145.31389	0.11%	
24/11/2007	Curlew Sandpiper	60	Barralliar Is	-38.27667	145.31389	0.07%	
9/02/2008	Curlew Sandpiper	600	Barralliar Is	-38.27667	145.31389	0.67%	
15/11/2008	Curlew Sandpiper	300	Barralliar Is	-38.27667	145.31389	0.33%	
14/02/2009	Curlew Sandpiper	5	Barralliar Is	-38.27667	145.31389	0.01%	
21/11/2009	Curlew Sandpiper	130	Barralliar Is	-38.27667	145.31389	0.14%	
13/02/2010	Curlew Sandpiper	10	Barralliar Is	-38.27667	145.31389	0.01%	
20/11/2010	Curlew Sandpiper	45	Barralliar Is	-38.27667	145.31389	0.05%	
21/07/2012	Curlew Sandpiper	1	Barralliar Is	-38.27667	145.31389	0.00%	
17/11/2012	Curlew Sandpiper	100	Barralliar Is	-38.27667	145.31389	0.11%	
9/02/2013	Curlew Sandpiper	28	Barralliar Is	-38.27667	145.31389	0.03%	
15/02/2014	Curlew Sandpiper	150	Barralliar Is	-38.27667	145.31389	0.17%	
21/02/2015	Curlew Sandpiper	120	Barralliar Is	-38.27667	145.31389	0.13%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
23/12/2016	Curlew Sandpiper	10	Barralliar Is	-38.27655191	145.3139502	0.01%	
21/11/2017	Curlew Sandpiper	6	Barralliar Is	-38.27655191	145.3139502	0.01%	
3/02/2018	Curlew Sandpiper	1	Barralliar Is	-38.27655191	145.3139502	0.00%	
25/11/2018	Curlew Sandpiper	10	Barralliar Is	-38.27655191	145.3139502	0.01%	
17/02/2019	Curlew Sandpiper	1	Barralliar Is	-38.27655191	145.3139502	0.00%	
18/11/2020	Curlew Sandpiper	300	Barralliar Is	-38.27655191	145.3139502	0.33%	
28/02/2021	Curlew Sandpiper	80	Barralliar Is	-38.27655191	145.3139502	0.09%	
15/03/2021	Curlew Sandpiper	20	Barralliar Is	-38.27655191	145.3139502	0.02%	
29/03/2021	Curlew Sandpiper	10	Barralliar Is	-38.27655191	145.3139502	0.01%	
8/11/2021	Curlew Sandpiper	10	Barralliar Is	-38.27655191	145.3139502	0.01%	
30/01/2022	Curlew Sandpiper	320	Barralliar Is	-38.27615591	145.3134325	0.36%	
16/02/2002	Double-banded Plover	1	Barralliar Is	-38.27667	145.31389	0.01%	19000
22/02/2004	Double-banded Plover	10	Barralliar Is	-38.27667	145.31389	0.05%	
17/07/2004	Double-banded Plover	1	Barralliar Is	-38.27667	145.31389	0.01%	
18/02/2006	Double-banded Plover	2	Barralliar Is	-38.27667	145.31389	0.01%	
17/02/2007	Double-banded Plover	2	Barralliar Is	-38.27667	145.31389	0.01%	
9/02/2008	Double-banded Plover	4	Barralliar Is	-38.27667	145.31389	0.02%	
13/02/2010	Double-banded Plover	8	Barralliar Is	-38.27667	145.31389	0.04%	
10/07/2010	Double-banded Plover	38	Barralliar Is	-38.27667	145.31389	0.20%	
30/07/2011	Double-banded Plover	75	Barralliar Is	-38.27667	145.31389	0.39%	
21/07/2012	Double-banded Plover	48	Barralliar Is	-38.27667	145.31389	0.25%	
6/07/2013	Double-banded Plover	80	Barralliar Is	-38.27667	145.31389	0.42%	
15/02/2014	Double-banded Plover	1	Barralliar Is	-38.27667	145.31389	0.01%	
26/07/2014	Double-banded Plover	104	Barralliar Is	-38.27667	145.31389	0.55%	
21/02/2015	Double-banded Plover	5	Barralliar Is	-38.27667	145.31389	0.03%	
18/07/2015	Double-banded Plover	69	Barralliar Is	-38.27667	145.31389	0.36%	
30/07/2016	Double-banded Plover	53	Barralliar Is	-38.27655191	145.3139502	0.28%	
8/07/2017	Double-banded Plover	30	Barralliar Is	-38.27655191	145.3139502	0.16%	
14/07/2018	Double-banded Plover	10	Barralliar Is	-38.27655191	145.3139502	0.05%	
15/06/2019	Double-banded Plover	10	Barralliar Is	-38.27655191	145.3139502	0.05%	
21/06/2020	Double-banded Plover	18	Barralliar Is	-38.27655191	145.3139502	0.09%	
15/03/2021	Double-banded Plover	20	Barralliar Is	-38.27655191	145.3139502	0.11%	
29/03/2021	Double-banded Plover	22	Barralliar Is	-38.27655191	145.3139502	0.12%	
10/07/2021	Double-banded Plover	47	Barralliar Is	-38.27615591	145.3134325	0.25%	
12/02/2005	Eastern Curlew	55	Barralliar Is	-38.27667	145.31389	0.16%	35000
30/07/2011	Eastern Curlew	7	Barralliar Is	-38.27667	145.31389	0.02%	
26/11/2011	Eastern Curlew	1	Barralliar Is	-38.27667	145.31389	0.00%	
21/07/2012	Eastern Curlew	16	Barralliar Is	-38.27667	145.31389	0.05%	
9/02/2013	Eastern Curlew	40	Barralliar Is	-38.27667	145.31389	0.11%	
6/07/2013	Eastern Curlew	10	Barralliar Is	-38.27667	145.31389	0.03%	
30/07/2016	Eastern Curlew	7	Barralliar Is	-38.27655191	145.3139502	0.02%	
11/02/2017	Eastern Curlew	4	Barralliar Is	-38.27655191	145.3139502	0.01%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
10/07/2021	Eastern Curlew	2	Barralliar Is	-38.27615591	145.3134325	0.01%	
30/01/2022	Eastern Curlew	1	Barralliar Is	-38.27615591	145.3134325	0.00%	
16/02/2002	Grey-tailed Tattler	1	Barralliar Is	-38.27667	145.31389	0.00%	70000
27/11/2004	Lesser Sand Plover	1	Barralliar Is	-38.27667	145.31389	0.00%	227500
9/02/2013	Lesser Sand Plover	1	Barralliar Is	-38.27667	145.31389	0.00%	
16/02/2002	Red Knot	200	Barralliar Is	-38.27667	145.31389	0.18%	110000
1/02/2003	Red Knot	10	Barralliar Is	-38.27667	145.31389	0.01%	
22/02/2004	Red Knot	1	Barralliar Is	-38.27667	145.31389	0.00%	
18/02/2006	Red Knot	6	Barralliar Is	-38.27667	145.31389	0.01%	
24/11/2007	Red Knot	6	Barralliar Is	-38.27667	145.31389	0.01%	
9/02/2008	Red Knot	50	Barralliar Is	-38.27667	145.31389	0.05%	
15/11/2008	Red Knot	7	Barralliar Is	-38.27667	145.31389	0.01%	
21/11/2009	Red Knot	1	Barralliar Is	-38.27667	145.31389	0.00%	
21/11/2017	Red Knot	1	Barralliar Is	-38.27655191	145.3139502	0.00%	
16/02/2002	Red-necked Stint	4500	Barralliar Is	-38.27667	145.31389	0.95%	475000
1/02/2003	Red-necked Stint	500	Barralliar Is	-38.27667	145.31389	0.11%	
22/02/2004	Red-necked Stint	2400	Barralliar Is	-38.27667	145.31389	0.51%	
27/11/2004	Red-necked Stint	3800	Barralliar Is	-38.27667	145.31389	0.80%	
12/02/2005	Red-necked Stint	2000	Barralliar Is	-38.27667	145.31389	0.42%	
11/11/2005	Red-necked Stint	3000	Barralliar Is	-38.27667	145.31389	0.63%	
18/02/2006	Red-necked Stint	4000	Barralliar Is	-38.27667	145.31389	0.84%	
25/11/2006	Red-necked Stint	1600	Barralliar Is	-38.27667	145.31389	0.34%	
17/02/2007	Red-necked Stint	3000	Barralliar Is	-38.27667	145.31389	0.63%	
24/11/2007	Red-necked Stint	3000	Barralliar Is	-38.27667	145.31389	0.63%	
9/02/2008	Red-necked Stint	2500	Barralliar Is	-38.27667	145.31389	0.53%	
15/11/2008	Red-necked Stint	3000	Barralliar Is	-38.27667	145.31389	0.63%	
14/02/2009	Red-necked Stint	1000	Barralliar Is	-38.27667	145.31389	0.21%	
21/11/2009	Red-necked Stint	2000	Barralliar Is	-38.27667	145.31389	0.42%	
13/02/2010	Red-necked Stint	600	Barralliar Is	-38.27667	145.31389	0.13%	
10/07/2010	Red-necked Stint	2	Barralliar Is	-38.27667	145.31389	0.00%	
20/11/2010	Red-necked Stint	500	Barralliar Is	-38.27667	145.31389	0.11%	
30/07/2011	Red-necked Stint	220	Barralliar Is	-38.27667	145.31389	0.05%	
26/11/2011	Red-necked Stint	5000	Barralliar Is	-38.27667	145.31389	1.05%	
21/07/2012	Red-necked Stint	450	Barralliar Is	-38.27667	145.31389	0.09%	
17/11/2012	Red-necked Stint	3000	Barralliar Is	-38.27667	145.31389	0.63%	
9/02/2013	Red-necked Stint	1800	Barralliar Is	-38.27667	145.31389	0.38%	
6/07/2013	Red-necked Stint	350	Barralliar Is	-38.27667	145.31389	0.07%	
16/11/2013	Red-necked Stint	50	Barralliar Is	-38.27667	145.31389	0.01%	
15/02/2014	Red-necked Stint	3900	Barralliar Is	-38.27667	145.31389	0.82%	
26/07/2014	Red-necked Stint	300	Barralliar Is	-38.27667	145.31389	0.06%	
18/07/2015	Red-necked Stint	325	Barralliar Is	-38.27667	145.31389	0.07%	
28/11/2015	Red-necked Stint	350	Barralliar Is	-38.27667	145.31389	0.07%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
30/07/2016	Red-necked Stint	14	Barralliar Is	-38.27655191	145.3139502	0.00%	
23/12/2016	Red-necked Stint	660	Barralliar Is	-38.27655191	145.3139502	0.14%	
11/02/2017	Red-necked Stint	1200	Barralliar Is	-38.27655191	145.3139502	0.25%	
8/07/2017	Red-necked Stint	30	Barralliar Is	-38.27655191	145.3139502	0.01%	
21/11/2017	Red-necked Stint	100	Barralliar Is	-38.27655191	145.3139502	0.02%	
3/02/2018	Red-necked Stint	500	Barralliar Is	-38.27655191	145.3139502	0.11%	
14/07/2018	Red-necked Stint	10	Barralliar Is	-38.27655191	145.3139502	0.00%	
25/11/2018	Red-necked Stint	1725	Barralliar Is	-38.27655191	145.3139502	0.36%	
19/12/2018	Red-necked Stint	30	Barralliar Is	-38.27615591	145.3134325	0.01%	
17/02/2019	Red-necked Stint	700	Barralliar Is	-38.27655191	145.3139502	0.15%	
15/06/2019	Red-necked Stint	40	Barralliar Is	-38.27655191	145.3139502	0.01%	
21/06/2020	Red-necked Stint	25	Barralliar Is	-38.27655191	145.3139502	0.01%	
18/11/2020	Red-necked Stint	2800	Barralliar Is	-38.27655191	145.3139502	0.59%	
28/02/2021	Red-necked Stint	2500	Barralliar Is	-38.27655191	145.3139502	0.53%	
15/03/2021	Red-necked Stint	1800	Barralliar Is	-38.27655191	145.3139502	0.38%	
29/03/2021	Red-necked Stint	3080	Barralliar Is	-38.27655191	145.3139502	0.65%	
10/07/2021	Red-necked Stint	147	Barralliar Is	-38.27615591	145.3134325	0.03%	
8/11/2021	Red-necked Stint	500	Barralliar Is	-38.27655191	145.3139502	0.11%	
30/01/2022	Red-necked Stint	3215	Barralliar Is	-38.27615591	145.3134325	0.68%	
22/02/2004	Ruddy Turnstone	2	Barralliar Is	-38.27667	145.31389	0.01%	30000
11/11/2005	Ruddy Turnstone	1	Barralliar Is	-38.27667	145.31389	0.00%	
9/02/2008	Ruddy Turnstone	3	Barralliar Is	-38.27667	145.31389	0.01%	
18/11/2020	Ruddy Turnstone	1	Barralliar Is	-38.27655191	145.3139502	0.00%	
16/02/2002	Sharp-tailed Sandpiper	150	Barralliar Is	-38.27667	145.31389	0.18%	85000
1/02/2003	Sharp-tailed Sandpiper	162	Barralliar Is	-38.27667	145.31389	0.19%	
22/02/2004	Sharp-tailed Sandpiper	90	Barralliar Is	-38.27667	145.31389	0.11%	
27/11/2004	Sharp-tailed Sandpiper	270	Barralliar Is	-38.27667	145.31389	0.32%	
12/02/2005	Sharp-tailed Sandpiper	20	Barralliar Is	-38.27667	145.31389	0.02%	
11/11/2005	Sharp-tailed Sandpiper	30	Barralliar Is	-38.27667	145.31389	0.04%	
18/02/2006	Sharp-tailed Sandpiper	30	Barralliar Is	-38.27667	145.31389	0.04%	
25/11/2006	Sharp-tailed Sandpiper	57	Barralliar Is	-38.27667	145.31389	0.07%	
17/02/2007	Sharp-tailed Sandpiper	50	Barralliar Is	-38.27667	145.31389	0.06%	
24/11/2007	Sharp-tailed Sandpiper	15	Barralliar Is	-38.27667	145.31389	0.02%	
9/02/2008	Sharp-tailed Sandpiper	20	Barralliar Is	-38.27667	145.31389	0.02%	
15/11/2008	Sharp-tailed Sandpiper	10	Barralliar Is	-38.27667	145.31389	0.01%	
21/11/2009	Sharp-tailed Sandpiper	4	Barralliar Is	-38.27667	145.31389	0.00%	
13/02/2010	Sharp-tailed Sandpiper	10	Barralliar Is	-38.27667	145.31389	0.01%	
17/11/2012	Sharp-tailed Sandpiper	1	Barralliar Is	-38.27667	145.31389	0.00%	
9/02/2013	Sharp-tailed Sandpiper	15	Barralliar Is	-38.27667	145.31389	0.02%	
15/02/2014	Sharp-tailed Sandpiper	60	Barralliar Is	-38.27667	145.31389	0.07%	
10/07/2010	Whimbrel	1	Barralliar Is	-38.27667	145.31389	0.00%	65000
21/07/2012	Whimbrel	2	Barralliar Is	-38.27667	145.31389	0.00%	
30/07/2016	Whimbrel	4	Barralliar Is	-38.27655191	145.3139502	0.01%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
30/01/2022	Whimbrel	1	Barralliar Is	-38.27615591	145.3134325	0.00%	

Appendix 3: Fairhaven – Chillott Rocks - Migratory shorebird species and species counts.

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
20/11/2010	Bar-tailed Godwit	1	Fairhaven / Chillcott Rocks	-38.35685902	145.27286	0.00%	325000
16/02/2002	Common Greenshank	3	Fairhaven / Chillcott Rocks	-38.35663029	145.2727313	0.00%	110000
13/07/2002	Common Greenshank	3	Fairhaven / Chillcott Rocks	-38.35663029	145.2729029	0.00%	
22/11/2003	Common Greenshank	1	Fairhaven / Chillcott Rocks	-38.35666394	145.27286	0.00%	
22/02/2004	Common Greenshank	36	Fairhaven / Chillcott Rocks	-38.35659664	145.27286	0.03%	
18/02/2006	Common Greenshank	8	Fairhaven / Chillcott Rocks	-38.35673125	145.2727742	0.01%	
25/11/2006	Common Greenshank	36	Fairhaven / Chillcott Rocks	-38.35652933	145.2726884	0.03%	
11/02/2017	Common Greenshank	20	Fairhaven / Chillcott Rocks	-38.35731358	145.2722168	0.02%	
18/11/2017	Common Greenshank	21	Fairhaven / Chillcott Rocks	-38.35704436	145.2724743	0.02%	
3/02/2018	Common Greenshank	23	Fairhaven / Chillcott Rocks	-38.35744756	145.2724743	0.02%	
24/11/2018	Common Greenshank	9	Fairhaven / Chillcott Rocks	-38.35682475	145.2726669	0.01%	
30/11/2019	Common Greenshank	16	Fairhaven / Chillcott Rocks	-38.35755827	145.2725381	0.01%	
8/02/2020	Common Greenshank	17	Fairhaven / Chillcott Rocks	-38.35856783	145.272109	0.02%	
13/02/2021	Common Greenshank	8	Fairhaven / Chillcott Rocks	-38.35846691	145.2721404	0.01%	
15/03/2021	Common Greenshank	19	Fairhaven / Chillcott Rocks	-38.35846691	145.2721404	0.02%	
29/03/2021	Common Greenshank	19	Fairhaven / Chillcott Rocks	-38.35402419	145.2741398	0.02%	
6/11/2021	Common Greenshank	16	Fairhaven / Chillcott Rocks	-38.35812985	145.2724232	0.01%	
2/02/2022	Common Greenshank	12	Fairhaven / Chillcott Rocks	-38.35877265	145.2741398	0.01%	
16/02/2002	Curlew Sandpiper	400	Fairhaven / Chillcott Rocks	-38.35663029	145.2727313	0.44%	90000
13/07/2002	Curlew Sandpiper	12	Fairhaven / Chillcott Rocks	-38.35663029	145.2729029	0.01%	
9/11/2002	Curlew Sandpiper	15	Fairhaven / Chillcott Rocks	-38.35663029	145.2729029	0.02%	
1/02/2003	Curlew Sandpiper	150	Fairhaven / Chillcott Rocks	-38.35683221	145.2729029	0.17%	
22/11/2003	Curlew Sandpiper	61	Fairhaven / Chillcott Rocks	-38.35666394	145.27286	0.07%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
22/02/2004	Curlew Sandpiper	150	Fairhaven / Chilcott Rocks	-38.35659664	145.27286	0.17%	
27/11/2004	Curlew Sandpiper	3	Fairhaven / Chilcott Rocks	-38.35666394	145.2730317	0.00%	
12/02/2005	Curlew Sandpiper	32	Fairhaven / Chilcott Rocks	-38.35659664	145.2729459	0.04%	
11/11/2005	Curlew Sandpiper	2	Fairhaven / Chilcott Rocks	-38.35659664	145.2727742	0.00%	
18/02/2006	Curlew Sandpiper	2	Fairhaven / Chilcott Rocks	-38.35673125	145.2727742	0.00%	
25/11/2006	Curlew Sandpiper	10	Fairhaven / Chilcott Rocks	-38.35652933	145.2726884	0.01%	
17/02/2007	Curlew Sandpiper	1	Fairhaven / Chilcott Rocks	-38.35666394	145.2727742	0.00%	
21/11/2009	Curlew Sandpiper	2	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.00%	
13/02/2010	Curlew Sandpiper	5	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.01%	
5/02/2011	Curlew Sandpiper	20	Fairhaven / Chilcott Rocks	-38.35673125	145.2729459	0.02%	
11/02/2012	Curlew Sandpiper	3	Fairhaven / Chilcott Rocks	-38.35659664	145.27286	0.00%	
15/02/2014	Curlew Sandpiper	17	Fairhaven / Chilcott Rocks	-38.35666394	145.2729459	0.02%	
21/02/2015	Curlew Sandpiper	30	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.03%	
11/02/2017	Curlew Sandpiper	10	Fairhaven / Chilcott Rocks	-38.35731358	145.2722168	0.01%	
14/11/2020	Curlew Sandpiper	2	Fairhaven / Chilcott Rocks	-38.35614486	145.2726239	0.00%	
13/07/2002	Double-banded Plover	46	Fairhaven / Chilcott Rocks	-38.35663029	145.2729029	0.24%	19000
22/02/2004	Double-banded Plover	6	Fairhaven / Chilcott Rocks	-38.35659664	145.27286	0.03%	
26/06/2006	Double-banded Plover	20	Fairhaven / Chilcott Rocks	-38.35673125	145.2729459	0.11%	
16/06/2007	Double-banded Plover	48	Fairhaven / Chilcott Rocks	-38.35679855	145.2729459	0.25%	
9/02/2008	Double-banded Plover	1	Fairhaven / Chilcott Rocks	-38.35659664	145.2727742	0.01%	
11/07/2009	Double-banded Plover	70	Fairhaven / Chilcott Rocks	-38.35673125	145.2729459	0.37%	
10/07/2010	Double-banded Plover	70	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.37%	
21/07/2012	Double-banded Plover	40	Fairhaven / Chilcott Rocks	-38.35659664	145.2729459	0.21%	
6/07/2013	Double-banded Plover	8	Fairhaven / Chilcott Rocks	-38.35652933	145.2729459	0.04%	
16/11/2013	Double-banded Plover	1	Fairhaven / Chilcott Rocks	-38.35666394	145.27286	0.01%	
22/11/2014	Double-banded Plover	4	Fairhaven / Chilcott Rocks	-38.35659664	145.2727742	0.02%	
21/02/2015	Double-banded Plover	2	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.01%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
18/07/2015	Double-banded Plover	56	Fairhaven / Chilcott Rocks	-38.35674528	145.272787	0.29%	
4/08/2016	Double-banded Plover	70	Fairhaven / Chilcott Rocks	-38.35746102	145.2727747	0.37%	
29/03/2021	Double-banded Plover	16	Fairhaven / Chilcott Rocks	-38.35402419	145.2741398	0.08%	
10/07/2021	Double-banded Plover	4	Fairhaven / Chilcott Rocks	-38.36136727	145.2736733	0.02%	
2/07/2022	Double-banded Plover	30	Fairhaven / Chilcott Rocks	-38.35798859	145.2732386	0.16%	
16/02/2002	Eastern Curlew	68	Fairhaven / Chilcott Rocks	-38.35663029	145.2727313	0.19%	35000
9/11/2002	Eastern Curlew	20	Fairhaven / Chilcott Rocks	-38.35663029	145.2729029	0.06%	
1/02/2003	Eastern Curlew	35	Fairhaven / Chilcott Rocks	-38.35683221	145.2729029	0.10%	
7/07/2005	Eastern Curlew	1	Fairhaven / Chilcott Rocks	-38.35666394	145.2729459	0.00%	
11/11/2005	Eastern Curlew	9	Fairhaven / Chilcott Rocks	-38.35659664	145.2727742	0.03%	
26/06/2006	Eastern Curlew	1	Fairhaven / Chilcott Rocks	-38.35673125	145.2729459	0.00%	
25/11/2006	Eastern Curlew	3	Fairhaven / Chilcott Rocks	-38.35652933	145.2726884	0.01%	
17/02/2007	Eastern Curlew	73	Fairhaven / Chilcott Rocks	-38.35666394	145.2727742	0.21%	
16/06/2007	Eastern Curlew	2	Fairhaven / Chilcott Rocks	-38.35679855	145.2729459	0.01%	
9/02/2008	Eastern Curlew	1	Fairhaven / Chilcott Rocks	-38.35659664	145.2727742	0.00%	
13/02/2010	Eastern Curlew	68	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.19%	
20/11/2010	Eastern Curlew	160	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.46%	
5/02/2011	Eastern Curlew	10	Fairhaven / Chilcott Rocks	-38.35673125	145.2729459	0.03%	
11/02/2012	Eastern Curlew	35	Fairhaven / Chilcott Rocks	-38.35659664	145.27286	0.10%	
21/02/2015	Eastern Curlew	36	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.10%	
23/01/2016	Eastern Curlew	30	Fairhaven / Chilcott Rocks	-38.35746102	145.2727747	0.09%	
3/02/2018	Eastern Curlew	4	Fairhaven / Chilcott Rocks	-38.35744756	145.2724743	0.01%	
15/06/2019	Eastern Curlew	4	Fairhaven / Chilcott Rocks	-38.35766616	145.2724952	0.01%	
8/02/2020	Eastern Curlew	14	Fairhaven / Chilcott Rocks	-38.35856783	145.272109	0.04%	
13/02/2021	Eastern Curlew	2	Fairhaven / Chilcott Rocks	-38.35846691	145.2721404	0.01%	
29/03/2021	Eastern Curlew	3	Fairhaven / Chilcott Rocks	-38.35402419	145.2741398	0.01%	
16/06/2007	Grey-tailed Tattler	1	Fairhaven / Chilcott Rocks	-38.35679855	145.2729459	0.00%	70000

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
6/11/2021	Latham's Snipe	12	Fairhaven / Chilcott Rocks	-38.35812985	145.2724232	0.03%	35000
21/11/2009	Pacific Golden Plover	1	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.00%	120000
16/02/2002	Red-necked Stint	800	Fairhaven / Chilcott Rocks	-38.35663029	145.2727313	0.17%	475000
13/07/2002	Red-necked Stint	200	Fairhaven / Chilcott Rocks	-38.35663029	145.2729029	0.04%	
9/11/2002	Red-necked Stint	220	Fairhaven / Chilcott Rocks	-38.35663029	145.2729029	0.05%	
1/02/2003	Red-necked Stint	904	Fairhaven / Chilcott Rocks	-38.35683221	145.2729029	0.19%	
14/06/2003	Red-necked Stint	30	Fairhaven / Chilcott Rocks	-38.35663029	145.2729029	0.01%	
22/11/2003	Red-necked Stint	850	Fairhaven / Chilcott Rocks	-38.35666394	145.27286	0.18%	
22/02/2004	Red-necked Stint	800	Fairhaven / Chilcott Rocks	-38.35659664	145.27286	0.17%	
27/11/2004	Red-necked Stint	214	Fairhaven / Chilcott Rocks	-38.35666394	145.2730317	0.05%	
12/02/2005	Red-necked Stint	574	Fairhaven / Chilcott Rocks	-38.35659664	145.2729459	0.12%	
11/11/2005	Red-necked Stint	500	Fairhaven / Chilcott Rocks	-38.35659664	145.2727742	0.11%	
18/02/2006	Red-necked Stint	400	Fairhaven / Chilcott Rocks	-38.35673125	145.2727742	0.08%	
26/06/2006	Red-necked Stint	18	Fairhaven / Chilcott Rocks	-38.35673125	145.2729459	0.00%	
25/11/2006	Red-necked Stint	600	Fairhaven / Chilcott Rocks	-38.35652933	145.2726884	0.13%	
17/02/2007	Red-necked Stint	775	Fairhaven / Chilcott Rocks	-38.35666394	145.2727742	0.16%	
16/06/2007	Red-necked Stint	66	Fairhaven / Chilcott Rocks	-38.35679855	145.2729459	0.01%	
24/11/2007	Red-necked Stint	500	Fairhaven / Chilcott Rocks	-38.35639472	145.2729459	0.11%	
9/02/2008	Red-necked Stint	185	Fairhaven / Chilcott Rocks	-38.35659664	145.2727742	0.04%	
15/11/2008	Red-necked Stint	202	Fairhaven / Chilcott Rocks	-38.35701983	145.2727956	0.04%	
11/07/2009	Red-necked Stint	200	Fairhaven / Chilcott Rocks	-38.35673125	145.2729459	0.04%	
21/11/2009	Red-necked Stint	500	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.11%	
13/02/2010	Red-necked Stint	350	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.07%	
10/07/2010	Red-necked Stint	60	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.01%	
20/11/2010	Red-necked Stint	630	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.13%	
5/02/2011	Red-necked Stint	540	Fairhaven / Chilcott Rocks	-38.35673125	145.2729459	0.11%	
26/11/2011	Red-necked Stint	550	Fairhaven / Chilcott Rocks	-38.35659664	145.27286	0.12%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
11/02/2012	Red-necked Stint	300	Fairhaven / Chilcott Rocks	-38.35659664	145.27286	0.06%	
21/07/2012	Red-necked Stint	28	Fairhaven / Chilcott Rocks	-38.35659664	145.2729459	0.01%	
17/11/2012	Red-necked Stint	90	Fairhaven / Chilcott Rocks	-38.35659664	145.27286	0.02%	
6/07/2013	Red-necked Stint	7	Fairhaven / Chilcott Rocks	-38.35652933	145.2729459	0.00%	
16/11/2013	Red-necked Stint	304	Fairhaven / Chilcott Rocks	-38.35666394	145.27286	0.06%	
15/02/2014	Red-necked Stint	450	Fairhaven / Chilcott Rocks	-38.35666394	145.2729459	0.09%	
22/11/2014	Red-necked Stint	170	Fairhaven / Chilcott Rocks	-38.35659664	145.2727742	0.04%	
21/02/2015	Red-necked Stint	38	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.01%	
18/07/2015	Red-necked Stint	250	Fairhaven / Chilcott Rocks	-38.35674528	145.272787	0.05%	
4/08/2016	Red-necked Stint	70	Fairhaven / Chilcott Rocks	-38.35746102	145.2727747	0.01%	
3/12/2016	Red-necked Stint	160	Fairhaven / Chilcott Rocks	-38.35762928	145.2727318	0.03%	
11/02/2017	Red-necked Stint	50	Fairhaven / Chilcott Rocks	-38.35731358	145.2722168	0.01%	
8/07/2017	Red-necked Stint	3	Fairhaven / Chilcott Rocks	-38.35773023	145.2717447	0.00%	
18/11/2017	Red-necked Stint	1	Fairhaven / Chilcott Rocks	-38.35704436	145.2724743	0.00%	
24/11/2018	Red-necked Stint	22	Fairhaven / Chilcott Rocks	-38.35682475	145.2726669	0.00%	
14/11/2020	Red-necked Stint	88	Fairhaven / Chilcott Rocks	-38.35614486	145.2726239	0.02%	
13/02/2021	Red-necked Stint	60	Fairhaven / Chilcott Rocks	-38.35846691	145.2721404	0.01%	
29/03/2021	Red-necked Stint	53	Fairhaven / Chilcott Rocks	-38.35402419	145.2741398	0.01%	
10/07/2021	Red-necked Stint	27	Fairhaven / Chilcott Rocks	-38.36136727	145.2736733	0.01%	
6/11/2021	Red-necked Stint	165	Fairhaven / Chilcott Rocks	-38.35812985	145.2724232	0.03%	
2/02/2022	Red-necked Stint	80	Fairhaven / Chilcott Rocks	-38.35877265	145.2741398	0.02%	
16/02/2002	Royal Spoonbill	6	Fairhaven / Chilcott Rocks	-38.35663029	145.2727313		
16/02/2002	Ruddy Turnstone	8	Fairhaven / Chilcott Rocks	-38.35663029	145.2727313	0.03%	30000
13/07/2002	Ruddy Turnstone	4	Fairhaven / Chilcott Rocks	-38.35663029	145.2729029	0.01%	
22/02/2004	Ruddy Turnstone	5	Fairhaven / Chilcott Rocks	-38.35659664	145.27286	0.02%	
12/02/2005	Ruddy Turnstone	25	Fairhaven / Chilcott Rocks	-38.35659664	145.2729459	0.08%	
18/02/2006	Ruddy Turnstone	26	Fairhaven / Chilcott Rocks	-38.35673125	145.2727742	0.09%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
9/02/2008	Ruddy Turnstone	14	Fairhaven / Chilcott Rocks	-38.35659664	145.2727742	0.05%	
11/02/2017	Ruddy Turnstone	18	Fairhaven / Chilcott Rocks	-38.35731358	145.2722168	0.06%	
29/03/2021	Ruddy Turnstone	12	Fairhaven / Chilcott Rocks	-38.35402419	145.2741398	0.04%	
16/02/2002	Sharp-tailed Sandpiper	17	Fairhaven / Chilcott Rocks	-38.35663029	145.2727313	0.02%	85000
1/02/2003	Sharp-tailed Sandpiper	16	Fairhaven / Chilcott Rocks	-38.35683221	145.2729029	0.02%	
22/11/2003	Sharp-tailed Sandpiper	3	Fairhaven / Chilcott Rocks	-38.35666394	145.27286	0.00%	
22/02/2004	Sharp-tailed Sandpiper	10	Fairhaven / Chilcott Rocks	-38.35659664	145.27286	0.01%	
12/02/2005	Sharp-tailed Sandpiper	2	Fairhaven / Chilcott Rocks	-38.35659664	145.2729459	0.00%	
11/11/2005	Sharp-tailed Sandpiper	6	Fairhaven / Chilcott Rocks	-38.35659664	145.2727742	0.01%	
21/11/2009	Sharp-tailed Sandpiper	1	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.00%	
5/02/2011	Sharp-tailed Sandpiper	1	Fairhaven / Chilcott Rocks	-38.35673125	145.2729459	0.00%	
11/02/2012	Sharp-tailed Sandpiper	1	Fairhaven / Chilcott Rocks	-38.35659664	145.27286	0.00%	
1/02/2003	Terek Sandpiper	2	Fairhaven / Chilcott Rocks	-38.35683221	145.2729029	0.00%	50000
21/11/2009	Terek Sandpiper	2	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.00%	
6/07/2013	Terek Sandpiper	3	Fairhaven / Chilcott Rocks	-38.35652933	145.2729459	0.01%	
25/11/2006	Whimbrel	1	Fairhaven / Chilcott Rocks	-38.35652933	145.2726884	0.00%	65000
21/11/2009	Whimbrel	2	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.00%	
20/11/2010	Whimbrel	2	Fairhaven / Chilcott Rocks	-38.35685902	145.27286	0.00%	

Appendix 4: Hanns Inlet & Sandy Pt - Migratory shorebird species and species counts.

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
12/02/2005	Bar-tailed Godwit	8	Hanns Inlet	-38.3761	145.2008	0.00%	325000
8/07/2017	Bar-tailed Godwit	1	Hanns Inlet	-38.374	145.1947	0.00%	
9/11/2002	Common Greenshank	35	Hanns Inlet	-38.3761	145.2008	0.03%	110000
12/02/2005	Common Greenshank	33	Hanns Inlet	-38.3761	145.2008	0.03%	
17/02/2007	Common Greenshank	32	Hanns Inlet	-38.3761	145.2008	0.03%	
25/11/2006	Common Greenshank	27	Hanns Inlet	-38.3761	145.2008	0.02%	
24/11/2007	Common Greenshank	26	Hanns Inlet	-38.3761	145.2008	0.02%	
13/02/2010	Common Greenshank	20	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.02%	
16/02/2002	Common Greenshank	19	Hanns Inlet	-38.3761	145.2008	0.02%	
22/11/2003	Common Greenshank	18	Hanns Inlet	-38.3761	145.2008	0.02%	
20/11/2010	Common Greenshank	17	Hanns Inlet	-38.3761	145.2008	0.02%	
3/02/2018	Common Greenshank	14	Hanns Inlet and Sandy Point	-38.3816	145.2188	0.01%	
1/02/2003	Common Greenshank	13	Hanns Inlet	-38.3761	145.2008	0.01%	
18/11/2017	Common Greenshank	12	Hanns Inlet (HMAS Cerberus)	-38.3719	145.1928	0.01%	
9/02/2013	Common Greenshank	11	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.01%	
11/02/2012	Common Greenshank	10	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.01%	
16/11/2013	Common Greenshank	10	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.01%	
27/11/2004	Common Greenshank	9	Hanns Inlet	-38.3761	145.2008	0.01%	
17/11/2012	Common Greenshank	9	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.01%	
3/12/2016	Common Greenshank	9	WP: Sandy Point & Hanns Inlet	-38.3745	145.1988	0.01%	
21/11/2009	Common Greenshank	8	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.01%	
11/02/2017	Common Greenshank	7	WP: Sandy Point & Hanns Inlet	-38.3764	145.2011	0.01%	
29/03/2021	Common Greenshank	7	Hanns Inlet	-38.3766	145.2034	0.01%	
8/02/2020	Common Greenshank	6	Hanns Inlet and Sandy Point	-38.3758	145.2019	0.01%	
30/11/2019	Common Greenshank	5	Hanns Inlet and Sandy Point	-38.3758	145.2019	0.00%	
22/11/2014	Common Greenshank	4	Hanns Inlet (restricted access)	-38.3756	145.2025	0.00%	
15/03/2021	Common Greenshank	4	Hanns Inlet	-38.379	145.2115	0.00%	
10/02/2022	Common Greenshank	4	Hanns Inlet and Sandy Point	-38.3752	145.197	0.00%	
13/07/2002	Common Greenshank	3	Hanns Inlet	-38.3761	145.2008	0.00%	
5/02/2011	Common Greenshank	3	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.00%	
15/02/2014	Common Greenshank	3	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.00%	
22/11/2014	Curlew Sandpiper	1	Hanns Inlet (restricted access)	-38.3756	145.2025	0.00%	90000
22/11/2003	Eastern Curlew	113	Hanns Inlet	-38.3761	145.2008	0.32%	35000
9/11/2002	Eastern Curlew	51	Hanns Inlet	-38.3761	145.2008	0.15%	
17/11/2012	Eastern Curlew	48	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.14%	
3/12/2016	Eastern Curlew	30	WP: Sandy Point & Hanns Inlet	-38.3745	145.1988	0.09%	
1/02/2003	Eastern Curlew	29	Hanns Inlet	-38.3761	145.2008	0.08%	
5/02/2011	Eastern Curlew	25	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.07%	
22/11/2014	Eastern Curlew	24	Hanns Inlet (restricted access)	-38.3756	145.2025	0.07%	
27/11/2004	Eastern Curlew	21	Hanns Inlet	-38.3761	145.2008	0.06%	
11/11/2005	Eastern Curlew	18	Hanns Inlet	-38.3761	145.2008	0.05%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
16/11/2013	Eastern Curlew	18	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.05%	
17/02/2007	Eastern Curlew	17	Hanns Inlet	-38.3761	145.2008	0.05%	
20/11/2010	Eastern Curlew	17	Hanns Inlet	-38.3761	145.2008	0.05%	
30/11/2019	Eastern Curlew	17	Hanns Inlet and Sandy Point	-38.3758	145.2019	0.05%	
16/02/2002	Eastern Curlew	16	Hanns Inlet	-38.3761	145.2008	0.05%	
15/02/2014	Eastern Curlew	14	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.04%	
18/11/2017	Eastern Curlew	13	Hanns Inlet (HMAS Cerberus)	-38.3719	145.1928	0.04%	
9/02/2013	Eastern Curlew	12	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.03%	
21/11/2009	Eastern Curlew	9	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.03%	
11/02/2012	Eastern Curlew	9	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.03%	
13/02/2010	Eastern Curlew	7	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.02%	
30/07/2011	Eastern Curlew	7	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.02%	
11/02/2017	Eastern Curlew	6	WP: Sandy Point & Hanns Inlet	-38.3764	145.2011	0.02%	
24/11/2018	Eastern Curlew	5	Hanns Inlet and Sandy Point	-38.3758	145.2019	0.01%	
12/02/2005	Eastern Curlew	3	Hanns Inlet	-38.3761	145.2008	0.01%	
8/02/2020	Eastern Curlew	3	Hanns Inlet and Sandy Point	-38.3758	145.2019	0.01%	
21/07/2012	Eastern Curlew	2	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.01%	
24/11/2007	Eastern Curlew	1	Hanns Inlet	-38.3761	145.2008	0.00%	
8/07/2017	Eastern Curlew	1	Hanns Inlet	-38.374	145.1947	0.00%	
3/02/2018	Eastern Curlew	1	Hanns Inlet and Sandy Point	-38.3816	145.2188	0.00%	
29/03/2021	Eastern Curlew	1	Hanns Inlet	-38.3766	145.2034	0.00%	
3/02/2018	Grey-tailed Tattler	1	Hanns Inlet and Sandy Point	-38.3816	145.2188	0.00%	70000
8/02/2020	Latham's Snipe	1	Hanns Inlet and Sandy Point	-38.3758	145.2019	0.00%	35000
16/11/2013	Red-necked Stint	50	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.01%	
1/02/2003	Red-necked Stint	12	Hanns Inlet	-38.3761	145.2008	0.00%	
9/02/2013	Red-necked Stint	1	WP: Sandy Point & Hanns Inlet	-38.3739	145.1981	0.00%	
20/11/2010	Whimbrel	1	Hanns Inlet	-38.3761	145.2008	0.00%	65000

Appendix 5: Hastings Marina - Migratory shorebird species and species counts.

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
29/03/2021	Common Sandpiper	1	Hastings marina	38.3127	145.1999	0.00%	190000
8/11/2021	Curlew Sandpiper	4	Hastings marina	38.3127	145.1999	0.00%	90000
28/02/2021	Red-necked Stint	70	Hastings marina	38.3127	145.1999	0.01%	475000
29/03/2021	Red-necked Stint	127	Hastings marina	38.3127	145.1999	0.03%	
6/11/2021	Red-necked Stint	200	Hastings marina	38.3127	145.1999	0.04%	
8/11/2021	Red-necked Stint	2132	Hastings marina	38.3127	145.1999	0.45%	
30/01/2022	Red-necked Stint	950	Hastings marina	38.3127	145.1999	0.20%	

Appendix 6: Long Island - Migratory shorebird species and species counts.

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
28/02/2021	Bar-tailed Godwit	1	Long Island incl wrecks	-38.3080496	145.219504	0.00%	325000
21/11/2017	Curlew Sandpiper	20	WP: Long Island	-38.3096996	145.221427	0.02%	90000
17/02/2007	Curlew Sandpiper	2	Long Is	-38.31056	145.22444	0.00%	
1/02/2003	Eastern Curlew	54	Long Is	-38.31056	145.22444	0.15%	35000
22/11/2003	Eastern Curlew	47	Long Is	-38.31056	145.22444	0.13%	
22/02/2004	Eastern Curlew	45	Long Is	-38.31056	145.22444	0.13%	
27/11/2004	Eastern Curlew	93	Long Is	-38.31056	145.22444	0.27%	
12/02/2005	Eastern Curlew	105	Long Is	-38.31056	145.22444	0.30%	
18/02/2006	Eastern Curlew	9	Long Is	-38.31056	145.22444	0.03%	
25/11/2006	Eastern Curlew	70	Long Is	-38.31056	145.22444	0.20%	
17/02/2007	Eastern Curlew	58	Long Is	-38.31056	145.22444	0.17%	
24/11/2007	Eastern Curlew	63	WP: Long Island	-38.309947	145.223753	0.18%	
9/02/2008	Eastern Curlew	53	WP: Long Island	-38.3100817	145.223753	0.15%	
14/02/2009	Eastern Curlew	18	WP: Long Island	-38.3102164	145.223324	0.05%	
21/11/2009	Eastern Curlew	55	WP: Long Island	-38.3095429	145.223153	0.16%	
13/02/2010	Eastern Curlew	37	WP: Long Island	-38.3094014	145.22341	0.11%	
20/11/2010	Eastern Curlew	48	WP: Long Island	-38.309745	145.223153	0.14%	
9/02/2013	Eastern Curlew	29	WP: Long Island	-38.3095429	145.222895	0.08%	
11/02/2017	Eastern Curlew	5	WP: Long Island	-38.3089251	145.222049	0.01%	
3/02/2018	Eastern Curlew	13	WP: Long Island	-38.3097165	145.222778	0.04%	
17/02/2019	Eastern Curlew	9	WP: Long Island	-38.3092822	145.221383	0.03%	
8/02/2020	Eastern Curlew	30	WP: Long Island	-38.3093495	145.219774	0.09%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
30/01/2022	Eastern Curlew	11	Long Island WP	-38.3099691	145.223903	0.03%	
9/11/2002	Red-necked Stint	142	Long Is	-38.31056	145.22444	0.03%	475000
1/02/2003	Red-necked Stint	280	Long Is	-38.31056	145.22444	0.06%	
22/02/2004	Red-necked Stint	173	Long Is	-38.31056	145.22444	0.04%	
27/11/2004	Red-necked Stint	175	Long Is	-38.31056	145.22444	0.04%	
17/02/2007	Red-necked Stint	238	Long Is	-38.31056	145.22444	0.05%	
11/02/2017	Red-necked Stint	900	WP: Long Island	-38.3089251	145.222049	0.19%	
21/11/2017	Red-necked Stint	200	WP: Long Island	-38.3096996	145.221427	0.04%	
3/02/2018	Red-necked Stint	400	WP: Long Island	-38.3097165	145.222778	0.08%	
25/11/2018	Red-necked Stint	164	WP: Long Island	-38.309198	145.221469	0.03%	
30/11/2019	Red-necked Stint	30	WP: Long Island	-38.3098816	145.221727	0.01%	
8/02/2020	Red-necked Stint	6	WP: Long Island	-38.3093495	145.219774	0.00%	
18/11/2020	Red-necked Stint	1	Long Island incl wrecks	-38.3080496	145.219504	0.00%	
8/11/2021	Red-necked Stint	64	Long Island WP	-38.3103732	145.223688	0.01%	
11/11/2005	Ruddy Turnstone	71	Long Is	-38.31056	145.22444	0.24%	30000
3/02/2018	Whimbrel	8	WP: Long Island	-38.3097165	145.222778	0.01%	65000
8/02/2020	Whimbrel	6	WP: Long Island	-38.3093495	145.219774	0.01%	
28/02/2021	Whimbrel	2	Long Island incl wrecks	-38.3080496	145.219504	0.00%	

Appendix 7: Long Reef WP - Migratory shorebird species and species counts.

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
15/02/2014	Bar-tailed Godwit	47	Long Reef WP	-38.259	145.3247	0.01%	325000
11/02/2017	Bar-tailed Godwit	62	Long Reef Island	-38.2592	145.3248	0.02%	
19/12/2018	Bar-tailed Godwit	10	Long Reef WP	-38.2593	145.3247	0.00%	
17/02/2019	Bar-tailed Godwit	20	Long Reef WP	-38.2593	145.3247	0.01%	
30/01/2022	Bar-tailed Godwit	7	Long Reef WP	-38.2593	145.3247	0.00%	
15/02/2014	Curlew Sandpiper	134	Long Reef WP	-38.259	145.3247	0.15%	90000
16/11/2013	Curlew Sandpiper	31	Long Reef WP	-38.259	145.3247	0.03%	
29/01/2016	Curlew Sandpiper	20	Long Reef Island	-38.2592	145.3248	0.02%	
30/01/2022	Curlew Sandpiper	10	Long Reef WP	-38.2593	145.3247	0.01%	
21/11/2017	Curlew Sandpiper	2	Long Reef WP	-38.2591	145.3247	0.00%	
28/02/2021	Curlew Sandpiper	1	Long Reef WP	-38.2593	145.3247	0.00%	
15/02/2014	Eastern Curlew	30	Long Reef WP	-38.259	145.3247	0.09%	35000
29/01/2016	Eastern Curlew	35	Long Reef Island	-38.2592	145.3248	0.10%	
11/02/2017	Eastern Curlew	11	Long Reef Island	-38.2592	145.3248	0.03%	
21/11/2017	Eastern Curlew	1	Long Reef WP	-38.2591	145.3247	0.00%	
3/02/2018	Eastern Curlew	16	Long Reef WP	-38.2591	145.3248	0.05%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
19/12/2018	Eastern Curlew	10	Long Reef WP	-38.2593	145.3247	0.03%	
17/02/2019	Eastern Curlew	12	Long Reef WP	-38.2593	145.3247	0.03%	
28/02/2021	Eastern Curlew	7	Long Reef WP	-38.2593	145.3247	0.02%	
30/01/2022	Eastern Curlew	29	Long Reef WP	-38.2593	145.3247	0.08%	
11/02/2017	Grey-tailed Tattler	1	Long Reef Island	-38.2592	145.3248	0.00%	70000
3/02/2018	Grey-tailed Tattler	1	Long Reef WP	-38.2591	145.3248	0.00%	
25/11/2006	Pacific Golden Plover	15	Long Reef WP	-38.259	145.3247	0.01%	120000
15/02/2014	Pacific Golden Plover	9	Long Reef WP	-38.259	145.3247	0.01%	
29/01/2016	Pacific Golden Plover	14	Long Reef Island	-38.2592	145.3248	0.01%	
11/02/2017	Pacific Golden Plover	5	Long Reef Island	-38.2592	145.3248	0.00%	
21/11/2017	Pacific Golden Plover	5	Long Reef WP	-38.2591	145.3247	0.00%	
3/02/2018	Pacific Golden Plover	6	Long Reef WP	-38.2591	145.3248	0.01%	
25/11/2018	Pacific Golden Plover	8	Long Reef WP	-38.259	145.3247	0.01%	
17/02/2019	Pacific Golden Plover	12	Long Reef WP	-38.2593	145.3247	0.01%	
30/11/2019	Pacific Golden Plover	5	Long Reef WP	-38.2593	145.3247	0.00%	
28/02/2021	Pacific Golden Plover	5	mangroves between Long Reef & Blind Bight	-38.2483	145.3239	0.00%	
15/03/2021	Pacific Golden Plover	2	mangroves between Long Reef & Blind Bight	-38.2482	145.3245	0.00%	
29/03/2021	Pacific Golden Plover	1	mangroves between Long Reef & Blind Bight	-38.2482	145.3245	0.00%	
8/11/2021	Pacific Golden Plover	6	Mangroves towards Blind Bight	-38.2484	145.3239	0.01%	
30/01/2022	Pacific Golden Plover	3	Long Reef WP (mangroves)	-38.2495	145.3242	0.00%	
16/11/2013	Red-necked Stint	5700	Long Reef WP	-38.259	145.3247	1.20%	475000
15/02/2014	Red-necked Stint	228	Long Reef WP	-38.259	145.3247	0.05%	
29/01/2016	Red-necked Stint	2000	Long Reef Island	-38.2592	145.3248	0.42%	
21/11/2017	Red-necked Stint	1100	Long Reef WP	-38.2591	145.3247	0.23%	
25/11/2018	Red-necked Stint	2	Long Reef WP	-38.259	145.3247	0.00%	
30/11/2019	Red-necked Stint	136	Long Reef WP	-38.2593	145.3247	0.03%	
8/02/2020	Red-necked Stint	250	Long Reef WP	-38.2593	145.3247	0.05%	
28/02/2021	Red-necked Stint	1	Long Reef WP	-38.2593	145.3247	0.00%	
30/01/2022	Red-necked Stint	140	Long Reef WP	-38.2593	145.3247	0.03%	
21/02/2015	Ruddy Turnstone	2	Long Reef WP	-38.259	145.3247	0.00%	
15/02/2014	Sharp-tailed Sandpiper	2	Long Reef WP	-38.259	145.3247	0.00%	85000
30/01/2022	Terek Sandpiper	1	Long Reef WP (mangroves)	-38.2495	145.3242	0.00%	50000

Appendix 8: North West French Island- Migratory shorebird species and species counts

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
16/02/2002	Common Greenshank	15	NW French Is	-38.2875	145.3161	0.00%	1110000
22/02/2004	Common Greenshank	34	NW French Is	-38.2875	145.3161	0.00%	
27/11/2004	Common Greenshank	91	NW French Is	-38.2875	145.3161	0.01%	
12/02/2005	Common Greenshank	2	NW French Is	-38.2875	145.3161	0.00%	
11/11/2005	Common Greenshank	15	NW French Is	-38.2875	145.3161	0.00%	
18/02/2006	Common Greenshank	50	NW French Is	-38.2875	145.3161	0.00%	
25/11/2006	Common Greenshank	15	NW French Is	-38.2875	145.3161	0.00%	
17/02/2007	Common Greenshank	120	NW French Is	-38.2875	145.3161	0.01%	
24/11/2007	Common Greenshank	3	NW French Is	-38.2875	145.3161	0.00%	
9/02/2008	Common Greenshank	7	NW French Is	-38.2875	145.3161	0.00%	
14/02/2009	Common Greenshank	7	NW French Is	-38.2875	145.3161	0.00%	
21/11/2009	Common Greenshank	75	NW French Is	-38.2875	145.3161	0.01%	
13/02/2010	Common Greenshank	7	NW French Is	-38.2875	145.3161	0.00%	
20/11/2010	Common Greenshank	60	NW French Is	-38.2875	145.3161	0.01%	
26/11/2011	Common Greenshank	50	NW French Is	-38.2875	145.3161	0.00%	
21/07/2012	Common Greenshank	1	NW French Is	-38.2875	145.3161	0.00%	
17/11/2012	Common Greenshank	51	NW French Is	-38.2875	145.3161	0.00%	
9/02/2013	Common Greenshank	51	NW French Is	-38.2875	145.3161	0.00%	
6/07/2013	Common Greenshank	1	NW French Is	-38.2875	145.3161	0.00%	
16/11/2013	Common Greenshank	60	NW French Is	-38.2875	145.3161	0.01%	
15/02/2014	Common Greenshank	21	NW French Is	-38.2875	145.3161	0.00%	
29/01/2016	Common Greenshank	38	NW French Island Coast	-38.2856	145.3136	0.00%	
17/02/2019	Common Greenshank	25	NW French Island Coast	-38.286	145.3141	0.00%	
28/02/2021	Common Greenshank	15	NW French Island Coast	-38.2855	145.3132	0.00%	
15/03/2021	Common Greenshank	13	NW French Island Coast	-38.2855	145.3132	0.00%	
29/03/2021	Common Greenshank	8	NW French Island Coast	-38.2855	145.3132	0.00%	
8/11/2021	Common Greenshank	1	NW French Island Coast	-38.2855	145.3132	0.00%	
30/01/2022	Common Greenshank	25	NW French Island Coast	-38.2855	145.3132	0.00%	
26/11/2011	Curlew Sandpiper	50	NW French Is	-38.2875	145.3161	0.06%	90000
16/11/2013	Curlew Sandpiper	3	NW French Is	-38.2875	145.3161	0.00%	
15/02/2014	Curlew Sandpiper	105	NW French Is	-38.2875	145.3161	0.12%	
27/11/2004	Eastern Curlew	20	NW French Is	-38.2875	145.3161	0.06%	35000
18/02/2006	Eastern Curlew	1	NW French Is	-38.2875	145.3161	0.00%	
17/02/2007	Eastern Curlew	40	NW French Is	-38.2875	145.3161	0.11%	
16/11/2013	Great Knot	2	NW French Is	-38.2875	145.3161	0.00%	42500
9/02/2013	Grey-tailed Tattler	3	NW French Is	-38.2875	145.3161	0.00%	70000
20/11/2010	Red-necked Stint	1	NW French Is	-38.2875	145.3161	0.00%	475000

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
9/02/2013	Red-necked Stint	340	NW French Is	-38.2875	145.3161	0.07%	
15/02/2014	Red-necked Stint	360	NW French Is	-38.2875	145.3161	0.08%	
11/11/2005	Sharp-tailed Sandpiper	43	NW French Is	-38.2875	145.3161	0.05%	85000
25/11/2006	Sharp-tailed Sandpiper	43	NW French Is	-38.2875	145.3161	0.05%	
20/11/2010	Sharp-tailed Sandpiper	30	NW French Is	-38.2875	145.3161	0.04%	
16/11/2013	Sharp-tailed Sandpiper	2	NW French Is	-38.2875	145.3161	0.00%	
15/02/2014	Sharp-tailed Sandpiper	160	NW French Is	-38.2875	145.3161	0.19%	

Appendix 9: Scrub Point- Migratory shorebird species and species counts

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
23/12/2016	Bar-tailed Godwit	2	Scrub Point	-38.286	145.2883	0.00%	325000
21/02/2015	Common Greenshank	25	Scrub Point	-38.288	145.2882	0.02%	110000
29/01/2016	Common Greenshank	18	Scrub Point	-38.285	145.2885	0.02%	
29/11/2015	Common Greenshank	10	Scrub Point	-38.288	145.2882	0.01%	
11/02/2017	Common Greenshank	8	Scrub Point	-38.288	145.2882	0.01%	
17/02/2019	Common Greenshank	8	Scrub Point	-38.288	145.2888	0.01%	
3/02/2018	Common Greenshank	5	Scrub Point	-38.285	145.2883	0.00%	
25/11/2018	Common Greenshank	3	Scrub Point	-38.286	145.2893	0.00%	
15/03/2021	Common Greenshank	2	Scrub Point	-38.288	145.2882	0.00%	
11/02/2017	Curlew Sandpiper	20	Scrub Point	-38.288	145.2882	0.02%	90000
10/07/2021	Double-banded Plover	1	Scrub Point	-38.288	145.2882	0.01%	19000
11/02/2017	Eastern Curlew	20	Scrub Point	-38.288	145.2882	0.06%	35000
30/11/2019	Grey Plover	2	Scrub Point	-38.288	145.2882	0.00%	80000
21/02/2015	Red-necked Stint	3500	Scrub Point	-38.288	145.2882	0.74%	475000
19/07/2015	Red-necked Stint	1	Scrub Point	-38.288	145.2882	0.00%	
29/11/2015	Red-necked Stint	500	Scrub Point	-38.288	145.2882	0.11%	
29/01/2016	Red-necked Stint	1000	Scrub Point	-38.285	145.2885	0.21%	
23/12/2016	Red-necked Stint	400	Scrub Point	-38.286	145.2883	0.08%	
11/02/2017	Red-necked Stint	2000	Scrub Point	-38.288	145.2882	0.42%	
18/11/2017	Red-necked Stint	100	Scrub Point	-38.288	145.2888	0.02%	
3/02/2018	Red-necked Stint	500	Scrub Point	-38.285	145.2883	0.11%	
30/11/2019	Red-necked Stint	90	Scrub Point	-38.288	145.2882	0.02%	
8/02/2020	Red-necked Stint	25	Scrub Point	-38.288	145.2882	0.01%	
10/07/2021	Red-necked Stint	5	Scrub Point	-38.288	145.2882	0.00%	
8/11/2021	Red-necked Stint	10	Scrub Point	-38.288	145.2882	0.00%	
11/02/2017	Sharp-tailed Sandpiper	4	Scrub Point	-38.288	145.2882	0.00%	85000
17/02/2019	Sharp-tailed Sandpiper	12	Scrub Point	-38.288	145.2888	0.01%	
23/12/2016	Whimbrel	6	Scrub Point	-38.286	145.2883	0.01%	65000
11/02/2017	Whimbrel	5	Scrub Point	-38.288	145.2882	0.01%	

Appendix 10: Tortoise Head- Migratory shorebird species and species counts

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
14/06/2003	Bar-tailed Godwit	35	Tortoise Head	38.4031	145.2708	0.01%	325000
22/02/2004	Bar-tailed Godwit	1	Tortoise Head	38.4031	145.2708	0.00%	
27/11/2004	Bar-tailed Godwit	4	Tortoise Head	38.4031	145.2708	0.00%	
5/02/2011	Bar-tailed Godwit	2	Tortoise Head	38.4031	145.2708	0.00%	
23/01/2016	Bar-tailed Godwit	3	Tortoise Head	38.4023	145.272	0.00%	
4/08/2016	Bar-tailed Godwit	1	Tortoise Head	38.4023	145.272	0.00%	
1/02/2003	Common Greenshank	14	Tortoise Head	38.4031	145.2708	0.01%	110000
22/11/2003	Common Greenshank	2	Tortoise Head	38.4031	145.2708	0.00%	
9/11/2002	Curlew Sandpiper	1	Tortoise Head	38.4031	145.2708	0.00%	90000
1/02/2003	Curlew Sandpiper	10	Tortoise Head	38.4031	145.2708	0.01%	
27/11/2004	Curlew Sandpiper	20	Tortoise Head	38.4031	145.2708	0.02%	
24/11/2007	Curlew Sandpiper	2	Tortoise Head	38.4031	145.2708	0.00%	
13/07/2002	Double-banded Plover	31	Tortoise Head	38.4031	145.2708	0.16%	19000
14/06/2003	Double-banded Plover	15	Tortoise Head	38.4031	145.2708	0.08%	
22/02/2004	Double-banded Plover	3	Tortoise Head	38.4031	145.2708	0.02%	
17/07/2004	Double-banded Plover	105	Tortoise Head	38.4031	145.2708	0.55%	
27/11/2004	Double-banded Plover	1	Tortoise Head	38.4031	145.2708	0.01%	
7/07/2005	Double-banded Plover	102	Tortoise Head	38.4031	145.2708	0.54%	
11/11/2005	Double-banded Plover	1	Tortoise Head	38.4031	145.2708	0.01%	
18/02/2006	Double-banded Plover	3	Tortoise Head	38.4031	145.2708	0.02%	
26/06/2006	Double-banded Plover	126	Tortoise Head	38.4031	145.2708	0.66%	
17/02/2007	Double-banded Plover	8	Tortoise Head	38.4031	145.2708	0.04%	
15/11/2008	Double-banded Plover	1	Tortoise Head	38.4031	145.2708	0.01%	
11/07/2009	Double-banded Plover	210	Tortoise Head	38.4031	145.2708	1.11%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
21/11/2009	Double-banded Plover	1	Tortoise Head	38.4031	145.2708	0.01%	
10/07/2010	Double-banded Plover	45	Tortoise Head	38.4031	145.2708	0.24%	
6/07/2013	Double-banded Plover	15	Tortoise Head	38.4031	145.2708	0.08%	
15/02/2014	Double-banded Plover	1	Tortoise Head	38.4031	145.2708	0.01%	
21/02/2015	Double-banded Plover	3	Tortoise Head	38.4031	145.2708	0.02%	
18/07/2015	Double-banded Plover	3	Tortoise Head	38.4031	145.2708	0.02%	
28/11/2015	Double-banded Plover	3	Tortoise Head	38.4031	145.2708	0.02%	
23/01/2016	Double-banded Plover	1	Tortoise Head	38.4023	145.272	0.01%	
20/06/2020	Double-banded Plover	2	Tortoise Head	38.4025	145.2671	0.01%	
27/02/2021	Double-banded Plover	2	Tortoise Head	38.4025	145.2671	0.01%	
15/03/2021	Double-banded Plover	30	Tortoise Head	38.4025	145.2671	0.16%	
29/03/2021	Double-banded Plover	20	Tortoise Head	38.4025	145.2671	0.11%	
10/07/2021	Double-banded Plover	3	Tortoise Head	38.4025	145.2671	0.02%	
2/02/2022	Double-banded Plover	3	Tortoise Head	38.4025	145.2671	0.02%	
9/11/2002	Eastern Curlew	275	Tortoise Head	38.4031	145.2708	0.79%	35000
1/02/2003	Eastern Curlew	83	Tortoise Head	38.4031	145.2708	0.24%	
14/06/2003	Eastern Curlew	7	Tortoise Head	38.4031	145.2708	0.02%	
22/11/2003	Eastern Curlew	172	Tortoise Head	38.4031	145.2708	0.49%	
22/02/2004	Eastern Curlew	160	Tortoise Head	38.4031	145.2708	0.46%	
27/11/2004	Eastern Curlew	144	Tortoise Head	38.4031	145.2708	0.41%	
12/02/2005	Eastern Curlew	165	Tortoise Head	38.4031	145.2708	0.47%	
7/07/2005	Eastern Curlew	2	Tortoise Head	38.4031	145.2708	0.01%	
11/11/2005	Eastern Curlew	180	Tortoise Head	38.4031	145.2708	0.51%	
18/02/2006	Eastern Curlew	65	Tortoise Head	38.4031	145.2708	0.19%	
17/02/2007	Eastern Curlew	108	Tortoise Head	38.4031	145.2708	0.31%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
24/11/2007	Eastern Curlew	125	Tortoise Head	38.4031	145.2708	0.36%	
9/02/2008	Eastern Curlew	80	Tortoise Head	38.4031	145.2708	0.23%	
15/11/2008	Eastern Curlew	125	Tortoise Head	38.4031	145.2708	0.36%	
11/07/2009	Eastern Curlew	2	Tortoise Head	38.4031	145.2708	0.01%	
21/11/2009	Eastern Curlew	95	Tortoise Head	38.4031	145.2708	0.27%	
13/02/2010	Eastern Curlew	1	Tortoise Head	38.4031	145.2708	0.00%	
20/11/2010	Eastern Curlew	3	Tortoise Head	-38.395	145.2739	0.01%	
5/02/2011	Eastern Curlew	125	Tortoise Head	38.4031	145.2708	0.36%	
30/07/2011	Eastern Curlew	18	Tortoise Head	38.4031	145.2708	0.05%	
26/11/2011	Eastern Curlew	130	Tortoise Head	38.4031	145.2708	0.37%	
11/02/2012	Eastern Curlew	140	Tortoise Head	38.4031	145.2708	0.40%	
21/07/2012	Eastern Curlew	2	Tortoise Head	38.4031	145.2708	0.01%	
16/11/2013	Eastern Curlew	135	Tortoise Head	38.4031	145.2708	0.39%	
15/02/2014	Eastern Curlew	85	Tortoise Head	38.4031	145.2708	0.24%	
22/11/2014	Eastern Curlew	124	Tortoise Head	38.4031	145.2708	0.35%	
21/02/2015	Eastern Curlew	110	Tortoise Head	38.4031	145.2708	0.31%	
18/07/2015	Eastern Curlew	60	Tortoise Head	38.4031	145.2708	0.17%	
28/11/2015	Eastern Curlew	148	Tortoise Head	38.4031	145.2708	0.42%	
23/01/2016	Eastern Curlew	75	Tortoise Head	38.4023	145.272	0.21%	
4/08/2016	Eastern Curlew	51	Tortoise Head	38.4023	145.272	0.15%	
3/12/2016	Eastern Curlew	172	Tortoise Head	38.4023	145.272	0.49%	
11/02/2017	Eastern Curlew	106	Tortoise Head	38.3994	145.2766	0.30%	
8/07/2017	Eastern Curlew	2	Tortoise Head	38.4023	145.272	0.01%	
18/11/2017	Eastern Curlew	107	Tortoise Head	38.4023	145.2725	0.31%	
3/02/2018	Eastern Curlew	50	Tortoise Head	38.4031	145.2738	0.14%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
30/06/2018	Eastern Curlew	3	Tortoise Head	38.3994	145.2745	0.01%	
24/11/2018	Eastern Curlew	55	Tortoise Head	38.4026	145.2696	0.16%	
19/12/2018	Eastern Curlew	105	Tortoise Head	38.4025	145.2671	0.30%	
30/11/2019	Eastern Curlew	98	Tortoise Head	38.4025	145.2671	0.28%	
8/02/2020	Eastern Curlew	80	Tortoise Head	38.4025	145.2671	0.23%	
14/11/2020	Eastern Curlew	45	Tortoise Head	38.4025	145.2671	0.13%	
27/02/2021	Eastern Curlew	44	Tortoise Head	38.4025	145.2671	0.13%	
15/03/2021	Eastern Curlew	38	Tortoise Head	38.4025	145.2671	0.11%	
29/03/2021	Eastern Curlew	4	Tortoise Head	38.4025	145.2671	0.01%	
10/07/2021	Eastern Curlew	3	Tortoise Head	38.4025	145.2671	0.01%	
6/11/2021	Eastern Curlew	146	Tortoise Head	38.4025	145.2671	0.42%	
2/02/2022	Eastern Curlew	116	Tortoise Head	38.4025	145.2671	0.33%	
2/07/2022	Eastern Curlew	14	Tortoise Head	38.4025	145.2671	0.04%	
24/11/2007	Grey-tailed Tattler	1	Tortoise Head	38.4031	145.2708	0.00%	70000
27/11/2004	Lesser Sand Plover	1	Tortoise Head	38.4031	145.2708	0.00%	227500
20/11/2010	Lesser Sand Plover	1	Tortoise Head	-38.395	145.2739	0.00%	
9/02/2013	Lesser Sand Plover	2	Tortoise Head	38.4031	145.2708	0.00%	
15/02/2014	Lesser Sand Plover	2	Tortoise Head	38.4031	145.2708	0.00%	
17/02/2007	Pacific Golden Plover	1	Tortoise Head	38.4031	145.2708	0.00%	120000
13/02/2010	Pacific Golden Plover	1	Tortoise Head	38.4031	145.2708	0.00%	
16/11/2013	Pacific Golden Plover	1	Tortoise Head	38.4031	145.2708	0.00%	
19/12/2018	Pacific Golden Plover	1	Tortoise Head	38.4025	145.2671	0.00%	
13/07/2002	Red-necked Stint	82	Tortoise Head	38.4031	145.2708	0.02%	475000
9/11/2002	Red-necked Stint	395	Tortoise Head	38.4031	145.2708	0.08%	
1/02/2003	Red-necked Stint	160	Tortoise Head	38.4031	145.2708	0.03%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
14/06/2003	Red-necked Stint	14	Tortoise Head	38.4031	145.2708	0.00%	
22/11/2003	Red-necked Stint	300	Tortoise Head	38.4031	145.2708	0.06%	
22/02/2004	Red-necked Stint	808	Tortoise Head	38.4031	145.2708	0.17%	
17/07/2004	Red-necked Stint	150	Tortoise Head	38.4031	145.2708	0.03%	
27/11/2004	Red-necked Stint	620	Tortoise Head	38.4031	145.2708	0.13%	
12/02/2005	Red-necked Stint	420	Tortoise Head	38.4031	145.2708	0.09%	
7/07/2005	Red-necked Stint	50	Tortoise Head	38.4031	145.2708	0.01%	
11/11/2005	Red-necked Stint	320	Tortoise Head	38.4031	145.2708	0.07%	
18/02/2006	Red-necked Stint	214	Tortoise Head	38.4031	145.2708	0.05%	
26/06/2006	Red-necked Stint	97	Tortoise Head	38.4031	145.2708	0.02%	
25/11/2006	Red-necked Stint	30	Tortoise Head	38.4031	145.2708	0.01%	
17/02/2007	Red-necked Stint	243	Tortoise Head	38.4031	145.2708	0.05%	
24/11/2007	Red-necked Stint	130	Tortoise Head	38.4031	145.2708	0.03%	
9/02/2008	Red-necked Stint	79	Tortoise Head	38.4031	145.2708	0.02%	
15/11/2008	Red-necked Stint	145	Tortoise Head	38.4031	145.2708	0.03%	
11/07/2009	Red-necked Stint	60	Tortoise Head	38.4031	145.2708	0.01%	
21/11/2009	Red-necked Stint	36	Tortoise Head	38.4031	145.2708	0.01%	
13/02/2010	Red-necked Stint	17	Tortoise Head	38.4031	145.2708	0.00%	
10/07/2010	Red-necked Stint	1	Tortoise Head	38.4031	145.2708	0.00%	
20/11/2010	Red-necked Stint	43	Tortoise Head	-38.395	145.2739	0.01%	
5/02/2011	Red-necked Stint	115	Tortoise Head	38.4031	145.2708	0.02%	
26/11/2011	Red-necked Stint	66	Tortoise Head	38.4031	145.2708	0.01%	
11/02/2012	Red-necked Stint	10	Tortoise Head	38.4031	145.2708	0.00%	
21/07/2012	Red-necked Stint	40	Tortoise Head	38.4031	145.2708	0.01%	
9/02/2013	Red-necked Stint	80	Tortoise Head	38.4031	145.2708	0.02%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
6/07/2013	Red-necked Stint	21	Tortoise Head	38.4031	145.2708	0.00%	
16/11/2013	Red-necked Stint	110	Tortoise Head	38.4031	145.2708	0.02%	
15/02/2014	Red-necked Stint	20	Tortoise Head	38.4031	145.2708	0.00%	
22/11/2014	Red-necked Stint	202	Tortoise Head	38.4031	145.2708	0.04%	
21/02/2015	Red-necked Stint	285	Tortoise Head	38.4031	145.2708	0.06%	
18/07/2015	Red-necked Stint	3	Tortoise Head	38.4031	145.2708	0.00%	
28/11/2015	Red-necked Stint	106	Tortoise Head	38.4031	145.2708	0.02%	
23/01/2016	Red-necked Stint	139	Tortoise Head	38.4023	145.272	0.03%	
3/12/2016	Red-necked Stint	50	Tortoise Head	38.4023	145.272	0.01%	
8/07/2017	Red-necked Stint	1	Tortoise Head	38.4023	145.272	0.00%	
30/06/2018	Red-necked Stint	21	Tortoise Head	38.3994	145.2745	0.00%	
24/11/2018	Red-necked Stint	32	Tortoise Head	38.4026	145.2696	0.01%	
30/11/2019	Red-necked Stint	5	Tortoise Head	38.4025	145.2671	0.00%	
8/02/2020	Red-necked Stint	40	Tortoise Head	38.4025	145.2671	0.01%	
14/11/2020	Red-necked Stint	45	Tortoise Head	38.4025	145.2671	0.01%	
27/02/2021	Red-necked Stint	90	Tortoise Head	38.4025	145.2671	0.02%	
15/03/2021	Red-necked Stint	60	Tortoise Head	38.4025	145.2671	0.01%	
29/03/2021	Red-necked Stint	100	Tortoise Head	38.4025	145.2671	0.02%	
10/07/2021	Red-necked Stint	35	Tortoise Head	38.4025	145.2671	0.01%	
6/11/2021	Red-necked Stint	30	Tortoise Head	38.4025	145.2671	0.01%	
2/02/2022	Red-necked Stint	125	Tortoise Head	38.4025	145.2671	0.03%	
9/11/2002	Ruddy Turnstone	10	Tortoise Head	38.4031	145.2708	0.03%	30000
1/02/2003	Ruddy Turnstone	10	Tortoise Head	38.4031	145.2708	0.03%	
14/06/2003	Ruddy Turnstone	6	Tortoise Head	38.4031	145.2708	0.02%	
22/11/2003	Ruddy Turnstone	33	Tortoise Head	38.4031	145.2708	0.11%	

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
22/02/2004	Ruddy Turnstone	26	Tortoise Head	38.4031	145.2708	0.09%	
27/11/2004	Ruddy Turnstone	10	Tortoise Head	38.4031	145.2708	0.03%	
12/02/2005	Ruddy Turnstone	3	Tortoise Head	38.4031	145.2708	0.01%	
11/11/2005	Ruddy Turnstone	5	Tortoise Head	38.4031	145.2708	0.02%	
18/02/2006	Ruddy Turnstone	43	Tortoise Head	38.4031	145.2708	0.14%	
26/06/2006	Ruddy Turnstone	10	Tortoise Head	38.4031	145.2708	0.03%	
25/11/2006	Ruddy Turnstone	3	Tortoise Head	38.4031	145.2708	0.01%	
17/02/2007	Ruddy Turnstone	18	Tortoise Head	38.4031	145.2708	0.06%	
24/11/2007	Ruddy Turnstone	29	Tortoise Head	38.4031	145.2708	0.10%	
21/11/2009	Ruddy Turnstone	8	Tortoise Head	38.4031	145.2708	0.03%	
13/02/2010	Ruddy Turnstone	5	Tortoise Head	38.4031	145.2708	0.02%	
20/11/2010	Ruddy Turnstone	16	Tortoise Head	-38.395	145.2739	0.05%	
5/02/2011	Ruddy Turnstone	21	Tortoise Head	38.4031	145.2708	0.07%	
26/11/2011	Ruddy Turnstone	17	Tortoise Head	38.4031	145.2708	0.06%	
11/02/2012	Ruddy Turnstone	20	Tortoise Head	38.4031	145.2708	0.07%	
21/07/2012	Ruddy Turnstone	3	Tortoise Head	38.4031	145.2708	0.01%	
16/11/2013	Ruddy Turnstone	14	Tortoise Head	38.4031	145.2708	0.05%	
22/11/2014	Ruddy Turnstone	13	Tortoise Head	38.4031	145.2708	0.04%	
21/02/2015	Ruddy Turnstone	15	Tortoise Head	38.4031	145.2708	0.05%	
23/01/2016	Ruddy Turnstone	8	Tortoise Head	38.4023	145.272	0.03%	
3/12/2016	Ruddy Turnstone	15	Tortoise Head	38.4023	145.272	0.05%	
15/06/2019	Ruddy Turnstone	2	Tortoise Head	38.4029	145.2712	0.01%	
15/03/2021	Ruddy Turnstone	2	Tortoise Head	38.4025	145.2671	0.01%	
10/07/2021	Ruddy Turnstone	4	Tortoise Head	38.4025	145.2671	0.01%	
27/11/2004	Sharp-tailed Sandpiper	1	Tortoise Head	38.4031	145.2708	0.00%	85000

Start Date	Common Name	Count	Survey Point Name	Latitude	Longitude	% of population (Hansen et al 2022)	Population estimate (Hansen et al 2022)
11/11/2005	Sharp-tailed Sandpiper	1	Tortoise Head	38.4031	145.2708	0.00%	
24/11/2007	Sharp-tailed Sandpiper	43	Tortoise Head	38.4031	145.2708	0.05%	
15/02/2014	Sharp-tailed Sandpiper	7	Tortoise Head	38.4031	145.2708	0.01%	
1/02/2003	Whimbrel	1	Tortoise Head	38.4031	145.2708	0.00%	65000
11/11/2005	Whimbrel	1	Tortoise Head	38.4031	145.2708	0.00%	
17/02/2007	Whimbrel	1	Tortoise Head	38.4031	145.2708	0.00%	
24/11/2007	Whimbrel	1	Tortoise Head	38.4031	145.2708	0.00%	
9/02/2008	Whimbrel	1	Tortoise Head	38.4031	145.2708	0.00%	
21/11/2009	Whimbrel	1	Tortoise Head	38.4031	145.2708	0.00%	
5/02/2011	Whimbrel	1	Tortoise Head	38.4031	145.2708	0.00%	
16/11/2013	Whimbrel	1	Tortoise Head	38.4031	145.2708	0.00%	
15/02/2014	Whimbrel	1	Tortoise Head	38.4031	145.2708	0.00%	
22/11/2014	Whimbrel	1	Tortoise Head	38.4031	145.2708	0.00%	
21/02/2015	Whimbrel	1	Tortoise Head	38.4031	145.2708	0.00%	
28/11/2015	Whimbrel	1	Tortoise Head	38.4031	145.2708	0.00%	
23/01/2016	Whimbrel	5	Tortoise Head	38.4023	145.272	0.01%	
4/08/2016	Whimbrel	1	Tortoise Head	38.4023	145.272	0.00%	
3/12/2016	Whimbrel	4	Tortoise Head	38.4023	145.272	0.01%	
11/02/2017	Whimbrel	1	Tortoise Head	38.3994	145.2766	0.00%	