Ramsar Information Sheet

Published on 13 April 2023
Update version, previously published on : 29 March 2016

Australia

Flood Plain Lower Ringarooma River

Designation date	16 November 1982
Site number	257
Coordinates	40°53'01"S 147°55'42"E
Area	3 534,00 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 Flood Plain Lower Ringarooma River Ramsar site is located on the far north-east coast of Tasmania.

The Site is irregularly shaped and covers an area of 3,534 ha. At its northern edge, the Site includes the Boobyalla Inlet estuary and parts of both Boobyalla Beach to the east and Murdochs Beach to the west of the River mouth. A mobile sand dune system occurs in the northern part of the Site. The Site extends approximately 8 km north to south, encompassing a variety of habitats which are significant to a number of species. The ecological data for the Site is limited.

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

1: The large riverine floodplain that forms a mosaic of permanent and seasonal marshlands that comprise the Site is considered rare within the Tasmanian bioregion. Wetland vegetation communities at the site include a variety of Ramsar wetland types, some of which are listed as vulnerable under Tasmanian legislation. The two main Ramsar wetland types are: coastal freshwater lagoons (K) and seasonal/intermittent/irregular rivers/streams/creeks (N). Other wetland types include permanent rivers/streams/creeks (M), permanent freshwater lakes (O), permanent freshwater marshes/pools (Tp), seasonal intermittent freshwater marshes/pools (Ts) and non-forested peatlands (U).

2: The floodplain supports a variety of habitats, which are significant to a range of flora and fauna species, including species listed as nationally or internationally threatened (Fairy Tern, Dwarf Galaxias, Australian Grayling and Green and Gold Frog).

3: The lagoons, marshlands and dunes support a rich variety of invertebrate fauna. The shallow, freshwater lagoons are important feeding sites for many species of waterbirds. The site supports species listed as rare or threatened at the regional level.

4: A number of migratory birds have been recorded from the Site, including eleven species on international migratory bird lists such as JAMBA (Japan-Australia migratory bird agreement), CAMBA (China-Australia migratory bird agreement), ROKAMBA (Republic of Korea-Australia migratory bird agreement) and the Convention on Migratory Species. The site provides nesting habitat for many species of waterbirds. The Site supports nesting shorebirds (including the Little Tern, Hooded Plover, Fairy Tern, Pied Oystercatcher and Red-capped Plover). It supports migrating fish (including the Tasmanian Mudfish, Tasmanian Whitebait, Australian Grayling).

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 Primary Industries, Parks, Water and Environment (DPIPWE)
Postal address	GPO Box 44 HOBART, Tasmania 7001, Australia

National Ramsar Administrative Authority

Institution/agency	Australian Government Department of Agriculture, Water and the Environment
Postal address	GPO Box 858 Canberra ACT 2601

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

From year	2012
To year	2020

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Flood Plain Lower Ringarooma River

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	the area has increased
(Update) The Site area has been calculated more accurately	☑
(Update) The Site has been delineated more accurately	☐
(Update) The Site area has increased because of a boundary extension	☐
(Update) The Site area has decreased because of a boundary restriction	☐
(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?	Not evaluated

(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 just over 1° C since 1910, with most of the warming since 1950. Further increases in temperature are projected, with more extremely hot days and fewer extremely cool days under all emissions scenarios. Warming over Australia is expected to be slightly higher than the global average. Oceans around Australia have warmed by around 1° C since 1910, contributing to longer and more frequent marine heatwaves. Sea levels are rising around Australia, increasing the risk of inundation and oceans are acidifying (BoM State of Climate, 2018). These conditions will affect the critical components, processes and services of the Site. The adaptive capacity and resilience of the site will be tested.

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 Flood Plain Lower Ringarooma River Site is shown as Lot 1 on Central Plan Register (CPR) 5658 from the Tasmanian Information and Land Services, Department of Primary Industries, Water and Environment. CPR 5658 horizontal datum is Australian Geodetic Datum (AGD66) Universal Transverse Mercator Projection Australian Map Grid (UTM AMG66) and Australian Height Datum (Tasmania) for vertical datum.

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? Gladstone (population 139) lies approximately 9 km to the south east of the Ramsar site.

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): 3534

Area, in hectares (ha) as calculated from GIS boundaries: 3533.972

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	Piper-Ringarooma Rivers, Tasmainian Drainage Basin
Other scheme (provide name below)	Bass Strait IMCRA Province

Other biogeographic regionalisation scheme

Commonwealth of Australia (2006). A guide to The Integrated Marine and Coastal Regionalisation of Australia - version 4.0 June 2006 (IMCRA v4.0).

Australian Drainage Divisions - Bureau of Meteorology (2012). Australian Hydrological Geospatial Fabric: http://www.bom.gov.au/water/geofabric/.

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

Hydrological services provided	The hydrology has influenced landforms, vegetation and habitat within the Site. Water is primarily derived from the Ringarooma River, with inputs from smaller tributaries within the Site's catchment. The freshwater wetland complex buffers flood peaks and processes nutrients that would otherwise be deposited in the estuary. This occurs through the overbank deposition and subsequent retention of flood waters and sediments into the freshwater wetlands. It also continues to trap a portion of the mine-related sediment that will continue to be transported down the river for at least 50 years (Knighton 1991). A proportion of this sediment will continue to be transported through the estuary to the sea.
Other ecosystem services provided	Benefits directly attributable to hydrology and its maintenance of the ecosystem/ habitat include: • Providing representative wetlands for bioregion • Maintaining bioregional biodiversity • Supporting species abundance and diversity • Supporting migratory bird species.

Other reasons

The Flood Plain Lower Ringarooma Site is considered rare within the bioregion (Tasmania Drainage Division). It is rare for large Tasmanian rivers to flow through floodplains and form the mosaic of wetlands that are found along the Ringarooma River (Stewart Blackhall, personal communication). The site contains regionally representative examples of wetland systems within a floodplain, with a mosaic of permanent and seasonal marshlands and a large river estuary (Boobyalla Inlet). In the classification of Tasmanian estuaries, Boobyalla Inlet is recognised as having high conservation significance. Tasmanian estuaries of high conservation significance are those that remain relatively pristine or contain an unusual range of species (Edgar, Barrett and Graddon 1999).

The Site includes 3 zones: coastal, estuary and freshwater.

The coastal zone covers the entire coast of the site (3-4 km), including the combined mouth of the Boobyalla and Ringarooma Rivers and their delta. Wetland types that occur within the coastal zone include:
• sandy shores (wetland type E);
• delta (wetland type F); and
• intertidal mud and sand flats (wetland type G).

The estuary zone is wave dominated, with a flood tide delta. The short residence time for deposited material results in little processing or trapping of associated nutrients and contaminants. The wetland types that occur within the estuary zone include:
• estuarine waters (wetland type F);
• intertidal mud and sand flats (wetland type G);
• intertidal salt marshes (wetland type H); and
• coastal brackish/saline lagoons (wetland type J).

The freshwater zone contains wetlands formed on a lowland floodplain that widens out downstream of a shallow and constricted valley. In the wider and flatter area of the floodplain, water from high flows sometimes leaves the channel and spreads out, filling in depressions in the landscape. As the water leaves the channel during high flows it quickly loses velocity and deposits the heavier sediment along the channel edge, forming natural levees. These natural levees impede the water from subsequently returning to the channel, leaving it to form a mosaic of seasonally inundated and permanent water bodies. The wetland types that occur within the freshwater zone include:
• seasonal waterways (wetland type N);
• permanent freshwater marshes, pools and ponds (< 8 ha), with emergent vegetation (wetland type Tp);
• seasonal freshwater marshes and pools, including seasonally flooded meadows and sedge marshes (wetland type Ts);
• shrub-dominated wetlands (wetland type W); and
• freshwater, tree-dominated wetlands (freshwater swamp forest) (wetland type Xf).

A section of the marshes known as The Chimneys is situated within Pleistocene dunefields and thought to be a remnant of a more extensive lake system, older than other lakes in the area. It potentially contains palynological and palaeobotanical fossils and megafaunal remains (Blackhall et al 2000).

☑ Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information

The floodplain supports a variety of habitats, which are significant to a range of flora and fauna species, including species listed as threatened under the IUCN Redlist and the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The Site supports six threatened species, including five wetland-dependent species:

• green and gold frog (Litoria raniformis) (vulnerable, EPBC Act)
• dwarf galaxias (Galaxiella pusilla) (vulnerable, EPBC Act and IUCN Red list)
• fairy tern (Sternula nereis) (vulnerable, IUCN Red list)
• Australian grayling (Prototroctes maraena) (vulnerable, EPBC Act)
• Australasian bittern (Botaurus poiciloptilus) (endangered, EPBC Act and IUCN Red list)
• shiny grasstree (Xanthorrhoea bracteata) (endangered, EPBC Act).

The green and gold frog has declined dramatically across its range. It is dependent upon permanent freshwater lagoons for breeding. Ideal breeding habitat is the shallow part of lagoons (to approx. 1.5 m) where there is generally a complex vegetation structure (DPIPWE 2001). It also requires terrestrial habitat (such as grasslands and forests), feeding mainly on terrestrial invertebrates such as beetles, termites, cockroaches, moths, butterflies and various insect larvae. The combined habitat requirements are provided by the site in the lagoons, herblands, sedgelands, swamp forests and coastal forests.

In Tasmania, the dwarf galaxias occurs in lowland areas in the northeast and northwest. Due to a declining total population, all known populations are important. The dwarf galaxias favours a shallow, stagnant swampy environment with abundant aquatic plants and is typically found in still waters such as swamps, drains and backwaters of creeks and streams. The waters inhabited by this species are often temporary, drying up partially or completely during summer, and replenished by rainfall or floodwaters during the wetter months. The Site is an ideal site for the species, offering a range of permanent and seasonal waterbodies, mostly still or slow flowing and many with abundant submerged vegetation.

The shiny grasstree is endemic to Tasmania and is known to occur in the coastal heathland within the Site. It has a highly fragmented geographic distribution and continuing decline is expected as a result of ongoing threats (which include dieback caused by Phytophthora root-rot; habitat loss, fragmentation or degradation; and too frequent fires) (DAWE 2020).

One nationally listed threatened ecological community, Tasmanian Forests and Woodlands dominated by black gum or Brookers gum (Eucalyptus ovata / E.brookeriana) (critically endangered), may occur within the area. Targeted surveys of this ecological community have not been undertaken within the Site.

☑ Criterion 3 : Biological diversity

Justification

The series of shallow freshwater lagoons at the Site provide important feeding and nesting habitat for many species of waterbirds. The Site includes approximately 3 km of beaches, from which a number of shorebirds have been recorded, including:
• hooded plover (Thinornis rubricollis)
• red-capped plover (Charadrius ruficapillus)
• greenshank (Tringa nebularia)
• red-necked stint (Calidris ruficollis)
• ruddy turnstone (Arenaria interpres)
• curlew sandpiper (Calidris ferruginea)
• black-fronted dotterel (Elseyornis melanops)
• fairy tern (Sternula nereis)
(Sally Bryant, personal communication).

Approximately 40 species of wetland dependent plants have been recorded at the Site. Four vegetation communities recognised as rare or threatened in Tasmania occur within the site, including:
• freshwater aquatic sedgeland and rushland (Ts)
• freshwater aquatic herbland (Tp)
• lacustrine herbland (Tp)
• Melaleuca ericifolia swamp forest (Xf).

The Site supports two regionally threatened bird species and four regionally threatened flora species considered to be at risk in Tasmania. These are:
• little tern (Sterna albifrons, rare, TSPA) – has been recorded breeding on beaches within the site.
• white-bellied sea eagle (Haliaeetus leucogaster, vulnerable, TSPA) – has been recorded at the site and may use habitats such as estuarine waters, permanent rivers and creeks, and seasonal intermittent lakes within the site.
• purple loosestrife (Lythrum salicaria, vulnerable, TSPA) - occurs in open areas in Melaleuca ericifolia swamp forest and in freshwater aquatic sedgeland and rushland wetlands in the site.
• ribbon weed (Vallisneria americana, rare, TSPA) - occurs in freshwater aquatic herbland within the site.
• erect marshflower (Villarsia exaltata, rare, TSPA) - The Chimneys is a key site for this species.
• native gypsywort (Lycopus australis, endangered, TSPA) - was previously thought to be extinct in Tasmania but has been found at the site. It occurs in association with lacustrine herbland in the study area and has been observed at one location on the western edge of Shantys Lagoon.

The Site has also been described as important for its diverse invertebrate fauna.

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

Optional text box to provide further information

Eight migratory birds have been recorded from the Site, which provides feeding and roosting habitat for these species during the non-breeding season. Species include:
• Latham's snipe (Gallinago hardwickii)
• curlew sandpiper (Calidris ferruginea)
• red-necked stint (Calidris ruficollis)
• ruddy turnstone (Arenaria interpres)
• bar-tailed godwit (Limosa lapponica)
• little tern (Sternula albifrons)
• greenshank (Tringa nebularia)
• Caspian tern (Hydroprogne caspia)

Information on these species at the Site is limited to occasional sightings.

The Site supports five beach nesting shorebirds at a critical stage of their life cycle (breeding):
• Little Tern (Sterna albifrons)
• Fairy Tern (Sterna neris)
• Pied Oystercatcher (Haematopus longirostris)
• Red-capped Plover (Charadrius ruficapillus)
• Hooded Plover (Thinornis rubricollis)

The large area of shallow water allows the Site to be a good feeding area for dabbling ducks and other waterbirds. The area provides nesting habitat for many species of waterbirds, particularly the Australasian shoveler (Anas rhynchotis) (Newall and Lloyd 2012).

The Site supports three species of fish at a critical stage in their lifecycle (migration):
• Tasmanian mudfish (Galaxias cleaveri)
• Tasmanian whitebait (Lovettia sealli)
• Australian grayling (Prototroctes maraena)

These species migrate between fresh and marine waters, highlighting the importance of the estuarine habitat within the Site.

Mudfish habitat is in swampy areas near the coast. The species is found mostly in still waters, heavily vegetated mud bottomed swamps and estuarine marshes. Spawning occurs in late winter, with the eggs or hatched larvae washed out to sea. Juveniles form part of the whitebait migration on their return from the sea in spring, where they take up residence in the lower part of coastal streams, including the Ringarooma River (Read 1999, cited in Newall and Lloyd 2012).

Tasmanian whitebait migrate into freshwater to breed. The larvae are then washed down to the sea. Read (1999) notes that this species was once the basis of an important commercial fishery, but since the 1940s populations declined to the point where the fishery was closed from 1973 to 1990. The fishery has since been reopened on a restricted basis.

Australian Grayling live in coastal streams and rivers and need to migrate to and from the sea. Larval life is marine, and juveniles return from the sea to the rivers during spring, spending the rest of their lives in the rivers (Read 1999 cited in Newall and Lloyd 2012).

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 / MAGNOLIOPSIDA	*Lycopus australis*	☐	☑	☐		☐	State listed (TSPA) - endangered	Contributes to the biodiversity of the site.
TRACHEOPHYTA / MAGNOLIOPSIDA	*Lythrum salicaria*	☐	☑	☐	LC	☐	State listed (TSPA) - vulnerable	Contributes to the biodiversity of the site
TRACHEOPHYTA / MAGNOLIOPSIDA	*Ornduffia reniformis*	☐	☑	☐		☐	State listed (TSPA) - rare	Contributes to the biodiversity of the site.
TRACHEOPHYTA / LILIOPSIDA	*Vallisneria americana*	☐	☑	☐	LC	☐	State listed (TSPA) - rare	Contributes to the biodiversity of the site
TRACHEOPHYTA / LILIOPSIDA	*Xanthorrhoea bracteata*	☑	☐	☐		☐	Nationally listed (EPBC) - endangered	Endemic

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								
Others																	
CHORDATA / AMPHIBIA	*Litoria raniformis*	☑	☐	☐	☐	☑	☐	☐	☐				EN	☐	☐	Nationally listed (EPBC) -vulnerable	Listed threatened species
Fish, Mollusc and Crustacea																	
CHORDATA / ACTINOPTERYGII	*Galaxiella pusilla*	☑	☐	☐	☐	☑	☐	☐	☐				VU	☐	☐	Nationally listed (EPBC) - vulnerable	Listed threatened species
CHORDATA / ACTINOPTERYGII	*Lovettia sealii*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		The site provides a migration pathway between fresh and salt waters.
CHORDATA / ACTINOPTERYGII	*Neochanna cleaveri*	☐	☑	☐	☐	☑	☐	☐	☐				EN	☐	☐		Internationally listed threatened species (IUCN). The site provides a migration pathway between fresh and salt waters.
CHORDATA / ACTINOPTERYGII	*Prototroctes maraena*	☑	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐	Nationally listed (EPBC) - vulnerable	The site provides a migration pathway between fresh and salt waters.
Birds																	
CHORDATA / AVES	*Ardea alba*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Contributes to the biodiversity of the site
CHORDATA / AVES	*Arenaria interpres*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) - migratory	Listed migratory species
CHORDATA / AVES	*Botaurus poiciloptilus*	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐	Nationally listed (EPBC) - endangered	Listed threatened species, may occur at the site.
CHORDATA / AVES	*Bubulcus ibis*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Contributes to the biodiversity of the site
CHORDATA / AVES	*Calidris ferruginea*	☐	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐	Nationally listed (EPBC) - migratory	Listed migratory species
CHORDATA / AVES	*Calidris ruficollis*	☐	☑	☐	☐	☑	☐	☐	☐				NT	☐	☐	Nationally listed (EPBC) - migratory	Listed migratory species
CHORDATA / AVES	*Charadrius ruficapillus*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Breeds at the site
CHORDATA / AVES	*Elseyornis melanops*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		The site provides feeding and nesting habitat. This species may breed at the site (this is a knowledge gap).
CHORDATA / AVES	*Gallinago hardwickii*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) - migratory	Listed migratory species

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	*Haematopus longirostris*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐		Breeds at the site
CHORDATA / AVES	*Haliaeetus leucogaster*	☐	☐	☐	☐	☑	☐	☐	☐				LC	☐	☐		Contributes to the biodiversity of the site
CHORDATA / AVES	*Hydroprogne caspia*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) - migratory	Listed migratory species
CHORDATA / AVES	*Limosa lapponica*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) - migratory	Listed migratory species
CHORDATA / AVES	*Sternula albifrons*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) -migratory	Listed migratory species. Breeds at the site.
CHORDATA / AVES	*Sternula nereis*	☑	☑	☐	☐	☑	☐	☐	☐				VU	☐	☐	Nationally listed (EPBC) -vulnerable	Listed threatened species. Breeds at the site.
CHORDATA / AVES	*Thinornis rubricollis*	☐	☐	☐	☐	☑	☐	☐	☐					☐	☐		Breeds at the site.
CHORDATA / AVES	*Tringa nebularia*	☐	☑	☐	☐	☑	☐	☐	☐				LC	☐	☐	Nationally listed (EPBC) -migratory	Listed migratory species.

1) Percentage of the total biogeographic population at the site

Although data on fauna presence, abundance and distribution is limited for the site, the following species have been identified as likely to occur within the site based on the DPIW Natural Values Atlas (Newall and Lloyd 2012):
• Tasmanian spotted-tailed quoll (Dasyurus maculatus) – almost certain to be present and known to occur on private land to the west of the site. Habitat may include blackwood swamp forest (Xf), coastal heathlands (W) and black peppermint coastal forest.
• grey goshawk (Accipiter novaehollandiae) – blackwood swamp forest (Xf) and coast paperbark swamp forest (Xf) provide potential nesting habitat for this species.

According to the King Island Biodiversity Management Plan (2012), the Australasian bittern (Botaurus poiciloptilus) may be present at the Site. Recent records suggest that the species may now be confined to coastal regions in the northeast of mainland Tasmania. It prefers shallow, vegetated freshwater or brackish swamps. It favours wetlands with tall dense vegetation, where it forages in still, shallow water up to 0.3 m deep, often at the edges of pools or waterways, or from platforms or mats of vegetation over deep water (Marchant & Higgins 1990 cited in Threatened Species Section 2012).

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
Tasmanian forests and woodlands dominated by black gum or Brookers gum (Eucalyptus ovata / E. brookeriana)	☑	This ecological community represents a type of eucalypt forest and woodland that typically occurs on poorly draining, damp sites such as flats, depressions, drainage lines and gullies.	Nationally listed (EPBC Act) - Critically Endangered

Optional text box to provide further information

The nationally listed threatened ecological community, Tasmanian forests and woodlands dominated by black gum or Brookers gum (Eucalyptus ovata / E.brookeriana) is likely to occur within the area. It is restricted to Tasmania, mostly occurring in the northern and eastern regions, including the Bass Strait islands.

The black gum – Brookers gum forest/ woodland is associated with lowland landscapes, often with poorly draining soils and sites that are wet or seasonally waterlogged. Eucalyptus ovata mostly occurs on elevations below 400 metres above sea level (ASL) with some occurrences associated with impeded drainage up to 700 metres ASL. The E. ovata forests are strongly associated with soils that are typically fertile soils in depositional landforms, though sometimes overlying rather infertile base rocks beneath the soil profile.

The Black gum – Brookers gum forest/woodland encompasses a suite of related vegetation assemblages dominated by Black Gum or Brookers Gum that is usually associated with locally moist sites in low to moderate rainfall areas of Tasmania. The structure ranges from forest to open woodland. The understorey is often dominated by shrubs and/or sedges, with the mix of species present depending on several factors, notably the moisture regime and soil fertility at the site. Variants that have a heathy or a mostly grassy understorey also occur, generally in response to changes in soil fertility, the type of substrate and/or past disturbance at a site.

The black gum forests occur across the northern slopes, east coast, Midlands and south-east. Much of the landscape where the ecological community originally occurred has been cleared and modified for agriculture, forestry or urban/infrastructure land uses. The Conservation advice for Tasmanian forests and woodlands dominated by black gum or Brookers gum provides additional information on this ecological community. See: http://www.environment.gov.au/biodiversity/threatened/communities/pubs/77-conservation-advice.pdf

Four vegetation communities that are recognised as threatened in Tasmania occur within the site:
• freshwater aquatic sedgeland and rushland (Ts),
• freshwater aquatic herbland (Tp),
• lacustrine herbland (Tp)
• Melaleuca ericifolia swamp forest (Xf).

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

4.1 - Ecological character

The ecological data available for the Site are limited. However, there is a detailed vegetation survey covering much of the flood plain vegetation, and some geomorphic examination of the land forming processes within the Site. There are several documents that provide qualitative information on the site's ecological character, including the Ecological Character Description (Newall & Lloyd, 2012).

The critical ecosystem services for the Site, together with their corresponding critical components and processes are:

Ecosystem service - Maintenance of rare and representative wetland types for the bioregion
Eleven Ramsar wetland types occur within the Ramsar site and provide a mosaic of habitats for wetland dependent species. They are:
• Sand, shingle or pebble shores, includes sand bars, spits and sandy islets (E)
• Estuarine waters (F)
• Intertidal mud, sand or salt flats (G)
• Intertidal marshes (H), includes salt marshes, raised salt marshes
• Coastal brackish/ saline lagoons (J)
• Seasonal/ intermittent/ irregular rivers/ streams/ creeks (N)
• Permanent freshwater marshes/ pools, marshes and swamps on inorganic soils; with emergent vegetation water-logged for at least most of the growing season (Tp)
• Seasonal/ intermittent freshwater marshes/pools on inorganic soil; includes seasonally flooded meadows, sedge marshes (Ts)
• Shrub-dominated wetlands (W)
• Freshwater swamp forest, including Paperbark and Blackwood (Acacia) (Xf)
• Forested peatlands; peat swamp forests (Xp).

Ecosystem service – supports rare or threatened species
Nationally threatened fauna species:
• The Site provides habitat for two nationally listed fish species: dwarf galaxias (vulnerable, EPBC Act and IUCN Redlist) and Australian Grayling (vulnerable, EPBC Act).
• The Site provides important habitat for the nationally listed green and gold frog (vulnerable, EPBC Act).
• The Site provides beach nesting habitat for the fairy tern (vulnerable, EPBC Act and IUCN Redlist).

Ecosystem service – supports populations important for regional biodiversity and/or at critical life stages
Regionally rare plant species: four state listed threatened plant species occur within the site:
• purple loosestrife (vulnerable, TSPA)
• ribbon weed (rare, TSPA)
• native gypsywort (endangered, TSPA)
• erect marshflower (rare, TSPA).

Regionally rare bird species: two state listed threatened bird species occur within the Site:
• little tern (rare, TSPA)
• white-bellied sea-eagle (vulnerable, TSPA)

Nesting shorebirds: the site provides nesting habitat for five species of shorebirds:
• little tern
• fairy tern
• hooded plover
• pied oystercatcher
• red-capped plover

Listed migratory bird species: the Site supports 8 species listed as migratory under CAMBA, JAMBA, ROKAMBA and/or CMS:
• Latham's snipe
• curlew sandpiper
• red-necked stint
• ruddy turnstone
• bar-tailed godwit
• little tern
• greenshank
• Caspian tern.

Migrating fish: the Site provides a migratory pathway between the freshwater of the Ringarooma River and the estuary and sea for three species of fish:
• Tasmanian mudfish
• Tasmanian whitebait
• Australian grayling

Essential elements: are elements of the Site that provide essential support to the critical components and processes of the site but are not themselves considered part of the site's unique ecological character. The essential elements for the Site are:
• climate
• geomorphology
• hydrology
• water quality
• terrestrial vegetation
• fish and invertebrates (as food for fish and birds).

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	Boobyalla Beach, Murdochs Beach	2	74	
F: Estuarine waters	Boobyalla Inlet	3	33	
G: Intertidal mud, sand or salt flats		3	58	
H: Intertidal marshes		4	44	
J: Coastal brackish / saline lagoons		2	74	

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	Ringarooma River	4	5	
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools		1	169	Rare
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		1	257	Rare
Fresh water > Marshes on inorganic soils >> W: Shrub-dominated wetlands		4	13	
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		1	614	
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands		4	1	

(ECD) Habitat connectivity	A natural channel through the dune barrier provides connectivity between the freshwater floodplain wetlands and the sea. The channel is kept open by relatively high river velocities.

4.3 - Biological components

4.3.1 - Plant species

Invasive alien plant species

Phylum	Scientific name	Impacts	Changes at RIS update
TRACHEOPHYTA/LILIOPSIDA	*Ammophila arenaria*	Actual (minor impacts)	No change
TRACHEOPHYTA/LILIOPSIDA	*Aponogeton distachyos*	Actual (minor impacts)	No change
TRACHEOPHYTA/LILIOPSIDA	*Cortaderia selloana*	Actual (minor impacts)	No change
TRACHEOPHYTA/MAGNOLIOPSIDA	*Euphorbia paralias*	Actual (minor impacts)	No change
TRACHEOPHYTA/MAGNOLIOPSIDA	*Lycium ferocissimum*	Actual (minor impacts)	No change
TRACHEOPHYTA/PINOPSIDA	*Pinus radiata*	Actual (minor impacts)	No change
TRACHEOPHYTA/MAGNOLIOPSIDA	*Rubus cochinchinensis*	Actual (minor impacts)	No change
TRACHEOPHYTA/MAGNOLIOPSIDA	*Salix fragilis*	Actual (minor impacts)	No change
TRACHEOPHYTA/MAGNOLIOPSIDA	*Senecio lusitanicus*	Actual (minor impacts)	No change
TRACHEOPHYTA/MAGNOLIOPSIDA	*Ulex europaeus*	Actual (minor impacts)	No change

Optional text box to provide further information

Expansion of grazed pasture within the site, including introduced grasses and weeds, has led to some loss of native vegetation communities.

Weed invasion is an indirect threat to the freshwater and estuarine zones through the loss of natural vegetation. Incursion of weeds brought downstream from higher in the catchment and the pressure of gorse (Ulex eurapaeus) are threats to the site.

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	*Anas rhynchotis*				High abundance, nesting habitat

Invasive alien animal species

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

Optional text box to provide further information

The area provides nesting habitat for many species of waterbirds, particularly the Australasian Shoveler (Anas rhynchotis) (Newall & Lloyd, 2012).

The lagoons, marshlands and dunes support a rich variety of invertebrate fauna, including insects, annelids, crustaceans, molluscs and gastropods (Newall & Lloyd, 2012).

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 Site experiences a temperate rainy climate with warm summers. The average annual rainfall is 723 millimetres, with rainfall peaking in winter, extending through spring and lowest in late summer – early autumn (BOM, n.d.). In 2020, the east coast of Tasmania experienced protracted dry spells leading to drought.

Over the last 30 years, changes to the climate and weather of the North Tasmania region have included:
• Rainfall has decreased in the autumn months in the north
• There have been fewer frosts
• There have been more hot days
(BOM Regional Weather Guide 2019, North Tasmania).

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
- [x] 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.

The Site lies within the Ringarooma River catchment in the Piper-Ringarooma Rivers Region of Tasmania. Waters from the Ramsar site discharge to Bass Strait

4.4.3 - Soil

- [x] Mineral

(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)

The Holocene flood plain sediments consist mainly of clays, sands and gravels which are overlain by silty clay soils. The silt was derived from the mine waste, decreasing with depth in the soil profile.

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually seasonal, ephemeral or intermittent water present	No change
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
Marine water	☐	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:

In the Site, hydrology is largely influenced by interactions between geomorphology and river flows. Timing and volume of water delivered influences biotic responses such as seed germination, triggers for breeding and breeding success (of birds, frogs and fish) and the provision of food.

The hydrology of the Site is not well documented. Flow patterns for the lower Ringarooma River provide indications of flows to the floodplain wetlands. The seasonal flow patterns of the Ringarooma River follow rainfall patterns, with highest flows in the winter/spring months and lowest flows in late summer to early autumn. The floodplain wetlands are surface water dominated. Local groundwater appears to be controlled by river flows, with surface water generally recharging groundwater (Newall and Lloyd 2012).

The freshwater wetlands lie on a floodplain that widens downstream of a shallow and constricted valley (Jerie and Household 2001). In the wider and flatter area of the lowland floodplain, water from high flow events can leave the channel and spread out, filling depressions in the landscape.

The freshwater wetlands buffer flood peaks and process nutrients that would otherwise be deposited in the estuary. As water leaves the channel during high flows, it quickly loses velocity and deposits the heavier sediment along the channel edge, forming natural levees. These levees impede the water from subsequently returning to the channel, leaving it to form a mosaic of seasonally inundated and permanent water bodies (Newall and Lloyd 2012).

The estuary zone within the Site is wave dominated, with a flood tide delta. The Ringarooma estuary has a direct connection between the river and the sea via a relatively narrow channel flanked by low-lying vegetation. The channel is kept open by the relatively high river velocities. A dune barrier partially restricts the estuary entrance, preventing flows from expanding it into a large, open estuary (Newall and Lloyd 2012).

(ECD) Connectivity of surface waters and of groundwater	Local groundwater appears to be controlled by river flows and overflows, with the surface water generally recharging the local groundwater. Local groundwater inflows are thought to be important to the floodplain wetlands but these are not quantified.
(ECD) Stratification and mixing regime	In the estuary, the natural process of stream inflows and water mixing results in a salinity gradient from the upstream extent of the estuary, where it is relatively fresh, to the river's mouth where it is close to sea water salinities.

4.4.5 - Sediment regime

Significant transportation of sediments occurs on or through the site ☑

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

Sediment regime unknown ☐

Please provide further information on sediment (optional):

The bulk of the wetland area is altered from its natural condition. This is due to large-scale sedimentation arising from mining operations in the late 1800s and early 1900s. However, the large trees on the site, as well as aerial photographs over several decades show that many of the current conditions have been established for decades and sediment movement is no longer as dynamic as it once was. The current condition of the site is likely to be indicative of the condition at the time of listing.

Areas that remain relatively unaffected by this mining-induced sedimentation include Bowlers Lagoon (a dune-barred lake in the sand sheet behind Boobyalla Beach) and some deflation hollows with associated lunettes.

(ECD) Water turbidity and colour	Median turbidity from the Ringarooma River at Gladstone was 6 NTU (Bobbi 1999).

4.4.6 - Water pH

Circumneutral (pH: 5.5-7.4) ☑

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

Unknown ☐

Please provide further information on pH (optional):

Median pH reading from the Ringarooma River at Gladstone was 6.6 (Bobbi 1999).

4.4.7 - Water salinity

Fresh (<0.5 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 ○

Unknown ☐

Please provide further information on salinity (optional):

The estuary's salinity gradient ranges from relatively fresh in the upstream extent of the estuary, to close to sea water salinity at the river mouth. The salinity gradient changes (in position and extent) with tides and periods of large river flows.

(ECD) Dissolved gases in water

Median dissolved oxygen is 9.5mg/L in the Ringarooma River at Gladstone (Bobbi 1999), indicative of well aerated waters.

4.4.8 - Dissolved or suspended nutrients in water

Mesotrophic ☑

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

Unknown ☐

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

Phosphorus concentrations are well below the ANZECC (Australian and New Zealand Environment and Conservation Council) default trigger values, whereas nitrogen concentrations slightly exceed the default. The water quality indicators show that the water delivered from the Ringarooma River to the Site is high quality.

(ECD) Water conductivity: Median electrical conductivity is 75 µS/cm in the Ringarooma River at Gladstone (Bobbi 1999).

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

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Wetland non-food products	Livestock fodder	Low

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Erosion protection	Soil, sediment and nutrient retention	Medium
Pollution control and detoxification	Water purification/waste treatment or dilution	Medium
Biological control of pests and disease	Support of predators of agricultural pests (e.g., birds feeding on locusts)	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Nature observation and nature-based tourism	Medium
Spiritual and inspirational	Spiritual and religious values	Medium
Spiritual and inspirational	Cultural heritage (historical and archaeological)	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	High

Optional text box to provide further information

The Ramsar site provides the following benefits and services:

• Wetland products (fodder and water for livestock in Rushy Lagoon and leased crown land).

• Replenishes local groundwater (surface water/groundwater interactions not yet fully understood at the site) by maintaining hydrological stability.

• Protection from erosion due to wind and wave action and currents. The site vegetation provides coastal shoreline and riverbank stabilization and storm protection.

• Water purification (including sediment and nutrient retention). This includes the removal and dilution of contaminants from diffuse sources (from grazing and catchment inflows).

• Biological control of pests and diseases by supporting predators of agricultural and other pests (for example, the site supports ibis which feed on grasshoppers, and eagles which feed on rabbits).

• Recreation and tourism through the provision of water regime and quality and biotic communities to meet tourism/recreation needs, including recreational fishing, hunting (duck shooting), and nature observation.

• Scientific and educational values, including possible palaeobotanical and palaeofaunal remains due to age of wetland type (in particular The Chimneys). This includes maintenance of geodiversity, including deflation hollows, lunettes, and a dune barred lake (Bowlers Lagoon).

Within the site: 10s

Outside the site: 100s

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	Organic decay and photosynthesis from aquatic macrophytes provides oxygen flux and nutrient cycling, underpinning the productivity of the wetland.
(ECD) Nutrient cycling	The freshwater wetland complex buffers flood peaks and processes nutrients from the catchment that would otherwise be deposited in the estuary.
(ECD) Animal reproductive productivity	Provides breeding habitat for threatened species, waterbirds and fish.
(ECD) Vegetational productivity, pollination, regeneration processes, succession, role of fire, etc.	Flowering and seed germination in the Shiny Grasstree is enhanced by the appropriate fire regime.
(ECD) Notable species interactions, including grazing, predation, competition, diseases and pathogens	Support predators of agricultural and other pests (for example, the site supports ibis which feed on grasshoppers, and eagles which feed on rabbits).
(ECD) Notable aspects concerning migration	Provides feeding and resting habitat for eleven migratory bird species listed under CAMBA, JAMBA, ROKAMBA, and/or CMS.

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)	☑	☑

Other

Category	Within the Ramsar Site	In the surrounding area
Unspecified mixed ownership	☑	☑

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

The land tenure of the Site is complex. Within the Site, approximately 60% of the area is owned by Rushy Pastoral, with the remainder being Crown land reserved under the Nature Conservation Act 2002. The Crown land includes the area between the Ringarooma River and the western boundary which is part of the Cameron Regional Reserve and the coastal and estuarine zone at the northern end of the site which is part of the Boobyalla Conservation Area. The land owned by Rushy Pastoral extends well beyond the Ramsar site boundary, covering a total of 20,758 ha.

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:

Site Manager, Parks and Wildlife Service, Tasmania

Postal address:

GPO Box 1751
HOBART, Tasmania 7001,
Australia
Telephone: 1300 368 550

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
Water abstraction	Low impact	Low impact	☑	No change	☑	No change

Agriculture and aquaculture

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

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Dams and water management/use	Low impact	Medium impact	☑	No change	☑	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	Medium impact	Medium impact	☑	No change	☑	No change

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Agricultural and forestry effluents	Medium impact	Medium impact	☑	No change	☑	No change

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Storms and flooding	Low impact	Low impact	☑	No change	☑	No change

Please describe any other threats (optional):

There are few human derived threats to the coastal zone.

The major threats to the estuary zone include:
• damage to soil and sediment structure through stock access
• loss of threatened vegetation through stock access
• impacts of excess sediment deposition through past mining practices
• declines in water quality through dairying impacts
• changes to hydrology through water extraction
• rising sea levels (Newall & Lloyd, 2012).

Threats to the freshwater zone of the site include:
• the impacts of sedimentation, particularly through the progression of the fine sands generated by past mining practices
• damage to the wetland soil/sediment structure through stock trampling
• inputs of excess nutrients through grazing and dairy wastes
• loss of threatened vegetation communities (including weed invasions), via stock grazing and pasture management practices
• changes to the hydrologic regime via:
- local (water extraction)
- regional/global (climate change) impacts; and/or
- lowering of the stream bed (Newall & Lloyd, 2012)

Climate change is likely to be a threat to the site in future. As the global climate continues to warm, the region (Southern Slopes, Tasmania East) is projected to experience increasing temperatures in all seasons, with more hot days and warm spells. There will be fewer frosts, with generally less rainfall in spring. There will be an increased intensity of extreme rainfall events. Mean sea level will continue to rise and height of extreme sea-level events will also increase. There will be a harsher fire-weather climate in the future (Climate change in Australia, BOM and CSIRO 2020).

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
State Conservation Area	Boobyalla Conservation Area	https://parks.tas.gov.au/about-us/managing-our-parks-and-reserves/reserve-listing	partly
State Regional Reserve	Cameron Regional Reserve	https://parks.tas.gov.au/about-us/managing-our-parks-and-reserves/reserve-listing	partly

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

Habitat

Measures	Status
Catchment management initiatives/controls	Implemented
Habitat manipulation/enhancement	Implemented

Species

Measures	Status
Control of invasive alien plants	Implemented

Human Activities

Measures	Status
Regulation/management of recreational activities	Implemented
Livestock management/exclusion (excluding fisheries)	Implemented

Other:

In Australia, the ecological character of a designated Site is protected as a Matter of National Environmental Significance (MNES) under the Environment Protection and Biodiversity Conservation Act 1999.

The Site covers part of the Cameron Regional Reserve and Boobyalla Conservation Area, which are protected under Tasmanian legislation (Nature Conservation Act 2002) and managed by the Tasmanian Parks and Wildlife Service.

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? No need identified

Further information

Under the Australian Government-funded Landcare Regional Land Partnerships program, the NRM North Region is undertaking Ringarooma Ramsar project (4 years to June 2023) (NRM North, 2020). The project will protect the ecological character of the Ramsar site by improving and protecting the condition of the site's floodplain wetlands and Melaleuca swamp forest. It aims to improve water quality from grazing impacts, remove weeds and reduce inappropriate vehicle access and tracks. The project will remove gorse, boxthorn, blackberries and willow, and reduce nutrient (nitrogen and phosphorus) inputs from adjacent farmland. See: https://nrmnorth.org.au/biodiversity/ringarooma-ramsar-project/

Ten-year land management agreements will seek a commitment from landowners to maintain the gains/reductions made under this project.

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water quality	Implemented
Plant community	Implemented

Under the Landcare Regional Land Partnerships Project (NRM North, 2020), the following monitoring will be undertaken:
• area and extent (ha) of gorse, blackberry, willow and boxthorn infestations
• quality and change in extent of freshwater floodplain wetland native vegetation and Melaleuca ericifolia vegetation
• area of dryland grazing (ha) and irrigated grazing (ha) with best practice land management practices
• area (ha) of freshwater floodplain wetland native vegetation and Melaleuca ericifolia vegetation protected
• area (ha) of the habitat protected from stock and vehicle access.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

The following list is a selection of the references used for this RIS update. See full reference list attached at 6.1.2 vi.

Bobbi, C. (1999). Water Quality Of Rivers In The Ringarooma Catchment. A Report Forming Part of the Requirements for State of Rivers Reporting. Land and Water Assessment Branch, DPIWE. Report Series WRA 99/01.

BOM & CSIRO (2020). Climate change in Australia: regional climate change projections https://www.climatechangeinaustralia.gov.au/en/climate-projections/future-climate/regional-climate-c hange-explorer/sub-clusters/?current=SSTEC&popup=true&tooltip=true (accessed 4 September 2020).

DAWE (2020). Shiny Grasstree EPBC Act threatened species advice: https://www.environment.gov.au/cgi-bin/sprat/public/publicspecies.pl?taxon_id=7950 (accessed 4 September 2020).

DPIPWE, Tasmania (2001). Green and Gold Frog listing statement: https://www.threatenedspecieslink.tas.gov.au/Pages/Green-and-Gold-Frog.aspx (accessed 4 September 2020).

Knighton, A. D. (1991). Channel bed adjustment along mine-affected rivers of northeast Tasmania. Geomorphology Vol. 4, No 3-4: 205-219.

Newall, P.R. and Lloyd, L.N. (2012). Ecological Character Description for the Flood Plain Lower Ringarooma River Ramsar Site. Lloyd Environmental Pty Ltd Report (Project No: LE0944) to the Department of Sustainability, Environment, Water, Population and Communities (SEWPaC), Australian Government. Lloyd Environmental, Syndal, Victoria, 2nd March 2012.

Read, M. (1999). Aquatic Ecology of Rivers In the Ringarooma Catchment: A Report Forming Part of The Requirements for State of Rivers Reporting. Land and Water Assessment Branch, DPIWE. Report Series WRA 99/03.

Threatened Species Section (2012). King Island Biodiversity Management Plan. Department of Primary Industries, Parks, Water and Environment, Hobart. https://www.environment.gov.au/resource/king-island-biodiversity-management-plan (accessed 4 September 2020).

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<no file available>

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:


Flood Plain Lower Ringarooma River (*Australian Government Department of Agriculture, Water and the Environment, 16-05-2009*)


Flood Plain Lower Ringarooma River (*Australian Government Department of Agriculture, Water and the Environment, 16-05-2009*)


Flood Plain Lower Ringarooma River (*Australian Government Department of Agriculture, Water and the Environment, 16-05-2009*)


Flood Plain Lower Ringarooma River (*Australian Government Department of Agriculture, Water and the Environment, 16-05-2009*)

6.1.4 - Designation letter and related data

Designation letter
<no file available>

Date of Designation: 1982-11-16