Ramsar Information Sheet

Published on 1 July 2022
Update version, previously published on : 29 March 2016

Australia

Cobourg Peninsula

Designation date	8 May 1974
Site number	1
Coordinates	11°20'49"S 132°13'47"E
Area	220 700,00 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 Cobourg Peninsula site is the first wetland of international importance to be declared in Australia and internationally and has a long history of natural conservation and protection.

The Ramsar site is located in the Northern Territory, approximately 200 kilometres north-east of Darwin, within the Timor Sea Drainage Division. The site covers approximately 220 700 hectares, and its boundary is the same as that of the former Gurig National Park, now combined with the Cobourg Marine Park to form the Garig Gunak Barlu National Park. It covers the peninsula and a number of associated islands. It contains unique biodiversity and heritage assets, and encompasses a range of landforms, habitats and wildlife. Within the site are numerous and varied coastal and inland ecosystems including:
• Terrestrial ecosystems: this includes both extensive wetland areas and largely untouched tropical eucalypt open forests and woodland.
• Riverine ecosystems: based around the numerous perennial creeks and estuaries that span the coastline of the Peninsula.
• Permanent freshwater and brackish ecosystems: providing a refuge for aquatic and terrestrial fauna during the dry season.
• Intertidal and coastal/marine ecosystems: including dune communities, fringing coral, rocky reefs, sand, mudflats, mangroves and seagrass communities.

Wetland and terrestrial habitats of the Ramsar site are effectively undisturbed, supporting a range of threatened species.

The site was listed for its diversity of wetlands, support for threatened species (including sea turtles and dugongs), diverse flora and fauna, breeding and feeding habitat for marine turtles, seabirds and migratory shorebirds, and support for fish species (meeting Criteria 1, 2, 3, 4 and 8).

The site also contains an abundance of archaeological sites and items of Indigenous, Macassan and European origin, and an ongoing 'living culture' that is maintained by the Arrarrkbi (traditional Indigenous owners of Cobourg Peninsula).

The five critical components, processes and services for the Cobourg Peninsula Ramsar site are its diversity and connectivity of wetlands, flatback and green turtle nesting, waterbird breeding colonies, contemporary living culture and maintenance of global biodiversity.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency	Northern Territory Department of Environment and Natural Resources
Postal address	Level 1, Goyder Centre 25 Chung Wah Terrace Palmerston NT 0830

National Ramsar Administrative Authority

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

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

From year	2013
To year	2020

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Cobourg Peninsula

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?	No

(Update) Optional text box to provide further information

No broad scale changes in ecological character since the time of listing (1974) were identified in the Ecological Character Description for the Ramsar site, prepared in 2011 (see BMT WBM 2011). Since that time, no changes in ecological character have been identified.

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<2 file(s) uploaded>

Former maps	0

Boundaries description

The boundary of the Ramsar site is the same as that of the former Gurig National Park (also known as the Cobourg Peninsula Sanctuary). The boundary is defined in the Schedule to the Cobourg Peninsula Aboriginal Land, Sanctuary and Marine Park Act 1996. The site includes all the area of the peninsula above the low-water mark, including associated islands: Sandy Island I, Sandy Island II, Allaru Island, Burford Island, Greenhill Island, Wangoindjung Island, Warldagawaji Island, Warla Island, Wunmiyi Island, Morse Island, Mogogout Island, two unnamed islands in Raffles Bay and Murnumurnu Rock.

Gurig National Park, which was established under the Cobourg Peninsula Aboriginal Land, Sanctuary and Marine Park Act 1981, has now been combined with the Cobourg Marine Park, through the Cobourg Peninsula Aboriginal Land, Sanctuary and Marine Park Act 1996, to form the Garig Gunak Barlu National Park.

2.2.2 - General location

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

b) What is the nearest town or population centre? Darwin (population in 2016 of 136,828) which is 200 km to the south-west

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): 220700

Area, in hectares (ha) as calculated from GIS boundaries 226480.331

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	Marine: Northern IMCRA Province Bioregion
Other scheme (provide name below)	Terrestrial: Tanami-Timor Sea Coast Drainage Division

Other biogeographic regionalisation scheme

Terrestrial: Australian Hydrological Geospatial Fabric (Geofabric): Topographic Drainage Divisions and River Regions (BOM, 2012) - Tanami-Timor Sea Coast Drainage Division

Marine: Commonwealth of Australia, 2006, Integrated Marine and Coastal Regionalisation of Australia (IMCRA) Version 4.0, Department of Environment and Heritage, Canberra. - Northern IMCRA Province Bioregion

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 site supports a range of hydrological values associated with its representative and near-natural wetlands. Key hydrological values of wetlands and waterways within the site catchment include (BMT WBM 2011): • Provision of dry season refuge for aquatic fauna species by permanent brackish and freshwater lakes, lagoons, pools and springs. • Groundwater contribution to maintenance of permanent brackish and freshwater lakes, lagoons, pools and springs. • Flushing of wetlands by seasonal flooding and isolation of aquatic habitats during the dry season determining survival of aquatic and terrestrial wetland species. • High dry season soil moisture derived from groundwater lenses for coastal dune and swamp communities. • Tidal hydraulics through the (tidal) Popham Creek, connecting the north and south coastlines. • Long-term cycles between freshwater and saline states for coastal lagoons along the northern coastline, with cyclones or extreme weather events triggering a shift to saline conditions and gradual recovery to freshwater conditions via rainfall and groundwater infiltration.
Other reasons	The site supports almost all Ramsar wetland types known to occur within the bioregion. This includes ten (out of twelve) marine/coastal wetland types, noting that one of the absent wetland types (Type A – permanent shallow marine waters) occurs immediately adjacent the Ramsar site and is absent only through the positioning of the boundary. The remaining marine/coastal wetland type is not present anywhere within the bioregion (Type Zk(a) – Karst systems). The Ramsar site also supports ten (out of twenty) inland wetland types, noting that at least four of the inland wetland types absent from the site are not represented anywhere in the bioregion (Types U, Va, Vt and Zg). The wetlands of Cobourg Peninsula are considered to represent some of the better protected natural or near-natural wetlands in the bioregion. The site has been under some level of formal government protection since 1924 and this, combined with its remoteness, has resulted in it being subject to only limited development pressure (BMT WNM 2011). The wetland types occurring within the Ramsar site are representative of landscape and wetland types found in the bioregion. The coastline is represented by a variety of different wetlands: in broad terms the north contains rocky shores, sandy beaches, coral reef and seagrass beds while the south harbours large tracts of mangrove, saltflats and estuarine waters. The juxtaposition and diversity of wetlands across a relatively compact area is unique to the bioregion, and considered an important aspect of the site's ecological value. One example from within the site demonstrating this aspect is the association of coral communities and mangroves within the tidal channel system known as Popham Creek. While there may be similar but less spectacular associations found on fringing reefs both locally and elsewhere, the occurrence of corals in mangrove channels beneath a dense canopy of Rhyzophora stylosa is unusual and has been considered of Northern Territory and national significance (Billyard 1995). The site supports an extensive area of blue carbon ecosystems (seagrass, salt marsh and mangrove) which contribute to mitigation of and adaptation to climate change.

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Justification

The Ramsar site supports a diverse assemblage of flora and fauna species. Cobourg Peninsula is known to support over 800 plant species (Brocklehurst 2010), over 600 fish species (NRETAS 2007), 64 species of coral (Billyard 1995), 406 species of marine invertebrate from coral reef or the intertidal zone (Frith and Calaby 1974), 35 mammal species, 71 reptile species, 19 frog species, and 236 bird species (predominantly derived from NT Government Fauna Atlas unpublished records). Refer to Appendix E of the Ecological Character Description (BMT WBM 2011) for species lists. It also supports at least 15 elasmobranch species (sharks, rays etc) (Davies et al).

The Ramsar site contains the range of tree and shrub mangrove species for the bioregion, including the mangrove palm Nypa fruticans that is rare in Australia but common in countries to the north.

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

☑ Criterion 8 : Fish spawning grounds, etc.

Justification

Cobourg Peninsula provides important habitats, feeding areas, dispersal and migratory pathways, and spawning sites for numerous fish species of direct and indirect fisheries significance. These fish have important fishery resource values both within and external to the site.

The site contains a substantial proportion of the mangrove and seagrass habitat within the bioregion that is subject to minimal anthropogenic impact. Positive relationships between these habitats and fisheries resources have been well documented (Manson et al. 2005, Nagelkerken et al. 2008).

Key fish species of significance include barramundi (Lates calcarifer), giant trevally (Caranx ignobilis), mangrove jack (Lutjanus argentimaculatus), black bream (Acanthopagrus berda), barracuda (Sphyraena spp.), whiting (Sillago spp.) and mud crabs (Scylla serrata).

Many of the fish and crustacean species listed above spend their juvenile stages in shallow nearshore waters of the site, particularly around mangroves and seagrass habitats. These species also spawn in inshore waters, particularly near the surf zone and in sandy channels within the boundaries of the Ramsar site.

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	*Nypa fruticans*	☐	☑	☐	LC	☐	Nationally rare	

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								

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 / REPTILIA	*Caretta caretta*	☑	☐	☐	☐	☐	☐	☐	☐				EN	☑	☑	Nationally endangered (EPBC Act)	
CHORDATA / REPTILIA	*Chelonia mydas*	☑	☑	☐	☐	☐	☐	☐	☐				EN	☑	☑	Nationally vulnerable (EPBC Act)	Nesting site
CHORDATA / MAMMALIA	*Conilurus penicillatus*	☑	☐	☐	☐	☐	☐	☐	☐				NT	☐	☐	Nationally vulnerable (EPBC Act)	
CHORDATA / MAMMALIA	*Dasyurus hallucatus*	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐	Nationally vulnerable (EPBC Act)	
CHORDATA / REPTILIA	*Dermochelys coriacea*	☑	☑	☐	☐	☐	☐	☐	☐				VU	☑	☑	Nationally endangered (EPBC Act)	Nesting site
CHORDATA / MAMMALIA	*Dugong dugon*	☑	☐	☐	☐	☐	☐	☐	☐				VU	☑	☐		
CHORDATA / REPTILIA	*Eretmochelys imbricata*	☑	☐	☐	☐	☐	☐	☐	☐				CR	☑	☑	Nationally vulnerable (EPBC Act)	
CHORDATA / REPTILIA	*Lepidochelys olivacea*	☑	☐	☐	☐	☐	☐	☐	☐				VU	☑	☑	Nationally endangered (EPBC Act)	
CHORDATA / REPTILIA	*Natator depressus*	☑	☑	☐	☐	☐	☐	☐	☐				DD	☑	☐	Nationally vulnerable (EPBC Act)	Nesting site
CHORDATA / MAMMALIA	*Orcaella heinsohni*	☐	☑	☐	☐	☐	☐	☐	☐				NT	☑	☐		Feed and breed over the intertidal seagrass bed and shallow waters
CHORDATA / MAMMALIA	*Pseudorca crassidens*	☐	☑	☐	☐	☐	☐	☐	☐				NT	☐	☐		Feed and breed over the intertidal seagrass bed and shallow waters
CHORDATA / MAMMALIA	*Sousa chinensis*	☐	☑	☐	☐	☐	☐	☐	☐				NT	☑	☐		Feed and breed over the intertidal seagrass bed and shallow waters
CHORDATA / MAMMALIA	*Tursiops aduncus*	☐	☑	☐	☐	☐	☐	☐	☐				NT	☐	☐		Feed and breed over the intertidal seagrass bed and shallow waters
CHORDATA / REPTILIA	*Varanus mertensi*	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☐	Nationally vulnerable (EPBC Act)	
CHORDATA / MAMMALIA	*Xeromys myoides*	☑	☐	☐	☐	☐	☐	☐	☐				VU	☑	☐	Nationally vulnerable (EPBC Act)	
Fish, Mollusc and Crustacea																	
CHORDATA / ACTINOPTERYGII	*Acanthopagrus berda*	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		spawning, nursery, feeding
CHORDATA / ACTINOPTERYGII	*Caranx ignobilis*	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		spawning, nursery, feeding
CHORDATA / ACTINOPTERYGII	*Lates calcarifer*	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		spawning, nursery, feeding
CHORDATA / ACTINOPTERYGII	*Lutjanus argentimaculatus*	☐	☐	☐	☐	☐	☐	☐	☑				LC	☐	☐		spawning, nursery, feeding
ARTHROPODA / MALACOSTRACA	*Scylla serrata*	☐	☐	☐	☐	☐	☐	☐	☑					☐	☐		spawning, nursery, feeding
Birds																	
CHORDATA / AVES	*Calidris tenuirostris*	☑	☑	☐	☐	☐	☐	☐	☐				VU	☐	☐		Feeding and resting site
CHORDATA / AVES	*Erythrotriorchis radiatus*	☑	☐	☐	☐	☐	☐	☐	☐				NT	☐	☐	Nationally vulnerable (APBC Act)	
CHORDATA / AVES	*Geophaps smithii*	☑	☐	☐	☐	☐	☐	☐	☐				VU	☐	☐	Nationally vulnerable (EPBC Act)	

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	*Onychoprion anaethetus*	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Breeding site
CHORDATA / AVES	*Sterna dougallii*	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Breeding site
CHORDATA / AVES	*Sterna sumatrana*	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Breeding site
CHORDATA / AVES	*Thalasseus bergii*	☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		Breeding site
CHORDATA / AVES	*Tyto novaehollandiae kimberli*	☑	☐	☐	☐	☐	☐	☐	☐					☐	☐	Nationally vulnerable (EPBC Act)	

1) Percentage of the total biogeographic population at the site

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

<no data available>

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

4.1 - Ecological character

A detailed description of the ecological features of the site is provided in the Ecological Character Description (BMT WBM 2011). The site contains a wide range of habitats that are in natural condition including at least 18 wetland types. Of particular importance are permanent brackish and freshwater wetlands, providing a refuge for aquatic and terrestrial fauna in the dry season, and coastal marine wetlands that provide habitat and nesting grounds for a wide variety of marine flora and fauna. Terrestrial and coastal wetlands are represented within the site, including extensive dunes, fringing coral, rocky reefs, sand, mudflat, mangroves and seagrass communities.

Critical ecosystem components, processes and services/benefits that characterise the wetlands (refer BMT WBM 2011) include: diversity and connectivity of wetlands, flatback and green turtle nesting, waterbird breeding colonies, contemporary living culture, and maintenance of global biodiversity.

In addition to these, there are a number of supporting components, processes and services/benefits: populations of migratory and resident waterbirds and seabirds, monsoon rainforests, terrestrial habitats, aquatic invertebrates, fish populations, climate, geology/geomorphology, hydrology (tidal, surface, groundwater), water quality, fire regimes, notable biological processes, fisheries resources values, recreation and tourism, scientific research and education, historical Indigenous and non-indigenous cultural heritage, and biological products.

In May 1974, Australia listed the Cobourg Peninsula as the world's first Wetland of International Importance under the Ramsar Convention, bringing international recognition to this remote and unspoiled area. During the years since its designation, the unique values and the ecological character of the site have been maintained, through its joint management by the traditional owners (the Arrarrkbi) and the Northern Territory Government, its isolation and its status as a Ramsar site and conservation reserve.

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
B: Marine subtidal aquatic beds (Underwater vegetation)		0		
C: Coral reefs				
D: Rocky marine shores				
E: Sand, shingle or pebble shores		0	2070	
F: Estuarine waters		3		Representative
G: Intertidal mud, sand or salt flats		4	6212	Representative
H: Intertidal marshes		0	2734	
I: Intertidal forested wetlands		1	26207	Representative
J: Coastal brackish / saline lagoons		0	1314	
K: Coastal freshwater lagoons		0	254	

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		2	7776	Representative
Fresh water > Lakes and pools >> P: Seasonal/ intermittent freshwater lakes		0	359	
Saline, brackish or alkaline water > Lakes >> Q: Permanent saline/ brackish/ alkaline lakes		0	578	
Saline, brackish or alkaline water > Lakes >> R: Seasonal/ intermittent saline/ brackish/ alkaline lakes and flats		0	169	
Saline, brackish or alkaline water > Marshes & pools >> Sp: Permanent saline/ brackish/ alkaline marshes/ pools		0	44	
Saline, brackish or alkaline water > Marshes & pools >> Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools		0	25	
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools		0	79	
Fresh water > Lakes and pools >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		0	110	
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		0	770	
Fresh water > Flowing water >> Y: Permanent Freshwater springs; oases		0	302	

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Coastal grasslands	

(ECD) Habitat connectivity	Cobourg Peninsula contains an extraordinary variety of wetland types, with 20 wetland types occurring over the site. The juxtaposition of these wetlands to each other provides a high degree of spatial connectivity between inland and coastal habitat types.

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/MAGNOLIOPSIDA	*Aegialitis annulata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Avicennia marina*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Bombax ceiba*	Used as timber for dugout canoes
TRACHEOPHYTA/MAGNOLIOPSIDA	*Bruguiera exaristata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Buchanania obovata*	Part of traditional Arrarrkbi diet
TRACHEOPHYTA/MAGNOLIOPSIDA	*Erythrophleum chlorostachys*	Used as traditional medicine
TRACHEOPHYTA/LILIOPSIDA	*Livistona humilis*	Part of the traditional Arrarrkbi diet and for basket material
TRACHEOPHYTA/MAGNOLIOPSIDA	*Morinda citrifolia*	Used as traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Planchonia careya*	Used as traditional medicine
TRACHEOPHYTA/MAGNOLIOPSIDA	*Rhizophora mucronata stylosa*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Sonneratia alba*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Tamarindus indica*	Part of traditional Arrarrkbi diet
TRACHEOPHYTA/MAGNOLIOPSIDA	*Terminalia latipes psilocarpa*	Part of traditional Arrarrkbi diet

Invasive alien plant species

Phylum	Scientific name	Impacts	Changes at RIS update
TRACHEOPHYTA/MAGNOLIOPSIDA	*Cryptostegia madagascariensis*	Potential	No change

Optional text box to provide further information

Mangroves are noteworthy due to high productivity and provision of habitat for fauna species, protection against coastal erosion and buffers against extreme weather events.

Wet monsoon forests occur around springs and seeps, and in riparian strips and are characteristic of Cobourg Peninsula and adjacent Croker Island (Brocklehurst 2010). The best occurrence of wet monsoon forest occurs on springs at the head of Mawuwu Creek where it forms closed forests dominated by canopy species such as Fragraea racemosa, Syzygium angophoroides, Melicope elleryana and Gmelina dalrympleana. The palm Hydriastele wendlandiana forms a dense secondary layer, and characterises the community.

The occurrence of corals in mangrove channels beneath a dense canopy of Rhyzophora stylosa is unusual and has been considered to be of Northern Territory and national significance (Billyard 1995).

Other plants used by Arrarrkbi for food include yam species (Dioscorea spp) and wild apple (Syzygium spp). Plants used for other purposes include Eucalyptus spp for spears and medicine, Hibiscus spp for spears.

Other weeds include, snakeweed (Stachytarpheta spp), mission grass (Pennisetum spp) and hyptis (Hyptis spp).

4.3.2 - Animal species

Invasive alien animal species

Phylum	Scientific name	Impacts	Changes at RIS update
CHORDATA/MAMMALIA	*Bos javanicus*	Potential	No change
CHORDATA/MAMMALIA	*Bubalus bubalis*	Potential	No change
CHORDATA/MAMMALIA	*Canis lupus familiaris*	Potential	No change
CHORDATA/MAMMALIA	*Cervus unicolor*	Potential	No change
CHORDATA/MAMMALIA	*Equus caballus*	Potential	No change
CHORDATA/MAMMALIA	*Sus scrofa*	Actual (minor impacts)	No change

Optional text box to provide further information

The Cobourg Peninsula Ramsar site supports an abundance of waterbirds, particularly in terms of the diversity of species, though Criterion 5 and 6 are not met at the site. Important waterbirds include ducks (Anas spp.), plovers (Charadrius spp)., sandpipers (Calidris spp)., egrets (Ardea spp.), terns (Sterna spp.), godwits (Limosa spp.) and greenshanks (Tringa spp.).

Noteworthy fauna also include threatened species (refer Criterion 2 above), as well as the following:
• A large number of fauna species are noteworthy in terms of their inclusion in the traditional diet, including dugong, turtle, magpie goose, fish, crabs and oysters.
• Saltwater crocodile (Crocodylus porosus) in terms of its ecological role as a top predator within the site and as iconic and cultural values (e.g. totemic, dietary).
• Pearl producing oysters are particularly important for the commercial pearling ventures associated with the site as well as for traditional purposes.

Cobourg's isolation from the rest of the mainland and its management arrangements, have seen many small and medium-sized native mammal species thrive. These species include the pale field-rat (Rattus tunneyi), northern brown bandicoot (Isoodon macrourus), brush-tailed rabbit-rat (Conilurus penicillatus), and black-footed tree-rat (Mesembriomys gouldii). The maintenance of these and other small and medium-sized native mammals is helped by the low abundance of feral cats and active fire management.

Continuing impacts from pigs, banteng, buffalo, cane toads and other invasive species into wetland habitats and negative impacts on the populations of wetland-dependent species are a potential threat to the site.

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
A: Tropical humid climate	Aw: Tropical savanna (Winter dry season)

According to the BOM Regional Weather and Climate Guide 2019 for the Top End, the region has, over the last 30 years, seen changes to the climate and weather including:
• Annual rainfall has increased by 11%
• Dry years have occurred three times and wet years 17 times
• There has been an increase in monsoon rains
• Monsoon season rainfall has been reliable across the region
• There have been more hot days, with more consecutive days above 40 °C

As the global climate continues to warm, the region (Monsoonal north west) is projected to experience further increases in air temperatures across all seasons, with more hot days. Natural climate variability will remain the major driver of rainfall changes (and drought) in the next few decades but increased intensity of extreme rainfall events is projected. Mean sea level will continue to rise and height of extreme sea-level events will also increase. Fewer but more intense tropical cyclones are projected with medium confidence.

4.4.2 - Geomorphic setting

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

a) Maximum elevation above sea level (in metres): 160

- [ ] Entire river basin
- [ ] Upper part of river basin
- [ ] Middle part of river basin
- [ ] Lower part of river basin
- [ ] More than one river basin
- [x] Not in river basin
- [x] 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.

Arafura and Timor seas

4.4.3 - Soil

- [x] Mineral
  - (Update) Changes at RIS update: ◉ No change ○ Increase ○ Decrease ○ Unknown
- [x] 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 across the site include ironstone gravels, shallow block laterite, saline estuarine-clays along coastal plains, and dune sands. These soils are generally unstructured and highly erodible.

4.4.4 - Water regime

Water permanence

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

Source of water that maintains character of the site

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

The hydrology of Cobourg Peninsula relates to surface water, groundwater and tidal water systems.

Surface water patterns are dominated by seasonal monsoonal rainfall. Most waterbodies occur within close proximity to the coastline with numerous perennial creeks and freshwater springs inland. All but three creeks (Mawuwu Creek, Alaru Creek and an unnamed creek) are less than 10 kilometres long. A total of 48 permanent waterbodies have been identified, often fed by groundwater lenses and freshwater springs (AECOM 2011, Zaar 2003). The remainder of the waterbodies are seasonal and generally increase in salinity as the dry season progresses. Coastal lagoons located along the northern coastline may experience sporadic or regular coastal flushing. These systems may be both permanent and seasonal.

Saline and brackish groundwater likely occurs across the peninsula at a minimum depth of 10 metres (Britten and Chin 1989 in Geosciences 2008). Groundwater lenses also occur in coastal dune systems and laterised sediments. Aquifers are found in Quaternary sandstones, Cretaceous laterites and Marlingur, Darwin, Wangarlu, Mudstone and Moonkinu Members. Quaternary aquifers diminish during the dry season (Hughes 1977). The Marligur Member is very high yielding (Prowse et al. 1999) and extends across the southern part of the Peninsula (Hughes 1978). A total of 67 bore holes are recorded across the site, 16 of which are production wells (Geoscience Australia 2008). Many of the wetlands are likely to be strongly groundwater dependant especially for coastal dune communities, open forest communities, and stream and swamp communities.

The tidal range is lower than much of the Top End coast, being limited to around 2–2.5 m.

4.4.5 - Sediment regime

Sediment regime unknown ☑

(ECD) Water turbidity and colour: Turbidity is variable across wetlands but increases generally in the late dry season.

4.4.6 - Water pH

Circumneutral (pH: 5.5-7.4) ☑

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

Unknown ☐

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 ☐

4.4.8 - Dissolved or suspended nutrients in water

Unknown ☑

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
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Medium
Wetland non-food products	Timber	Medium
Wetland non-food products	Reeds and fibre	Medium
Genetic materials	Medicinal products	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Medium
Hazard reduction	Coastal shoreline and river bank stabilization and storm protection	Medium

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Picnics, outings, touring	
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Nature observation and nature-based tourism	Medium
Recreation and tourism	Water sports and activities	Medium
Spiritual and inspirational	Cultural heritage (historical and archaeological)	High
Spiritual and inspirational	Spiritual and religious values	Medium
Spiritual and inspirational	Contemporary cultural significance, including for arts and creative inspiration, and including existence values	High
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	Medium
Scientific and educational	Educational activities and opportunities	High

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

Critical ecosystem components, processes and services/benefits that characterise the wetlands (refer BMT WBM 2011) include: diversity and connectivity of wetlands, flatback and green turtle nesting, waterbird breeding colonies, contemporary living culture, and maintenance of global biodiversity.

The site includes wide range of wetland habitat types, and supports populations of waterbirds, and freshwater fish and invertebrates. The catchments for all wetland types are also contained within the site boundaries. Critical ecosystem processes that underpin the wetland values of the site include breeding populations of marine turtles and waterbirds, with supporting processes including climate, fire regime, hydrology, water quality, geology and geomorphology. One critical service provided by the site, contemporary living heritage, enables the traditional owners (the 'Arrarrkbi') to continue the cultural practices handed down over many generations. The other critical service provided is the maintenance of global biodiversity through supporting threatened fauna and a species-rich ecosystem. The wetland components and processes of the site support a broad range of ecosystem services/benefits including fisheries resource values, tourism and recreation values and historical heritage.

Within the site: 10s

Outside the site: 1000s

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 ☑

Description if applicable

In 1981 Gurig National Park became the first jointly managed national park in Australia. The management of the Ramsar site provides a model of wetland wise use, incorporating traditional knowledge in order to maintain the ecological character and provide a balance between wise-use and competing interests such as nature conservation and tourism. The site is managed under a joint arrangement between the traditional owners and the Northern Territory Government. Notable aspects demonstrating the application of traditional knowledge include:
• Land and sea management: Arrarrkbi undertake land and sea management practices such as burning, monitoring the populations of species and monitoring the environmental impacts of activities such as tourism on the land. The ranger staff of the Garig Gunak Barlu National Park include Arrarrkbi, and a community group, the Warramunburr rangers, was established in 2010 and provides complementary land and sea management practices employing local Arrarrkbi.
• Sustainable use: Arrarrkbi use their traditional knowledge of the rich variety of flora and fauna for food, medicine, timber, fibre, dye and tools.

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

Description if applicable

Traditional owners of the Ramsar site display exceptional cultural traditions. In particular, land management (as described above) is critical in maintaining cultural heritage as Traditional ecological knowledge is transferred (e.g. harvesting techniques, species' ecology), traditional languages are used, and other cultural practices are undertaken.

Cobourg Peninsula contains substantial evidence of historical Indigenous and non-Indigenous cultural heritage. Arrarrkbi have lived on Cobourg Peninsula for up to 60 000 years (Brockwell et al. 1995). Macassan trepang traders visited the Cobourg Peninsula from 1720 until 1907 (Mitchell 1996; Russell 2004). Europeans attempted to establish settlements on Cobourg Peninsula from 1827 until 1849 (Tacon 1988). For this reason, Cobourg Peninsula is sometimes known as the land of 'three cultures'.

Archaeological material for all three cultures is evident throughout the Peninsula, particularly along the northern coastline.

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

Description if applicable

Cobourg Peninsula has been described as a humanised landscape containing a pattern of ecosystems that has been created by thousands of years of calculated management (CPSB 1987). Fire management is one of the main drivers that has and continues to influence the ecological character of the Ramsar site. The present vegetation communities and suites of fauna are dependent on the traditional burning practices established by traditional owners over a long period of time (Russell-Smith 1995).

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 ☑

Description if applicable

A number of sacred sites are present within the Ramsar site. These sites primarily relate to the activities that took place during the creation era and the travels of the first people, and include significant rock art and occupation sites, burial sites, ceremonial sites, story places and dreaming places. Sites of particular cultural significance are referred to as dreaming tracks and places (djang). Djang can occur on land, or in and under the sea (NRETAS 2007), and they relate to the activities that took place during the creation era and the travels of the first people such as Warramurra-ngundji. Djang are associated with natural features such as plants, animals, landscape features, climate features and habitats.

4.6 - Ecological processes

<no data available>

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
National/Federal government	☐	☑
Provincial/region/state government	☑	☑

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Commercial (company)	☑	☐

Other

Category	Within the Ramsar Site	In the surrounding area
Commoners/customary rights	☑	☑

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

Land within the Ramsar site is Aboriginal freehold land held in trust by the Cobourg Peninsula Sanctuary Board Land Trust for the Traditional Owners with the exception of two parcels of land. These are the land surrounding the Cape Don Lighthouse, and the special purpose lease on the eastern shore of Knocker Bay, Port Essington, held as a land base for pearl farming operations for Paspaley Pearling Company Pty Ltd. The Seven Spirit Bay Wilderness Lodge at coral Bay is established under a lease agreement with the Cobourg Peninsula Sanctuary Board.

The waters of the Van Diemen Gulf and the Timor and Arafura Seas, adjacent to the site, are considered Crown Land. Croker Island to the north-east and mainland areas to the south-east are Aboriginal freehold land held by the Arnhem Land Aboriginal Land Trust.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:
Cobourg Peninsula Sanctuary and Marine Park Board; Black Point Ranger Station

Provide the name and/or title of the person or people with responsibility for the wetland:
Jailee Wilson; Alan Withers

Postal address:
Cobourg Peninsula Sanctuary and Marine Park Board
PO Box 496
Palmerston NT 0831
AUSTRALIA

Black Point Ranger Station
Parks and Wildlife Commission of the Northern Territory
c/o PO Box 496
Palmerston NT 0831
Australia

E-mail address:
jailee.wilson@nt.gov.au

5.2 - Ecological character threats and responses (Management)

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

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Tourism and recreation areas	Medium impact	Medium impact	☑	No change	☐	No change

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Hunting and collecting terrestrial animals	Medium impact	Medium impact	☑	No change	☐	No change
Fishing and harvesting aquatic resources	Medium impact	Medium impact	☑	No change	☐	No change

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Recreational and tourism activities	Medium 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	High impact	High impact	☑	No change	☑	No change

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Excess heat, sound, light	Medium impact	Medium impact	☑	No change	☐	No change
Garbage and solid waste	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
Habitat shifting and alteration	Medium impact	Medium impact	☑	No change	☐	No change
Storms and flooding	Medium impact	Medium impact	☑	No change	☐	No change
Temperature extremes	Medium impact	Medium impact	☑	No change	☐	No change

Please describe any other threats (optional):

Of the threats to the Ramsar site, future impacts from climate change in terms of coral bleaching and saltwater intrusion and impacts from large populations of non-indigenous ungulates (that is, pigs, banteng, buffalo and horses) and spread of cane toads are seen as the most likely and potentially severe.

The key threats to the conservation values of the Garig Gunak Barlu National Park (covering the Cobourg Peninsula and surrounding marine waters) were evaluated by Rangers, planners and technical specialists in 2015. The highest priority threats were identified as inappropriate burning, wildfire, gamba grass establishment, banteng, cat introduction, buffalo, ghost nets and marine debris. Medium threats were pigs, rubber vine & snakeweed, mission grass, sickle pod & Mossman River grass. Lower priority threats were sida and hyptis, caltrop and sambar deer. For further details see Integrated Conservation Strategy, attached at Question 6.1.2.

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Park	Garig Gunak Barlu National Park	https://nt.gov.au/leisure/parks-reserves/find-a-park/find-a-park -to-visit/garig-gunak-barlu-nati onal-park	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

Habitat

Measures	Status
Habitat manipulation/enhancement	Implemented

Species

Measures	Status
Control of invasive alien animals	Implemented

Human Activities

Measures	Status
Regulation/management of recreational activities	Implemented

Other:

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

The majority of the site is managed as a conservation reserve, with some tourism and education, commercial fishing and low-level traditional owner hunting and gathering. In the surrounding areas, cultured pearl farming, aquarium fish harvesting, mud crabbing, mackerel trolling and mineral exploration take place.

Access is limited to small numbers of self-sufficient visitors, who come to enjoy scenic views in a remote setting. Activities include camping, wildlife watching, photography, hiking, boating and fishing and there are opportunities to learn about the rich cultural and historical values of the area.
Concerted efforts to reduce large non-indigenous herbivore numbers have not been utilised on Cobourg Peninsula to date, with annual cull numbers relatively low. A Commonwealth-funded program to control pigs and banteng within Cobourg Peninsula, through baiting, shooting and trapping, began in late 2010.

Indigenous ranger groups undertake fire, weed and feral animal management and coastal surveillance as well as ghost net management.

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 ◉

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

An interpretive visitor centre is located at Black Point. This centre provides visitors with information about the Cobourg Peninsula Ramsar site regarding ecological values, native fauna and flora patterns, historical and archaeological features, and cultural and social heritage.

URL of site-related webpage (if relevant): https://nt.gov.au/leisure/parks-reserves/find-a-park/find-a-park-to-visit/garig-gunak-barlu-national -park

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? Yes, there is a plan

5.2.7 - Monitoring implemented or proposed

Fire regime - Regional studies have assessed fire regimes over time and impacts on some vegetation communities.
Indigenous ranger groups monitor fauna, weeds, ghost nets, fire and illegal fishing vessels.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

This RIS has been developed based on the Ecological Character description for the site and other references which have been included in a bibliography attached under section 6.1.2.

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>

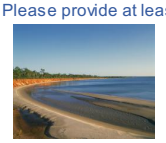
iv. relevant Article 3.2 reports
<no file available>

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:



Cobourg Peninsula (---, *08-08-2014*)

Cobourg Peninsula (---, *01-09-2014*)

Pier at Black Point, Cobourg Peninsula (---, *05-09-2014*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation: 1974-05-08