Ramsar Information Sheet

Published on 18 December 2024
Update version, previously published on : 29 March 2016

Australia

Logan Lagoon

Designation date	16 November 1982
Site number	252
Coordinates	40°11'05"S 148°18'07"E
Area	2 257,00 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

The Logan Lagoon is one of three large estuarine lagoons which make up a coastal lagoon system that extends along the eastern coastline of Flinders Island, Tasmania.

The Site meets criteria 1,2,3,4 and 6:

1. The Site is an excellent, regionally representative example of a coastal estuarine wetland system and comprises a diverse range of seasonal and permanent marshlands, grass and heathlands, forests, and woodlands, many of which support threatened species and communities within the Tasmanian bioregion.

2. It provides habitat for threatened fish, bird and plant species as well as a threatened ecological community.

3. The Site supports high waterbird diversity. It provides habitat for nesting, feeding and roosting and supports resident and migratory shorebirds including those listed as nationally threatened and included in international agreements. A diverse assemblage of frogs, mammals, fish and reptiles is also found.

4. Logan Lagoon provides important resting and feeding areas for waterbirds such as banded stilts during drought and for shorebirds on their international migrations along the East Asian-Australasian Flyway. Over 20 migratory species that breed in the Arctic have been recorded at the site in their non-breeding season. Breeding of the little tern is supported by the Site.

6. The Site regularly supports 1% of the global populations of several species - hooded plover, fairy tern, musk duck and chestnut teal.

Potential threats include:
• inappropriate fire regimes
• invasive species
• contaminated runoff from agricultural practices
• inappropriate use of recreational vehicles
• climate change.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency	Department of Climate Change, Energy, the Environment and Water (DCCEEW)
Postal address	GPO Box 3090 Canberra ACT 2601 Australia

National Ramsar Administrative Authority

Institution/agency	Department of Climate Change, Energy, the Environment and Water (DCCEEW)
Postal address	GPO Box 3090 Canberra ACT 2601 Australia

2.1.2 - Period of collection of data and information used to compile the RIS

From year	2014
To year	2022

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Logan Lagoon

2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary	Yes ○ No ◉
(Update) B. Changes to Site area	No change to area
(Update) For secretariat only: This update is an extension	☐

2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?	Uncertain

(Update) Optional text box to provide further information

While there has been no notifiable change in ecological character, the Site has been subject to a changing climate. Australia has warmed by an average of 1.47°C (higher than the global average) since national records began in 1910, leading to an increased frequency of extreme heat events. Further increases in temperature are projected, with more extremely hot days and fewer extremely cool days under all emissions scenarios. There has been a reduction of 10-20% in cool season rainfall in recent decades in southern Australia. There has also been a trend towards a greater proportion of rainfall from high intensity short duration rainfall events, especially across northern Australia. (BoM and CSIRO 2022; BoM, 2022). These conditions will affect the critical components, processes, and services of the Site and will test the Site's resilience. Climate projections and the information available to guide wetland management under a changing climate is continually evolving, This and other relevant sections of the RIS will be reviewed and updated as significant advances are made.

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps	0

Boundaries description

The boundary of Logan Lagoon is shown as Lot 1 on Central Plan Register (CPR) 5650 from the Tasmanian Information and Land Services, Department of Primary Industries, Water and Environment. CPR 5650 horizontal datum is Australian Geodetic Datum (AGD66) Universal Transverse Mercator Projection Australian Map Grid (UTM AMG66) and Australian Height Datum (Tasmania) for vertical datum (Figure 1). Cadastral information about surrounding land parcels can be obtained from the Land Information System Tasmania (LIST) mapping site http://maps.thelist.tas.gov.au/listmap/app/list/map.

2.2.2 - General location

a) In which large administrative region does the site lie? Tasmania

b) What is the nearest town or population centre? Logan Lagoon is situated on the south-east corner of Flinders Island in Bass Strait, Tasmania, Australia, approximately 6 kilometres north-east of Lady Barron township (population 158, 2016 census).

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes ○ No ◉

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes ○ No ◉

2.2.4 - Area of the Site

Official area, in hectares (ha): 2257

Area, in hectares (ha) as calculated from GIS boundaries: 2258.834

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	Tasmania Drainage Division, Flinders - Cape Barren River Region

Other biogeographic regionalisation scheme

Australian Hydrological Geospatial Fabric (Geofabric). Topographic Drainage Divisions and River Regions (BOM 2012) Tasmania Drainage Division, Flinders - Cape Barren River Region.

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Other ecosystem services provided	The Site includes areas of saltmarsh which are recognised as blue carbon ecosystems. Blue carbon ecosystems sequester significant amounts of carbon dioxide from the atmosphere and oceans, contributing to climate change mitigation. They also protect the coastline from storms and sea level rise, prevent shoreline erosion and regulated coastal water quality (Conservation International, 2019).
Other reasons	The Site is an excellent, regionally representative example of a coastal estuarine wetland system, and comprises a diverse range of seasonal and permanent marshlands, grass and heathlands, forests and woodlands, many of which support threatened species or communities within the Tasmanian Bioregion and the Bass Strait IMCRA Province. In particular, the site contains excellent, near pristine, representative examples of the following Ramsar wetland types: • Type E - Sand, shingle or pebble shores; • Type J - Coastal brackish/saline lagoons (42% site area); • Type H - Intertidal marshes; • Type N - Seasonal/intermittent/irregular rivers/streams/creeks; • Type Ss - Seasonal/intermittent saline/brackish/alkaline marshes/pools; • Type Tp - Permanent freshwater marshes/pools; • Type Ts - Seasonal/intermittent freshwater marshes/pools on inorganic soils (7% site area); and • Type W - Shrub-dominated wetlands. Logan Lagoon, with other lagoons and dunes in the area, provides a representative and outstanding example of the development of Holocene shorelines for Tasmania. Similarly, the Planter Beach Coastal Barrier System is partly within the site. It is a representative and outstanding example of how offshore bars formed with Holocene sea level rise, and how barrier growth has enclosed the coast, forming large lagoons. These two sites are listed on the Tasmanian Geoconservation Database for their conservation significance.

☑ Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information

The Site supports three nationally threatened wetland-dependent fauna species. The dwarf galaxias (Galaxiella pusilla) and fairy tern (Sternula nereis nereis) are listed as vulnerable under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and IUCN Red List respectively, whilst the Australasian bittern (Botaurus poiciloptilus) is listed as endangered under the EPBC Act and IUCN Red List.

The Site supports two nationally threatened wetland-dependent terrestrial flora species, the swamp fireweed (Senecio psilocarpus), which is listed as vulnerable under the EPBC Act, and the Northern leek-orchid (Prasophyllum secutum) which is listed as endangered under the EPBC Act.

The Lowland Poa labillardierei grassland (or 'Lowland Native Grasslands of Tasmania') is listed as a critically endangered ecological community under the EPBC Act (DEWHA 2010b) and is extensive throughout the site.

Wedge-tailed eagles (Aquila audax fleayi) and forty-spotted pardalote (Pardalotus quadragintus), both listed as endangered under the EPBC Act, also present at the site. The eagle is associated with the Lowland Native Grasslands of Tasmania ecological community.

Other nationally or internationally listed threatened species that have been recorded at the site, but need further assessment in terms of how the site supports them, include the sharp-tailed sandpiper (Calidris acuminata), ruddy turnstone (Arenaria interpres), bar-tailed godwit (Limosa lapponica), Latham's snipe (Gallinago hardwickii), common greenshank (Tringa nebularia), curlew sandpiper (Calidris ferruginea) and the eastern curlew (Numenius madagascariensis).

☑ Criterion 3 : Biological diversity

Justification

The Site supports waterbird diversity. Surveys reported in 2013 and 2008 (Woehler and Ruoppolo, 2013; Woehler, 2008) confirm earlier shorebird surveys (Bryant 2002) that reported high migratory and shorebird diversity for Logan Lagoon.

The Site provides breeding habitat for the little tern (Sternula albifrons), a beach nesting shorebird also listed as endangered under the TSP Act. Logan Lagoon is listed as an important site for two other shorebird species, curlew sandpiper (Calidris ferruginea) and red-necked stint (Calidris ruficollis) under the East Asian - Australasian Flyway Partnership Shorebird Site Network (Bamford et al. 2008).

A total of 21 migratory shorebird species have been recorded at the Site and all of these, with the exception of the double-banded plover (Charadrius bicinctus), breed in the Arctic region during the northern hemisphere summer. Double-banded plovers breed in New Zealand and some of the population over-winters in Australia. Many of the migratory birds recorded at the site are listed on international agreements such as the Convention on Migratory Species and East Asian-Australasian Flyway bilateral migratory bird agreements such as the Japan Australia Migratory Bird Agreement (JAMBA).

The Site is important for resident shorebirds and while recent documented surveys are not available limited area surveys (E Woehler personal communication, February 2022) undertaken in 2015 recorded the presence of hooded plovers (Thinornis rubicollis), listed as vulnerable under the EPBC Act. These species and others continue to be recorded at the site (Birdlife Australia, Birdata 2018). There are 129 bird species (native, migratory and introduced) recorded within a 6 km radius of the Logan Lagoon.

For these reasons, the lagoon is not only important on a local scale, but also nationally and internationally.

Fourteen of the 35 native mammal species present on mainland Tasmania, six of the 11 Tasmanian frog species, nine native freshwater fish species and 14 species of reptile occur on Flinders Island, all of which are likely to occur in the Logan Lagoon Ramsar site (DSEWPaC 2012).

One regionally threatened wetland-dependent terrestrial plant species, the large-fruit seatassel (Ruppia megacarpa) which is listed as rare under the TSP, is recorded within Logan Lagoon, however the importance of this species for the biodiversity of the site needs to be assessed.

The Site is also important for wetland plant diversity. Three wetland dependent vegetation communities, considered to be poorly reserved in Tasmania and recognised as threatened under Tasmanian legislation, have been recorded within the site:

• saline aquatic herbland
• freshwater aquatic herbland
• lacustrine herbland.

☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions

Optional text box to provide further information

Logan Lagoon provides important resting and feeding areas for waterbirds and migratory shorebirds. In 2002-2003, with severe drought conditions in mainland Australia, a flock of approximately 3000 banded stilts (Cladorynchus leucocephalus) arrived at Logan Lagoon and remained in the area for about 8 months. This is the largest number of stilts ever recorded in Tasmania (Olsen and Weston 2004; Woehler and Park 1997).

The 1998-1999 Shorebird Survey (Bryant 2002) for Tasmania found that Logan Lagoon and Cameron Inlet have high migratory and shorebird diversity and are priority sites for resident species. The area provides breeding habitat for the little tern (Sternula albifrons), a beach nesting shorebird listed as endangered under the Tasmanian Threatened Species Protection Act 1995. The survey also recorded large numbers of two migratory species: 1000 curlew sandpipers (Calidris ferruginea), and 4000 red-necked stints (Calidris ruficollis). Logan Lagoon is listed as an important site for these two species under the East Asian - Australasian Shorebird Site Network (Bamford et al. 2008). For these reasons, the lagoon is not only important on a local scale, but also nationally and internationally.

A total of 21 migratory shorebird species have been recorded at the site and all of these, with the exception of the double-banded plover (Charadrius bicinctus), breed in the Arctic region during the northern hemisphere summer. Double-banded plovers breed in New Zealand and some of the population over-winters in Australia.

Many of the migratory bird species that use the site during migration are listed on international agreements such as Convention on Migratory Species and/or East Asian-Australasian Flyway Partnership international bilateral migratory bird agreements. These species are:

• cattle egret (Bubulcus ibis)
• ruddy turnstone (Arenaria interpres)
• sharp-tailed sandpiper (Calidris acuminata)
• sanderling (Calidris alba)
• lesser sand plover (Charadrius mongolus)
• Latham's snipe (Gallinago hardwickii)
• Caspian tern (Hydroprogne caspia)
• bar-tailed godwit (Limosa lapponica)
• satin flycatcher (Myiagra cyanoleuca)
• eastern curlew (Numenius madagascariensis)
• whimbrel (Numenius phaeopus)
• Pacific golden plover (Pluvialis fulva)
• little tern (Sternula albifrons sinensis)
• common greenshank (Tringia nebularia)

☑ Criterion 6 : >1% waterbird population

Optional text box to provide further information	Using population estimates obtained from the fifth edition of Waterbird Population Estimates (WPE5) (Wetlands International 2012), the site regularly supports 1% of the global or regional population of musk duck and chestnut teal. This is based on survey data obtained from waterfowl counts (DSEWPaC 2012, Bryant 2002 and Woehler 2008) as discussed under Criterion 3 and 4. During periods of inundation, the area contained high numbers of waterbirds. When water levels were low, such as in in most years over the decade 2002-2012, numbers for waterfowl species were generally low (DSEWPaC 2012). Populations of hooded plover and fairy terns have also met the 1% population thresholds however, given the limited monitoring at the site, it is difficult to determine whether the site meets the criteria for 'regular' use for these populations. The November 2008 survey data showed that Flinders Island held more than 2% of the Australian populations of hooded plovers and pied oystercatchers, and at least 1% of the Australian population of sooty oystercatchers (Woehler and Ruoppolo, 2013; Woehler, 2008). The east coast beaches between Pot Boil Point and North East River (approximately 70 km) are particularly significant for resident shorebirds. The high value of east coast beaches between Pot Boil Point and North East River to hooded and red-capped plovers is apparent from all surveys conducted (Woehler, 2008).

3.2 - Plant species whose presence relates to the international importance of the site

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Plantae								
TRACHEOPHYTA / LILIOPSIDA	*Prasophyllum secutum*	☑	☐	☐		☐	Nationally listed (EPBC) - endangered	The species is endemic to Tasmania where it is uncommon and localised along the north coast of the state, on the west coast at Ocean Beach and on Flinders Island (TSS 2008a). The area of South Logan Lagoon represents an important location for the species as it is one of the few locations where it is known to exist, protected by reservation status. The orchid is dependent on fire to trigger emergence and good flowering.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Senecio psilocarpus*	☑	☐	☐		☐	Nationally listed (EPBC) - vulnerable	Swamp fireweed is known from six locations in Tasmania; including one observation from Pot Boil Point in the Logan Lagoon Site (Wapstra, 2010).

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
Fish, Mollusc and Crustacea																	
CHORDATA / ACTINOPTERYGII	*Galaxiella pusilla*	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐	Nationally listed (EPBC) - endangered	Nationally and internationally listed threatened species. Central to the support of the dwarf galaxias are the maintenance of the sand, gravel and alluvium deposits associated with the Holocene shorelines and an adequate and persistent water level in Logan Lagoon or Pot Boil Creek.
Birds																	
CHORDATA / AVES	*Anas castanea*	☐	☐	☑	☐	☐	☐	☐	☐	1819	2009	1.82	LC	☐	☐		The WPE5 population estimate for this species is 100,000 (WPE5). The site supports 1% of the population.

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
CHORDATA / AVES	*Aquila audax fleayi*	☑	☐	☐	☐	☑	☐	☐	☐					☐	☐	Nationally listed (EPBC) - endangered	Nationally listed threatened species that, although not identified as wetland dependent and contributes to the biodiversity of the site.
CHORDATA / AVES	*Arenaria interpres*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☑	Nationally listed (EPBC) — vulnerable, marine and migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally listed marine and migratory bird species, contributes to the biodiversity of the site. This species uses the site during migration.
CHORDATA / AVES	*Biziura lobata*	☐	☐	☑	☐	☐	☐	☐	☐	5200	2009	52	LC	☐	☐	Nationally listed (EPBC) - marine	The wpe5 Tasmanian sub-population estimate for this species is 1-10,000 (wpe5). The site supports 52% of the sub-population.
CHORDATA / AVES	*Botaurus poiciloptilus*	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐	Nationally listed (EPBC) - endangered	Nationally and internationally listed threatened species. Has been recorded breeding at the site.
CHORDATA / AVES	*Bubulcus ibis*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) - marine	Nationally listed marine. Migrates within Australia. Contributes to the biodiversity of the site.
CHORDATA / AVES	*Calidris acuminata*	☑	☑	☐	☐	☑	☐	☐	☐				VU	☐	☐	Nationally listed (EPBC) — vulnerable, marine and migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally listed marine and migratory species. Internationally listed as vulnerable. This species uses the site during migration.
CHORDATA / AVES	*Calidris alba*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) - marine and migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally listed marine and migratory species. Contributes to the biodiversity of the site. This species uses the site during migration.
CHORDATA / AVES	*Calidris ferruginea*	☑	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐	Nationally listed (EPBC) - critically endangered, marine, migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally and internationally listed threatened species. Contributes to the biodiversity of the site. It is water dependent species that Logan Lagoon is an important site during migration.
CHORDATA / AVES	*Calidris ruficollis*	☐	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐	Nationally listed (EPBC) - marine and migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally listed marine and migratory species. Contributes to the biodiversity of the site. It is water dependent species that Logan Lagoon is an important site during migration.
CHORDATA / AVES	*Charadrius mongolus*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) - endangered, marine and migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally listed threatened, marine and migratory species. This is a water dependent species that contributes to the biodiversity of the site. This species uses the site during migration.
CHORDATA / AVES	*Cladorhynchus leucocephalus*	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		The site is known to provide a drought refuge at times, for this species.
CHORDATA / AVES	*Gallinago hardwickii*	☐	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐	Nationally listed (EPBC) — vulnerable, marine and migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally listed marine and migratory species. Contributes to the biodiversity of the site. This species uses the site during migration.
CHORDATA / AVES	*Hydroprogne caspia*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) - marine and migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally listed marine and migratory species. Contributes to the biodiversity of the site. This species uses the site during migration.
CHORDATA / AVES	*Limosa lapponica*	☐	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐	Nationally listed (EPBC) - marine and migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally listed marine and migratory species. Contributes to the biodiversity of the site. This species uses the site during migration.
CHORDATA / AVES	*Numenius madagascariensis*	☑	☑	☐	☐	☑	☐	☐	☐				EN	☐	☑	Nationally listed (EPBC) - critically endangered, marine and migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally and internationally listed marine and migratory species. Contributes to the biodiversity of the site. This species uses the site during migration.

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
CHORDATA / AVES	*Numenius phaeopus*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) - marine and migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally listed marine and migratory species. Contributes to the biodiversity of the site. This species uses the site during migration.
CHORDATA / AVES	*Pardalotus quadragintus*	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐	Nationally listed (EPBC) - endangered	Nationally and internationally listed threatened species. The site provides habitat for this species.
CHORDATA / AVES	*Pluvialis fulva*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) - marine and migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally listed marine and migratory species. Contributes to the biodiversity of the site. This species uses the site during migration.
CHORDATA / AVES	*Sternula albifrons*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) - marine and migratory.	Nationally listed marine and migratory species. Contributes to the biodiversity of the site. This species uses the site during migration. The area provides breeding habitat for the little tern.
CHORDATA / AVES	*Sternula nereis*	☑	☐	☑	☐	☐	☐	☐	☐	250	2002	16.67	VU	☐	☐	Nationally listed (EPBC) - vulnerable	Nationally (Sternula nereis nereis) and internationally (Sternula nereis) listed threatened species. Contributes to the biodiversity of the site. The WPE5 population estimate for this species is 1200-1980. The site supports 16.5% of the population. The site provides valuable habitat. The fairy tern breeds on sandy beaches above the high tide line but below where terrestrial vegetation occurs. Therefore, the exposed Holocene shorelines and ocean beaches are important geomorphologic components for the support of fairy terns.
CHORDATA / AVES	*Thinornis rubricollis*	☐	☑	☑	☐	☐	☐	☐	☐	68	2008	1.5		☐	☐	Eastern Hooded Plover (Thinornis rubricollis rubricollis) is Nationally listed (EPBC) - vulnerable and marine	Eastern Hooded Plover nationally (Thinornis rubricollis rubricollis) and internationally (Thinornis rubricollis) listed threatened species. Contributes to the biodiversity of the site. The WPE5 Hooded Plover rubricollis population has an estimate for this species is 4500. The site supports 1.5% of the population. The site provides habitat for this species to breed. It is endemic to southern Australia and Tasmania where it inhabits ocean beaches and subcoastal lagoons.
CHORDATA / AVES	*Tringa nebularia*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) - endangered, marine and migratory. Listed under the Convention on Migratory Species and EAAF international migratory bird agreements.	Nationally listed marine and migratory species. Contributes to the biodiversity of the site. This species uses the site during migration.

1) Percentage of the total biogeographic population at the site

Gallaxiella pusilla (dwarf galaxias): The dwarf galaxias is a small freshwater fish endemic to south-eastern Australia, where it occurs in Tasmania, South Australia and Victoria. The dwarf galaxias is widely distributed, but populations are fragmented and patchy. Declines in abundance have been due to habitat changes to shallow freshwater wetlands, especially wetland drainage. Threats include wetland drainage, climate change, habitat damage through grazing and lack of regeneration, and feral fish competitors and predators. (Saddlier et al, 2010)

Calidris ferruginea (curlew sandpiper): In Australia, curlew sandpipers occur around the coasts and inland. There are records from all states. This species does not breed in Australia. Threats in Australia, especially eastern and southern Australia, include ongoing human disturbance, habitat loss and degradation from pollution, changes to the water regime and invasive plants. Curlew sandpipers are threatened by wetland degradation in East Asia where it stages on migration. (DAWE, 2022a Conservation Advice, Calidris ferruginea).

Charadrius mongolus (lesser sand plover): The lesser sand plover breeds in the northern hemisphere and undertakes annual migrations to and from southern feeding grounds for the austral summer. Within Australia, the lesser sand plover is widespread in coastal regions and has been recorded in all states. Threats to the lesser sand plover in Australia, especially eastern and southern Australia, include ongoing human disturbance, habitat loss and degradation from pollution, changes to the water regime and invasive plants. (DAWE, 2022b. Conservation Advice, Charadrius mongolus).

Numenius madagascariensis (far eastern curlew): The far eastern curlew is the largest migratory shorebird in the world. Within Australia, the eastern curlew has a primarily coastal distribution. The species is found in all Australian states. Far eastern curlews are found on islands in Bass Strait and along the north-west, north-east, east and south- east coasts of Tasmania. Threats in Australia, especially eastern and southern Australia, include ongoing human disturbance, habitat loss and degradation from pollution.

NOTE: for the four species listed under criterion 6, data upon which this is based is over ten years old. No recent comprehensive survey data is available. The species are presumed to still meet the criteria.

3.4 - Ecological communities whose presence relates to the international importance of the site

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Lowland native grasslands of Tasmania	☑	Lowland Poa labillardierei grasslands are generally species-poor, treeless communities characterisedby tussocks of Poa labillardierei with herbs, graminoids and small grasses in the inter-tussock spaces. This community occurs below 600m elevation.	The Lowland Poa labillardierei grassland is listed as a critically endangered ecological community ('Lowland Native Grasslands of Tasmania') under the EPBC Act (DEWHA 2010b) and is extensive throughout the site.

Optional text box to provide further information

Lowland Native Grasslands of Tasmania - Lowland Poa labillardierei grassland is usually considered a terrestrial community and therefore not wetland-dependent. However, around Logan Lagoon it is defined as a partially wetland-dependent community because it is found in areas of the lagoon that are intermittently inundated. The intermittent inundation allows a more diverse range of species to persist, such that:
• Terrestrial species persist because they are able to tolerate inundation for limited periods, but permanent inundation will kill them; or
• Partially wetland-dependent species persist because they are periodically inundated, but persistent arid conditions will kill them.

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

The critical components and processes for the Logan Lagoon are:

• Climate - the particular attributes of climate that are important in maintaining the ecological character of the site are rainfall, temperature, wind and evaporation.

• Geomorphology - Logan Lagoon is part of an extensive eastern Flinders Island parallel dune-coastal barrier system. It is a site of geo-conservation significance and contains a number of old, slightly higher than present, strand lines suggesting recent uplift (or higher mid-Holocene sea levels). The lagoon is isolated from the sea by a large sand bar.

• Hydrology - the Site's hydrological regime includes highly seasonal freshwater inflows from direct precipitation and drainage channels via Pot Boil Creek. There is limited tidal exchange with ocean waters – the sand bar at the lagoon entrance is rarely breached under natural conditions. Groundwater discharges from the uppermost aquifer beneath the lagoon.

• Water quality - surface water quality is influenced by seasonal factors, including rainfall recharge, inflows from Pot Boil Creek, evaporation, and interaction with groundwater and adjacent marine waters. Periodic opening of the lagoon, under natural circumstances, to ocean waters quickly modifies water quality. Water quality can also change rapidly with climatic conditions.

• Vegetation - the Site contains a mosaic of vegetation communities including Lowland sedgy heathland, Saline aquatic herbland, Saline sedgeland and rushland, Fresh water aquatic herbland, Lowland Poa labillardierei grassland, and Melaleuca squarrosa scrub.

• Bird species - there is a high diversity and abundance of birds, including 127 recorded species. A total of 21 migratory shorebird species has been recorded at the Site.

The critical benefits and services for the site are that it:

• supports representative, rare or unique wetland types - the diversity of wetland habitat at Logan Lagoon contributes to it meeting Criterion 1, and results from interactions between the components and processes of geomorphology, climate, hydrology and vegetation.

• supports threatened species and communities - Logan Lagoon supports nationally and internationally threatened fish (dwarf galaxias) and birds (Australasian bittern and fairy tern); and nationally and regionally threatened plants (swamp fireweed and northern leek orchid) and an ecological community (Lowland Grasslands of Tasmania). Wedge-tailed eagles and forty-spotted pardalote, both nationally threatened, are also supported by the Site. A combination of components and processes within the site combine to provide the conditions and habitat to support the species and community.

• provides habitat for flora and fauna that contribute to the biodiversity of the Tasmanian bioregion - for example, geomorphologic features such as the Holocene shorelines, support wetland dependent vegetation types, which in turn provide habitat for invertebrate populations and other aquatic fauna. This biota subsequently provides a source of food for the birds that contribute to the site being recognised as a wetland of international importance.

• supports critical life stages and provides refuge - Logan Lagoon provides important resting and feeding areas for waterbirds and migratory shorebirds. It also provides refuge for waterbirds during drought and important breeding habitat for beach nesting shorebirds.

• supports migratory and resident waterbirds - Logan Lagoon provides the physical habitat and biological conditions for supporting waterbirds and migratory shorebirds.

A detailed account of the Site's ecological character can be found in the Ecological Character Description (Finley, Jensz and Roberts, 2010), included at Section 6.1.2.

4.2 - What wetland type(s) are in the site?

Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
E: Sand, shingle or pebble shores		0		Representative
H: Intertidal marshes		0		Representative
J: Coastal brackish / saline lagoons		0		Representative

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> N: Seasonal/ intermittent/ irregular rivers/ streams/ creeks		4		
Saline, brackish or alkaline water > Marshes & pools >> Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools		2		Representative
Fresh water > Marshes on inorganic soils >> Tp: Permanent freshwater marshes/ pools		4		Representative
Fresh water > Lakes and pools >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		1		Representative
Fresh water > Marshes on inorganic soils >> W: Shrub-dominated wetlands		3		Representative

4.3 - Biological components

4.3.1 - Plant species

Invasive alien plant species

Phylum	Scientific name	Impacts	Changes at RIS update
TRACHEOPHYTA/MAGNOLIOPSIDA	*Carduus cephalanthus*	Potential	No change
TRACHEOPHYTA/LILIOPSIDA	*Cortaderia selloana*	Potential	No change
TRACHEOPHYTA/MAGNOLIOPSIDA	*Euphorbia paralias*	Actual (minor impacts)	No change
TRACHEOPHYTA/MAGNOLIOPSIDA	*Lycium ferocissimum*	Potential	No change

Optional text box to provide further information

Three saltmarsh and wetland community types occurring at the Site are listed as vulnerable under the Tasmanian Nature Conservation Act 2002. Two of these, Selliera radicans herbfield associated with Lacustrine Herbland and Lamprothamnium aquatic herbland associated with Saline aquatic herbland, are considered poorly reserved in Tasmania. The vegetation community 'Lowland Native Grasslands of Tasmania', listed as a critically endangered under the EPBC Act, is extensive throughout the site. Including the communities mentioned above, the site supports six vegetation communities recognised as being rare or vulnerable in Tasmania. There are remnant communities of conservation significance (Harris 1989) on the eastern side of the lagoon.

A number of declared weeds occur in the Logan Lagoon Site. Pampas (Cortaderia selloana), slender thistle (Carduus pycnocephalus), and African boxthorn (Lycium ferocissimum) are all listed as declared weeds in Tasmania (Parsons and Cuthbertson 1992). All of these species are invasive and out-compete other plants, particularly where the soil has been disturbed. Sea spurge (Euphorbia paralias) is also colonising the southern beach of the Site.

Sea spurge is one of a number of weeds that are significantly affecting beach and coastal ecosystems throughout Flinders Island and the rest of Tasmania. It invades beaches and dune plant communities, displacing native species (Parks and Wildlife Service 2003). It alters the structure of dunes and creates a dense vegetation cover on sand spits and along the back of the beach where few plants normally grow. This is likely to have serious impacts on some beach nesting shorebirds, such as pied oystercatchers, hooded and red-capped plovers, and beach-nesting seabirds such as little and fairy terns, which prefer open sands for nesting (DPIPWE 2010).

Pampas grass, Cortaderia selloana, thrives in a variety of habitats in Tasmania and most severe infestations occur on Flinders Island. Pampas grass primarily reproduces by seed but can grow from root segments.

Slender thistle is a widely distributed, serious weed in Tasmania. It occurs in most agricultural areas where it invades pastures, crops and neglected areas with moderate to highly fertile soils.

African boxthorn is a woody shrub, the stems of which bear large, rigid spines. It may grow to 5m high. It is found at a range of location around Tasmania.

4.3.2 - Animal species

Invasive alien animal species

Phylum	Scientific name	Impacts	Changes at RIS update
CHORDATA/MAMMALIA	*Felis catus*	Actual (major impacts)	No change
CHORDATA/MAMMALIA	*Sus scrofa*	Actual (major impacts)	No change

Optional text box to provide further information

Feral pigs are widespread throughout the Site, usually associated with seasonal wetlands because of their reliance on fresh water (Parks and Wildlife Service 2007). Habitat degradation is one of the main threats to plant species within the Site and feral pigs have caused extensive localised damage to terrestrial and wetland vegetation (Parks and Wildlife Service 2007). Extensive runways have been created and pigs uproot large areas of the soft sandy soils in their search for food.
Feral cats are widespread on Flinders Island, including throughout the Logan Lagoon Ramsar site (Parks and Wildlife Service 2007). Feral cats are known to prey on native wildlife, but may also have indirect effects on native fauna by carrying and transmitting infectious diseases such as toxoplasmosis (DEWHA 2008b). Predation by cats is listed nationally as a Key Threatening Process under the EPBC Act. The Threat Abatement Plan for Predation by Feral Cats, (DEWHA 2008b) identifies research, management and other actions needed to control cats.
Some exotic birds are also present in the Logan Lagoon area. For example, European starlings (Sturnus vulgaris) compete with native birds for nesting hollows. Domestic dogs, including those used for hunting in the Chain of Lagoons area, may pose a risk to native wildlife. Rabbits and foxes have not been introduced to Flinders Island, which is fortunate because these two species can have a devastating impact on vegetation and native fauna (Parks and Wildlife Service 2007).

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Cfb: Marine west coast (Mild with no dry season, warm summer)

The climate of Flinders Island is classified as temperate maritime. The island is surrounded by the waters of Bass Strait and the Tasman Sea. Summers are mild with average temperatures between 13.8 and 22.7 degrees Celsius, compared to midwinter with average temperatures between 6.4 and 13.4 degrees Celsius. (BoM 2022).

Flinders Island airport receives a mean annual rainfall of 740.5mm, with highest monthly rainfall of 81.2mm in July and lowest rainfall of 38.5mm in February.

According to BoM and CSIRO (2022) climate projections for Southern slopes (Tasmania east) region average temperatures will continue to increase in all seasons with more hot days and warm spells. Fewer frosts are projected. Generally less rainfall in spring and little change or an increase in winter rainfall is projected. Changes to summer and autumn rainfall are possible but less clear. Increased intensity of extreme rainfall events is projected.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 0

a) Maximum elevation above sea level (in metres): 20

- Entire river basin ☐
- Upper part of river basin ☑
- Middle part of river basin ☐
- Lower part of river basin ☑
- More than one river basin ☐
- Not in river basin ☐
- Coastal ☑

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

Logan Lagoon is situated on Flinders Island north of the Tasmanian mainland and surrounded by Bass Strait. It lies within the Flinders-Cape Barren River Region, part of the Tasmania Drainage Division (Australian Hydrological Geospatial Fabric (Geofabric). Bureau of Meteorology, 2012).

4.4.3 - Soil

- Mineral ☑
  - (Update) Changes at RIS update: No change ◉ Increase ○ Decrease ○ Unknown ○
- Organic ☑
  - (Update) Changes at RIS update: No change ◉ Increase ○ Decrease ○ Unknown ○
- No available information ☐

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes ◉ No ○

Please provide further information on the soil (optional)

Soils at the site include:

• Hydrosols, as seasonally or permanently wet soils and subaqueous materials; and
• Sands, occurring in dunes or sandy plains at the site.

Hydrosols occur within the lagoon perimeter and are also dominant to the west, southwest and north of the lagoon. Sandy soil types are the dominant soil types to the east and south of the lagoon, as well as some areas to the west of the lagoon.
The majority of Logan Lagoon has a low probability (6-70% chance) or extremely low probability (1-5% chance) of Potential Acid Sulfate Soils, however, there are some small localised areas with a high probability (>70% chance) across the Site.

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from surface water	☑	No change
Water inputs from precipitation	☐	No change
Water inputs from groundwater	☐	No change

Water destination

Presence?	Changes at RIS update
Marine	No change

Stability of water regime

Presence?	Changes at RIS update
Water levels fluctuating (including tidal)	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology:

The Logan Lagoon estuary is the main hydrological feature at the site, comprising approximately 40% of the reserved area. The major inputs to the lagoon are surface water inflows from Pot Boil Creek and its tributaries, direct rainfall over the lagoon, groundwater discharge from the uppermost aquifer beneath the lagoon, and inflows of seawater via the lagoon entrance. The lagoon has a neutral pH, salinities similar to seawater, is relatively clear and has moderate levels of nutrients, particularly phosphate. The elevated levels of nutrients are most likely the result of runoff from nearby farmland in the catchment.

The present entrance to the sea is only open on an infrequent basis and generally a sand bar extends from the lagoon to the beach. During periods when the bar is open, there can be an outflow of lagoon water or an inflow of seawater into the lagoon, with the extent of seawater exchange being dependent on factors such as lagoon water levels, tides, extent of bar erosion and storm activity. It has been claimed that there have been periods when the entrance is closed and a very high water level has resulted in waterlogging of adjacent farmland. At such times, artificial opening of the lagoon mouth by excavating a channel to the ocean has occurred during the past 50 years; however, this disrupts the natural hydrology and is a threat to the ecological character of the site.

(ECD) Connectivity of surface waters and of groundwater: There is connectivity between surface and groundwater but there is little data to quantify this.

(ECD) Stratification and mixing regime: no data available

4.4.5 - Sediment regime

Significant erosion of sediments occurs on the site ☑

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Significant accretion or deposition of sediments occurs on the site ☑

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Significant transportation of sediments occurs on or through the site ☑

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Sediment regime is highly variable, either seasonally or inter-annually ☑

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Sediment regime unknown ☑

Please provide further information on sediment (optional):

Alluvial processes occurring within Logan Lagoon contribute to the formation of geological features such as shorelines and sand dunes via the deposition of sediments.

Physical processes within the lagoon are apparent by landforms that include a series of recurved spits along the former western shoreline, and a linear island in the northwest corner. As barriers developed to enclose the lagoon, the effects of sea waves reduce as other processes dominate, including tidal currents, fluvial inflow and winds blowing over the lagoon generating local waves and currents. These processes have displaced and moved sediments up and down the lagoon shoreline, resulting in the erosion of embayments and growth of landforms such as the spits and linear island observed at the Site.

(ECD) Water turbidity and colour	Turbidity ranged from 'low' to 'medium', indicating an increase in suspended particulates from runoff in August 2009.

4.4.6 - Water pH

Acid (pH<5.5) ☐

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Circumneutral (pH: 5.5-7.4) ☑

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Alkaline (pH>7.4) ☐

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Unknown ☐

Please provide further information on pH (optional):

The lagoon has a neutral pH, salinities similar to seawater, is relatively clear and has moderate levels of nutrients, particularly phosphate. The elevated levels of nutrients are most likely the result of runoff from nearby farmland in the catchment.

4.4.7 - Water salinity

Fresh (<0.5 g/l) ☐

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Mixohaline (brackish)/Mixosaline (0.5-30 g/l) ☑

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Euhaline/Eusaline (30-40 g/l) ☑

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Hyperhaline/Hypersaline (>40 g/l) ☐

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Unknown ☐

Please provide further information on salinity (optional):

Surface water quality in Logan Lagoon is influenced by seasonal factors that affect water levels in the lagoon, including: rainfall recharge; inflows from Pot Boil Creek and its tributaries; evaporation; interaction with groundwater; and adjacent marine waters.
During winter and spring periods when rainfall and freshwater inflows are at their highest, mixing and dilution of lagoon waters is expected to result in decreased lagoon water salinities. In the drier summer and autumn months - with less rainfall, higher rates of evaporation and a decrease in the extent of the lagoon waters - salinity is expected to increase through concentration.
Available groundwater data for lagoon systems to the north of Camerons Inlet (REM and Aquaterra 2008) indicates that groundwater electrical conductivity in the uppermost aquifer beneath Logan Lagoon is likely to range from 1500 - 4500 µS/cm (approximate Total Dissolved Solids of 1000 - 2900 mg/L), which is slightly brackish.

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic ☐

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Mesotrophic ☐

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Oligotrophic ☐

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Dystrophic ☐

(Update) Changes at RIS update: No change ○ Increase ○ Decrease ○ Unknown ◉

Unknown ☑

Please provide further information on dissolved or suspended nutrients (optional):

Logan Lagoon is relatively clear and has moderate levels of nutrients, particularly phosphate. The elevated levels of nutrients are most likely the result of runoff from nearby farmland in the catchment.

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ◉ ii) significantly different ○

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Medium
Erosion protection	Soil, sediment and nutrient retention	Medium
Hazard reduction	Flood control, flood storage	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Water sports and activities	Medium
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Nature observation and nature-based tourism	Medium
Scientific and educational	Educational activities and opportunities	Medium

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	Medium
Soil formation	Accumulation of organic matter	Medium
Soil formation	Sediment retention	Medium
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	Medium

Optional text box to provide further information

The benefits and services most relevant for Logan Lagoon are grouped into supporting services, regulating services and cultural services. No provisioning services were identified.

Supporting Services - Logan Lagoon maintains regional biodiversity by:
• supporting a number of representative, rare or unique wetland types
• supporting regionally, nationally and internationally threatened species and communities
• providing habitat for plant and animal species that contribute to the biodiversity of the Tasmanian bioregion
• supporting critical life stages or providing refuge
• supporting migratory and resident waterbirds.

Alluvial processes occurring within Logan Lagoon contribute to the formation of geological features such as shorelines and sand dunes via the deposition of sediments. Accumulation of organic matter provides nutrients for flora communities which help to stabilise the dune systems. The lagoon facilitates storage, recycling, processing and acquisition of nutrients for use by other organisms inhabiting or using the Site.

Regulating services - Logan Lagoon maintains and regulates the hydrological cycles and regimes including:
• groundwater recharge from surrounding impermeable granite catchments
• flood control and erosion protection; retention, recovery and removal of excess nutrients and pollutants
• maintenance of natural ecosystems in the lagoon.

Scientific and educational - the site has education value in serving as a demonstration of a near-pristine wetland, particularly the coastal dune systems that are of geoconservation significance on a regional scale. The monitoring of bird numbers at the site provides important information on the long term status of some threatened birds.

The benefits and services listed above contribute to the maintenance of the site's ecological character. However, not all are critical for supporting the components and processes that contribute to the ecological character. The critical benefits and services for maintaining the components and processes are:

• supports representative, rare or unique wetland types;
• supports threatened species and communities;
• provides habitat for flora and fauna that contribute to the biodiversity of the Tasmanian bioregion;
• supports critical life stages or provides refuge; and
• supports migratory and resident waterbirds.

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes ○ No ○ Unknown ◉

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland ☐

ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland ☐

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples ☐

iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland ☐

<no data available>

4.6 - Ecological processes

(ECD) Primary production	no data
(ECD) Nutrient cycling	The lagoon facilitates storage, recycling, processing and acquisition of nutrients for use by other organisms inhabiting or using the site.
(ECD) Carbon cycling	no data
(ECD) Animal reproductive productivity	no data
(ECD) Vegetational productivity, pollination, regeneration processes, succession, role of fire, etc.	Frequent, extensive firing has altered some of the vegetation within the Logan Lagoon Ramsar site. The vegetation on the western windward side of the lagoon is conducive to fire, containing tussock grasslands, sedgeland, heath and scrub.
(ECD) Notable species interactions, including grazing, predation, competition, diseases and pathogens	Phytophthora cinnamomi is present at Logan Lagoon but the impact of the disease has not been investigated (T Rudman, DPIPWE, personal communication, 10 February 2010). Chytrid fungus may also be affecting native amphibians.
(ECD) Notable aspects concerning animal and plant dispersal	no data
(ECD) Notable aspects concerning migration	The site supports shorebirds in their annual migrations along the East Asian-Australasian Flyway in the non-breeding season. Numbers may fluctuate depending on factors including habitat availability (declining at many locations in the flyway).
(ECD) Pressures and trends concerning any of the above, and/or concerning ecosystem integrity	Over the past 5-6 years (with government funding) a private landholder to the west of the site has excluded stock from waterways on their property and undertaken some revegetation, reducing nutrients and other runoff into the system via Pot Boil Creek.

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
Provincial/region/state government	☑	☑

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	☐	☑

Provide further information on the land tenure / ownership regime (optional):

The 2257 ha site is enclosed within the Logan Lagoon Conservation Area which is managed by the Tasmanian Parks and Wildlife Service. The Site is bounded by sea to the east and south, Logan Lagoon Conservation Area to the north, with private property along approximately two-thirds of the western and north-western boundary. With the exception of the areas immediately to the west and north-west of the entrance to Pot Boil Creek, the majority of the Logan Lagoon Conservation Area is covered with native vegetation.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: Parks and Wildlife Service, Tasmania

Provide the name and/or title of the person or people with responsibility for the wetland: Parks and Wildlife Service, Tasmania

Postal address: GPO Box 1751
HOBART, Tasmania 7001, Australia
Telephone: +61 3 6165 4396

E-mail address: information@dpipwe.tas.gov.au

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Drainage	unknown impact	unknown impact	☑	unknown	☑	unknown

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Livestock farming and ranching	unknown impact	unknown impact	☐	No change	☑	No change

Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Mining and quarrying	unknown impact		☐	No change	☑	unknown

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified/others	unknown impact		☑	unknown	☐	No change

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Fire and fire suppression	unknown impact	unknown impact	☑	unknown	☑	No change

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Invasive non-native/ alien species	unknown impact	unknown impact	☑	unknown	☐	No change

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Agricultural and forestry effluents	unknown impact		☐	unknown	☑	unknown

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Habitat shifting and alteration	unknown impact	unknown impact	☑	unknown	☑	unknown
Droughts	unknown impact	unknown impact	☑	unknown	☑	unknown
Temperature extremes	unknown impact	unknown impact	☑	unknown	☑	unknown
Storms and flooding	unknown impact	unknown impact	☑	decrease	☑	unknown
Unspecified	unknown impact		☑	unknown	☐	No change

Please describe any other threats (optional):

There are several threats which could adversely impact on the ecological character of the Logan Lagoon, comprising:

• Inappropriate fire regime: frequent and extensive firing has dramatically altered some of the vegetation within the Logan Lagoon Ramsar site. The vegetation on the western windward side of the lagoon is conducive to fire, containing areas of tussock grasslands, sedgeland, heath and scrub;
• Inappropriate use of recreational vehicles at the site: access to the site in off-road vehicles and motorbikes is common. Off-road vehicle use is associated with a range of impacts to some of the Ramsar site's key natural values and may cause erosion, vegetation damage, contribute to the spread of introduced plants, disturb coastal breeding birds and destroy their eggs;
• Alteration to drainage regime, including artificial opening of the lagoon mouth and modifications of the natural flow into the lagoon: Human interference in the natural hydrological processes of Logan Lagoon, such as artificially opening the mouth, may be detrimental to many of the species inhabiting the lagoon ecosystem, including, aquatic plant and algal species, fish, amphibians, birds, crustaceans and gastropods;
• Introduction of animal and plant pests: Introduced animal species have established wild (feral) populations on Flinders Island and in the Logan Lagoon. These feral animals pose varying threats to the native fauna and flora. Similarly, a number of introduced plant species as well as the root-rot fungus Phytophthora cinnamomi has been introduced to the lagoon site;
• Surrounding land use/agriculture: Most of the water that enters the Logan Lagoon site originates in or flows through land that is subject to agricultural activities, particularly pasture improvement for grazing. Runoff and leaching of fertilisers and other toxicants into the water system may indirectly have a significant impact on the natural properties of the lagoon; and
• Climate change via changed rainfall patterns, changed temperature and wind regimes, more frequent and severe weather events, sea level rise and/or coastal retreat: Changes associated with such a climate may potentially impact the hydrology, geomorphology, vegetation, habitat and species at Logan Lagoon.

(Source: ECD - Finley et al, 2010).

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Conservation Area	Logan Lagoon Conservation Area		whole

5.2.3 - IUCN protected areas categories (2008)

Ia Strict Nature Reserve ☐

Ib Wilderness Area: protected area managed mainly for wilderness protection ☐

II National Park: protected area managed mainly for ecosystem protection and recreation ☐

III Natural Monument: protected area managed mainly for conservation of specific natural features ☐

IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention ☐

V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☐

VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems ☑

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Other:

In Australia, the ecological character of a designated Wetland of International Importance is protected as a matter of national environmental significance (MNES) under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes ○ No ◉

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes ○ No ◉

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Please select a value

5.2.7 - Monitoring implemented or proposed

<no data available>

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

This RIS has been prepared based on information from the ecological character description; relevant management plans; and past Ramsar Information sheets.
A full bibliography is included as an attachment under Section 6.1.2 vi.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<1 file(s) uploaded>

ii. a detailed Ecological Character Description (ECD) (in a national format)
<1 file(s) uploaded>

iii. a description of the site in a national or regional wetland inventory
<no file available>

iv. relevant Article 3.2 reports
<no file available>

v. site management plan
<1 file(s) uploaded>

vi. other published literature
<1 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

Aerial view of Logan Lagoon looking north-west (17th July 2009). (*Barry Baker, 17-07-2009*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation: 1982-11-16