

Australia

Ord River Floodplain

Offline RIS Word form

The purpose of this form is to help in collecting data on a Ramsar Site for the completion of an online Ramsar Information Sheet (RIS) at <https://rsis.ramsar.org>. It can be circulated between the National Focal Point, RIS compilers and other national data collectors. However, it is not accepted by the Ramsar Secretariat for submission of a Site update or new Site designation. The data collected through this form must be transferred to the online form by the National Focal Point or an authorized online RIS compiler.  
  
All fields marked with an asterisk (\*) are required.  
  
 For more information on how to use this form, please refer to the document   
 [How to use the offline RIS Word form.](http://www.ramsar.org/document/how-to-use-the-offline-ris-word-form)

Created by RSIS v1.7 on 18 March 2020 at 01:18

[https://rsis.ramsar.org/RISapp/section.php?idSection=1&part=1&idvris=29303747&action=view](https://rsis.ramsar.org/RISapp/section.php?idSection=1&amp;part=1&amp;idvris=29303747&amp;action=view)

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.

Summary

1.1 Summary description

Please provide a short descriptive text summarising the key characteristics and internationally important aspects of the site. You may prefer to complete the four following sections before returning to draft this summary.

Summary (This field is limited to 2500 characters)

|  |  |
| --- | --- |
|  | The Ord River Floodplain Ramsar Site is located in the East Kimberley region in the north of Western Australia, within the Ord-Pentecost River Region in the Tanami-Timor Sea Coast Drainage Division. The Ramsar Site was designated in June 1990.    The Ord River Floodplain Ramsar Site is an extensive system of river, seasonal creek, tidal mudflat and floodplain wetlands. The site represents the best example of wetlands associated with the floodplain and estuary of a tropical river system in the Kimberley region of Western Australia. The site includes the False Mouths of the Ord, which comprises vast areas of mudflats, mangrove communities and a maze of tidal creeks. The site also includes small but potentially important freshwater forested swamps. Of the 19 species of mangrove found in Western Australia, 15 have been recorded within the Ramsar Site. The site is also important because of the presence of mangrove dependent bird species and the provision of habitat for the regionally protected Saltwater Crocodile (Crocodylus porosus).    The Ramsar Site is a nursery, feeding and/or breeding ground for migratory birds, waterbirds, fish, crabs, prawns and crocodiles. Over 200 bird species have been recorded within the Site (including 105 waterbird species), over 300 species of vascular plants, 35 reptile species and 17 species of bats. The site supports Freshwater Sawfish (Pristis microdon), Green Sawfish (Pristis zijsron) and the Australian Painted Snipe (Rostratula australis), which are listed as vulnerable under the national 'Environment Protection and Biodiversity Conservation Act 1999'. The site is also one of only two known habitats in Western Australia of the nationally endangered Northern River Shark (Glyphis garricki). The site regularly supports 1% of the population of Plumed Whistling Duck (Dendrocygna eytoni) and Little Curlew (Numenius minutes). A Flatback Turtle (Natator depressus) rookery is located at Cape Domett, immediately north of the Ramsar Site. |

Data & location

2.1 Formal data

2.1.1 Name and address of the compiler of this RIS

Compiler 1

Name

|  |  |
| --- | --- |
|  | Principal Coordinator, Wetlands Section |

Institution/agency

|  |  |
| --- | --- |
|  | Department of Parks and Wildlife (Western Australia) |

Postal address (This field is limited to 254 characters)

|  |  |
| --- | --- |
|  | 17 Dick Perry Ave  Technology Park  Kensington WA 6983  Australia |

E-mail (The online RIS only accepts valid e-mail addresses, e.g. example@mail.com )

|  |  |
| --- | --- |
|  | wetlands@dpaw.wa.gov.au |

Phone (The online RIS only accepts valid phone numbers, e.g. +1 41 123 45 67 )

|  |  |
| --- | --- |
|  | +61-8-9219-9000 |

Fax (The online RIS only accepts valid phone numbers, e.g. +1 41 123 45 67 )

|  |  |
| --- | --- |
|  | +61-8-9334-0498 |

Compiler 2

Name

|  |  |
| --- | --- |
|  |  |

Institution/agency

|  |  |
| --- | --- |
|  |  |

Postal address (This field is limited to 254 characters)

|  |  |
| --- | --- |
|  |  |

E-mail (The online RIS only accepts valid e-mail addresses, e.g. example@mail.com )

|  |  |
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Phone (The online RIS only accepts valid phone numbers, e.g. +1 41 123 45 67 )

|  |  |
| --- | --- |
|  |  |

Fax (The online RIS only accepts valid phone numbers, e.g. +1 41 123 45 67 )

|  |  |
| --- | --- |
|  |  |

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

From year (The online RIS only accepts numeric values)

|  |  |
| --- | --- |
|  | 1989 |

To year (The online RIS only accepts numeric values)

|  |  |
| --- | --- |
|  | 2015 |

2.1.3 Name of the Ramsar Site

Official name (in English, French or Spanish)\* (This field is mandatory)

|  |  |
| --- | --- |
|  | Ord River Floodplain |

Unofficial name (optional)

|  |  |
| --- | --- |
|  |  |

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

A. Changes to Site boundary (Update)

[x] Yes / [ ] No

.

[x] The boundary has been delineated more accurately

[ ] The boundary has been extended

[ ] The boundary has been restricted

B. Changes to Site area (Update)

|  |  |
| --- | --- |
|  | the area has decreased[[1]](#footnote-1) |

[x] The Site area has been calculated more accurately

[x] The Site has been delineated more accurately

[ ] The Site area has increased because of a boundary extension

[ ] The Site area has decreased because of a boundary restriction

Important note: If the boundary of the designated site is being restricted/reduced, before submitting this updated RIS to the Secretariat the Contracting Party should have followed: - the requirements in Article 2.5 of the Convention; or - the procedures established by the Conference of the Parties in the annex to Resolution VIII.20 (2002); or - where appropriate instead, the procedures in the annex to Resolution IX.6 (2005). Contracting Parties should also have provided to the Secretariat a report on changes prior to the submission of an updated RIS.

2.1.5 Changes to the ecological character of the Site

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

|  |  |
| --- | --- |
|  | No[[2]](#footnote-2) |

Are the changes (Update)

[ ] Positive / [ ] Negative / [x] Positive & Negative

.

.

What extent of the Ramsar site is affected (%)

Positive % (Update)

|  |  |
| --- | --- |
|  |  |

Negative % (Update)

|  |  |
| --- | --- |
|  |  |

Optional text box to provide further information (Update)

|  |  |
| --- | --- |
|  |  |

[ ] No information available

Are changes the result of (tick each category which applies):

[ ] Changes resulting from causes operating within the existing boundaries?

[ ] Changes resulting from causes operating beyond the site’s boundaries?

[ ] Changes consequent upon site boundary reduction alone (e.g., the exclusion of some wetland types formerly included within the site)?

[ ] Changes consequent upon site boundary increase alone (e.g., the inclusion of different wetland types in the site)?

Please describe any changes to the ecological character of the Ramsar Site, including in the application of the Criteria, since the previous RIS for the site. (Update)

|  |  |
| --- | --- |
|  |  |

Is the change in ecological character negative, human-induced AND a significant change (above the limit of acceptable change) (Update)

[ ] Yes / [x] No

.

Has an Article 3.2 report been submitted to the Secretariat? (Update)

[ ] Yes / [x] No

.

2.2 Site location

2.2.1 Defining the Site boundaries

The site boundaries must be clearly delineated on both: a) a GIS shapefile and b) a digital map/image:

-> To define the site boundaries please complete field 2.2.1 a1), 2.2.1 a2) and 2.2.1 b) via the online form.

-UPLOAD via online form-

Boundaries description (This field is limited to 2500 characters)

|  |  |
| --- | --- |
|  | The boundary of the Ramsar Site includes the Parry Lagoons Nature Reserve 42155 and the Ord River Nature Reserve 31967 both of which are vested in the Conservation Commission of Western Australia and managed by the Department of Parks and Wildlife. The Ramsar Site also includes areas of non-reserved marine and estuarine waters of the Cambridge Gulf and the lower Ord River. Excluded from the Ramsar Site is the Parry Creek Road Reserve, Parry Creek Farm and the Goose Hill Living Area.    The boundary of the Ord River Floodplain Ramsar Site includes the following lots: Crown Reserve 42155 (Lot 301 on Plan 47473, Lot 302 on Plan 47473, Lot 745 on Plan 240360, Lot 746 on Plan 240360); Crown Reserve 48482 (Lot 300 on Plan 46802); Crown Reserve 39016 (Lot 621 on Plan 216016); Crown Reserve 34724 (Lot 486 on Plan 182258); Crown Reserve 31967 (Lot 755 on Plan 241648, Lot 671 on Plan 240266); Unallocated Crown Land (PIN 639736, Lot 844 on Plan 194780).    Excluded from the Ramsar site is the Parry Creek Road Reserve, Parry Creek Farm and the Goose Hill Living Area: Freehold (Lot 377 on Plan 180078, Lot 224 on Plan 166136, Lot 223 on Plan 166136, Lot 292 on Plan 173332, Lot 841 on Plan 35244); Road reserve (PIN 639952, Lot 881 on Plan 28405).    Note: Unallocated Crown Land (UCL) refers to Crown land which is not subject to any interest (aside from native title interests) and which is not reserved or dedicated. A Parcel Identifier Number (PIN) is allocated to areas of UCL that do not have a defined cadastral identifier (e.g. lot number). Boundary descriptions including UCL will be revised as more information is available. |

2.2.2 General location

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

|  |  |
| --- | --- |
|  | Western Australia |

b) What is the nearest town or population centre?

|  |  |
| --- | --- |
|  | The site is remote. The nearest town is Wyndham (population 787 in 2011) approximately 10 kilometres west of the site. The capital city of Western Australia is Perth, which is over 3,000 kilometres south of the 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 / [x] No

.

b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party?

[ ] Yes / [x] No

.

c) Is the site part of a formal transboundary designation with another Contracting Party?

[ ] Yes / [x] No

.

d) Transboundary Ramsar Site name:

|  |  |
| --- | --- |
|  |  |

2.2.4 Area of the Site

If you have not established an official area by other means, you can copy the area calculated from the GIS boundaries into the 'official area' box.

Official area, in hectares (ha): (The online RIS only accepts numeric values)

|  |  |
| --- | --- |
|  | 140766 |

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

|  |  |
| --- | --- |
|  | 140765.65 |

2.2.5 Biogeography

Please provide the biogeographic region(s) encompassing the site and the biogeographic regionalization scheme applied:

Biogeographic regions

|  |  |
| --- | --- |
| **Regionalisation scheme(s)** | **Biogeographic region** |
| Other scheme (provide name below) |  |
|  |  |

Other biogeographic regionalisation scheme (This field is limited to 2500 characters)

|  |  |
| --- | --- |
|  | The Ord-Pentecost River Region in the Tanami-Timor Sea Coast Drainage Division (Australian Hydrological Geospatial Fabric). The estuary is open to the Northwest Transition of the Integrated Marine and Coastal Regionalisation of Australia – version 4.0 June 2006 (IMCRA v4.0). |

Why is the Site important?

3.1 Ramsar Criteria and their justification

Tick the box against each criterion applied to the designation of the Ramsar Site. All criteria which apply should be ticked. Please explain why you selected a criterion by filling in the relevant fields on this page, on the three other pages of this section 'Criteria & justification' and on the 'Wetland types' page of the section 'What is the site like?'.

[x] Criterion 1: Representative, rare or unique natural or near-natural wetland types

To justify this Criterion, please select at least one wetland type as representative, rare or unique in the section What is the site like? > Wetland types and provide further details in at least one of the three boxes below.

Hydrological services provided (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  | The site represents the best example of wetlands associated with the floodplain and estuary of a tropical river system in the Tanami–Timor Sea Coast bioregion in the Kimberley region of Western Australia. In addition, the False Mouths of the Ord are the most extensive mudflat and tidal waterway complex in Western Australia and the wetland grass/herblands at Parry Lagoons are the most extensive vegetation community of this type in the State (Department of Conservation and Land Management 1998).    Within the Ramsar Site, as the freshwater floodplain grades into estuarine systems, the line between fresh non-tidal and saline intertidal is not static and there is a broad transitional (ecotonal) zone. The ecotone may at times seem fresh in terms of plants and water quality and at other times saline. The vegetation communities within these sites can vary considerably, for example, from Melaleuca thickets to dense stands of mangrove. This is a dynamic and rich zone for fauna and flora but is poorly known because it is vaguely defined and is almost inaccessible during the wet season (Hale 2008). |

Other ecosystem services provided (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  |  |

Other reasons (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  |  |

[x] Criterion 2 : Rare species and threatened ecological communities

To justify this Criterion, please give details below on:

- relevant plant species in the section Criteria & justification> Plant species (3.2)

- relevant animal species in the section Criteria & justification> Animal species (3.3)

- relevant ecological communities in the section Criteria & justification> Ecological communities (3.4)

Optional text box to provide further information (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  |  |

[x] Criterion 3 : Biological diversity

To justify this Criterion, please give details in the box below. If you want to name any specific species, please give details on:

- relevant plant species in the section Criteria & justification> Plant species (3.2)

- relevant animal species in the section Criteria & justification> Animal species (3.3)

Justification (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  | The Ramsar Site contains 15 of the 19 species of mangrove known to occur in Western Australia (Johnstone 1990; Semeniuk and Semeniuk 2000) and is the most diverse area for mangroves in the Kimberley region and potentially in the State (Pedretti and Paling 2001). Mangroves are the most extensive vegetation community in the Ramsar Site, covering approximately 26,800 hectares. These communities are important habitat for a number of bird species restricted to mangrove forests in Western Australia. Twenty one mangrove bird species have been recorded within the Ramsar Site. The Black Butcherbird (Cracticus quoyi) and Collared Kingfisher (Todiramphus chloris) are significant due to their isolation from other populations of these species. The Black Butcherbird (Cracticus quoyi) breed in the area and is the only population of its kind in Western Australia (Johnstone 1990). |

[x] Criterion 4 : Support during critical life cycle stage or in adverse conditions

To justify this Criterion, please give details below on:

- relevant plant species in the section Criteria & justification> Plant species (3.2)

- relevant animal species in the section Criteria & justification> Animal species (3.3)

and explain the life cycle stage or nature of adverse conditions in the accompanying 'justification' box.

Optional text box to provide further information (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  |  |

[x] Criterion 5 : >20,000 waterbirds

To justify this Criterion, please give details below on:- the total number of waterbirds and the period of data collection - relevant waterbird species, and if possible their population size, in the section Criteria & justification> Animal species (3.3)

Overall waterbird numbers\* (This field is mandatory)

|  |  |
| --- | --- |
|  | >20,000 regularly |

Start year\* (This field is mandatory)

|  |  |
| --- | --- |
|  | 1980 |

End year\* (This field is mandatory)

|  |  |
| --- | --- |
|  | 2013 |

Source of data:

|  |  |
| --- | --- |
|  | Jaensch and Vervest 1990, Hale 2008, Atlas of Australian Birds (BirdLife Australia) |

Optional text box to provide further information (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  |  |

[x] Criterion 6 : >1% waterbird population

To justify this Criterion, please give details on relevant waterbird species and their population size in the section Criteria & justification> Animal species (3.3)

Optional text box to provide further information (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  |  |

[ ] Criterion 7 : Significant and representative fish

To justify this Criterion, please give information in the box below and details of relevant fish species in the section Criteria & justification> Animal species (3.3)

Justification (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  |  |

[x] Criterion 8 : Fish spawning grounds, etc.

To justify this Criterion, please give information in the box below. Completion of details on relevant fish species in the section Criteria & justification> Animal species (3.3) is optional.

Justification (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  | The Ramsar Site is important as a nursery and/or breeding and/or feeding ground for at least 50 species of fish and a migratory route for 15 species that are known to be diadromous (i.e. fish species that migrate between salt and freshwater) (Hale 2008). |

[ ] Criterion 9 : >1% non-avian animal population

To justify this Criterion, please give details on relevant non-avian species and their population size in the section Criteria & justification> Animal species (3.3)

Optional text box to provide further information (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  |  |

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

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Scientific name**\* | **Common name** | **Criterion 2** | **Criterion 3** | **Criterion 4** | **IUCN Red List**[[3]](#footnote-3) | **CITES Appendix I** | **Other status** | **Justification** |
|  |  |  |  |  |  |  |  |  |

Optional text box to provide further information on plant species of international importance:

(This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  | It is not known if there are nationally rare, threatened or endemic plants at the Site. There are several species that are under consideration for declaration as “rare flora” at a State level, notably Utricularia aurea.    The second record for the mangrove species Diospyros littorea in Western Australia is within the Ramsar Site. The species is listed as a priority (P2) flora species in Western Australia. |

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

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Phylum** | **Scientific name**\* | **Common name** | **Species qualifies under criterion** | | | | **Species contributes under criterion** | | | | **Pop. Size**[[4]](#footnote-4) | **Period of pop. Est.**4 | **% occurrence**4 | **IUCN Red List**[[5]](#footnote-5) | **CITES Appendix I** | **CMS Appendix I** | **Other Status** | **Justification** |
| **2** | **4** | **6** | **9** | **3** | **5** | **7** | **8** |
| Birds | | | | | | | | | | | | | | | | | | |
| Chordata/Aves | Anas gracilis | Grey Teal | [ ] | [ ] | [ ] | [ ] | [ ] | [x] | [ ] | [ ] | 6980 | 1980-1990 |  | LC | [ ] | [ ] |  | Population size is the maximum count of this species recorded from the site (from Jaensch and Vervest 1990). More recent data on population size is not available. |
| Chordata/Aves | Anas superciliosa | Pacific Black Duck | [ ] | [ ] | [ ] | [ ] | [ ] | [x] | [ ] | [ ] | 1000 | 1980-1990 |  | LC | [ ] | [ ] |  | Population size is the maximum count of this species recorded from the site (from Jaensch and Vervest 1990). More recent data on population size is not available. |
| Chordata/Aves | Aythya australis | Hardhead | [ ] | [ ] | [ ] | [ ] | [ ] | [x] | [ ] | [ ] | 4000 | 1980-1990 |  | LC | [ ] | [ ] |  | Population size is the maximum count of this species recorded from the site (from Jaensch and Vervest 1990). More recent data on population size is not available. |
| Chordata/Aves | Calidris acuminata | Sharp-tailed Sandpiper | [ ] | [x] | [ ] | [ ] | [ ] | [x] | [ ] | [ ] | 1500 | 1980-1990 |  | LC | [ ] | [ ] |  | Population size is the maximum count of this species recorded from the site (from Jaensch and Vervest 1990). More recent data on population size is not available. Data deficient but may support >1%, migratory |
| Chordata/Aves | Dendrocygna eytoni | Plumed Whistling Duck | [ ] | [ ] | [x] | [ ] | [ ] | [x] | [ ] | [ ] | 15000 | 1980-1990 | 1.5 | LC | [ ] | [ ] | EPBC Vulnerable | Population size is the maximum count of this species recorded from the site (from Jaensch and Vervest 1990). More recent data on population size is not available. |
| Chordata/Aves | Erythrogonys cinctus | Red-kneed Dotterel | [ ] | [ ] | [ ] | [ ] | [ ] | [x] | [ ] | [ ] | 3000 | 1980-1990 |  | LC | [ ] | [ ] |  | Population size is the maximum count of this species recorded from the site (from Jaensch and Vervest 1990). More recent data on population size is not available. Data deficient but may support >1% |
| Chordata/Aves | Erythrotriorchis radiatus | Red Goshawk | [x] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] |  |  |  | NT | [ ] | [ ] | EPBC Vulnerable |  |
| Chordata/Aves | Erythrura gouldiae | Gouldian Finch | [x] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] |  |  |  | NT | [ ] | [ ] | EPBC Endangered |  |
| Chordata/Aves | Falcunculus frontatus | Crested Shriketit | [x] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] |  |  |  | LC | [ ] | [ ] | EPBC Vulnerable |  |
| Chordata/Aves | Himantopus himantopus | Black-winged Stilt | [ ] | [ ] | [ ] | [ ] | [ ] | [x] | [ ] | [ ] | 1700 | 1980-1990 |  | LC | [ ] | [ ] |  | Population size is the maximum count of this species recorded from the site (from Jaensch and Vervest 1990). More recent data on population size is not available. |
| Chordata/Aves | Numenius minutus | Little Curlew | [ ] | [x] | [x] | [ ] | [ ] | [ ] | [ ] | [ ] | 2500 | 1980-1990 | 1.4 | LC | [ ] | [ ] |  | Population size is the maximum count of this species recorded from the site (from Jaensch and Vervest 1990). More recent data on population size is not available. |
| Chordata/Aves | Rostratula australis | Australian Painted Snipe | [x] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] |  |  |  | EN | [ ] | [ ] | EPBC Vulnerable |  |
| Fish, Mollusc and Crustacea | | | | | | | | | | | | | | | | | | |
| Chordata/Actinopterygii | Epinephelus lanceolatus | Queensland groper | [x] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [x] |  |  |  | VU | [ ] | [ ] |  |  |
| Chordata/Elasmobranchii | Glyphis garricki | Northern River Shark | [x] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [x] |  |  |  | CR | [ ] | [ ] | EPBC Endangered | One of only two known habitats in Western Australia. |
| Chordata/Elasmobranchii | Pristis microdon | Freshwater Sawfish | [x] | [x] | [ ] | [ ] | [ ] | [ ] | [ ] | [x] |  |  |  | CR | [x] | [ ] | EPBC Vulnerable | Migratory |
| Chordata/Elasmobranchii | Pristis zijsron | Green Sawfish | [x] | [x] | [ ] | [ ] | [ ] | [ ] | [ ] | [x] |  |  |  | CR | [x] | [ ] | EPBC Vulnerable | Migratory |
| Others | | | | | | | | | | | | | | | | | | |
| Chordata/Mammalia | Dasyurus hallucatus | Northern Quoll | [x] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] |  |  |  | EN | [ ] | [ ] | EPBC Endangered |  |
| Chordata/Reptilia | Natator depressus | Flatback Turtle | [x] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] |  |  |  |  | [x] | [ ] | EPBC Vulnerable | A Flatback Turtle rookery is located at Cape Domett, immediately north of the Ramsar site. Highly likely that the species is also found within the northern boundary of the Ramsar site. |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Optional text box to provide further information on animal species of international importance:

(This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  | The site is remote and comprises extensive and diverse habitats that are largely inaccessible during the wet season. With increased survey efforts and monitoring, it is likely that additional species of international importance will be recorded.    The site meets Criterion 4 by supporting animals during:  • critical life stages of migration – annual use by large numbers of fish and migratory birds (32 bird species listed under international migratory agreements). Further information is available in Hale (2008).  • critical life stage of drought refuge – seasonal influx of large numbers of waterbirds from dry wetlands in surrounding areas and periodic massive influx from wider areas during drought  • critical life stage of breeding – 16 species of wetland dependent birds, Saltwater and Freshwater Crocodiles and an unknown number of fish species. Further information is available in Hale (2008).    Overall waterbird numbers:  The site is extensive, very remote and at the time of greatest waterbird habitat and food resources (the wet season) access to wetlands to survey birds is extremely difficult. As such, few waterbird surveys have been undertaken within the Ramsar Site and when conducted, surveys are limited only to accessible areas. The most comprehensive waterbird surveys were conducted in the 1980s, however, they were limited to Parry Lagoons. More recent surveys at Parry Lagoons by BirdLife Australia members (1998-2013) were undertaken during the dry season and were largely presence/absence observations with little quantitative data. Observational data from the BirdLife Australia surveys indicates that waterbird species composition has remained relatively stable from 1998 to 2013. The paucity of waterbird surveys within the Ramsar site has been acknowledged as a knowledge gap in the ecological character description (Hale 2008). As the ecological character of the site has not changed since the surveys in the 1980s, it would be expected that the criterion of ‘regularly supports 20,000 waterbirds’ is still supported.  Surveys from Parry Lagoons only (March 1980 – 20,000; March 1983 – >20,000; May 1986 – 20,670; May 1988 – 18,914). |

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** |
|  |  |  |  |

Optional text box to provide further information (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  |  |

What is the Site like?

4.1 Ecological character

Please summarize the ecological components, processes and services which are critical to determining the ecological character of the site. Please also summarize any natural variability in the ecological character of the site, and any known past or current change

(This field is limited to 4000 characters)

|  |  |
| --- | --- |
|  | Climate  Semi-arid monsoonal. Annual average rainfall at Wyndham (1968-2014) is 820 mm with high annual variation (460 to 1,620 mm) (Bureau of Meteorology 2014). Rain falls mostly in the wet season (November-April).    Geomorphology  Extensive mud flats, intertidal areas and floodplain (seasonal and permanent freshwater wetlands) provide habitat for mangroves, invertebrates and waterbirds.    Hydrology  Macro-tidal influence. Dams upstream have reduced inflows (Trayler et al. 2006). Low flows occur during the dry season with higher flows in the wet. Overbank flows from the Ord River to Parry Lagoons are now infrequent. Parry Creek is the major source of water for Parry Lagoons and floodplains.    Water quality  Estuary is highly turbid and net exporter of nutrients. Potentially high nutrient levels from upstream agriculture. Salinity in the estuary varies seasonally (30–35 ppt in dry, < 4 ppt in wet). Parry Lagoons is predominantly fresh. Some agrichemicals detected above ANZECC guidelines (Water and Rivers Commission 2003a).    Phytoplankton  Estuary dominated by diatoms and plankton, and is predominantly epi-benthic.    Vegetation  More than 300 species of vascular plants recorded. Extensive areas of mangrove in intertidal areas with 15 species recorded. Parry Lagoons supports extensive sedge/grass lands (intermittent inundation); aquatic vegetation occurs in the permanent waterholes surrounded by wooded swamp.    Invertebrates  Commercially significant taxa include mud crabs and white banana prawns.    Fish  More than 50 species (estuarine, marine and freshwater). Migratory route for approximately 15 species. Supports nationally listed species: Freshwater Sawfish (Pristis microdon), Green Sawfish (Pristis zijsron) and Northern River Shark (Glyphis garricki) (Morgan et al. 2011).    Birds  Over 200 species recorded within the site, including nationally listed species and the only known site in WA of Zitting Cisticolas (Cisticola juncidus). Breeding recorded for 16 species (Hale 2008). Site supports extensive and diverse nesting habitats (Department of Environment and Conservation 2012).    Reptiles  35 species recorded. Regionally protected Saltwater (Crocodylus porosus) and Freshwater crocodiles (Crocodylus johnstoni) occur and breed within the site.    Mammals  Supports nationally listed Northern Quoll (Dasyurus hallucatus), 17 bat species and at least 36 other mammal species (Department of Environment and Conservation 2012). |

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

Please list all wetland types which occur on the site, and for each of them: - rank the four most abundant types by area from 1 (greatest extent) to 4 (least extent) in the third column, - if the information exists, provide the area (in ha) in the fourth column - if this wetland type is used for justifying the application of Criterion 1, indicate if it is representative, rare or unique in the last column - you can give the local name of the wetland type if different from the Ramsar classification system in the second column

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** |
| F: Estuarine waters |  | 0 |  | Representative |
| G: Intertidal mud, sand or salt flats |  | 0 |  | Representative |
| H: Intertidal marshes |  | 0 |  | Representative |
| I: Intertidal forested wetlands |  | 0 |  | Representative |
| J: Coastal brackish / saline lagoons |  | 0 |  | Representative |
| K: Coastal freshwater lagoons |  | 0 |  | Representative |
|  |  |  |  |  |

Inland wetlands

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Wetland types (code and name)** | **Local name** | **Ranking of extent (1: greatest - 4: least)** | **Area (ha) of wetland type** | **Justification of Criterion 1** |
| Fresh water > Flowing water >> M: Permanent rivers/ streams/ creeks |  | 0 |  | Representative |
| Fresh water > Flowing water >> N: Seasonal/ intermittent/ irregular rivers/ streams/ creeks |  | 0 |  | Representative |
| Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools |  | 0 |  | Representative |
| Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils |  | 0 |  | Representative |
| Fresh water > Marshes on inorganic soils >> W: Shrub-dominated wetlands |  | 0 |  | Representative |
| Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands |  | 0 |  | Representative |
| Fresh water > Flowing water >> Y: Permanent Freshwater springs; oases |  | 0 |  | Representative |
|  |  |  |  |  |

Human-made wetlands

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Wetland types (code and name)** | **Local name** | **Ranking of extent (1: greatest - 4: least)** | **Area (ha) of wetland type** | **Justification of Criterion 1** |
|  |  |  |  |  |

What non-wetland habitats are within the site?

Other non-wetland habitat

|  |  |
| --- | --- |
| **Other non-wetland habitats within the site** | **Area (ha) if known** |
| Grassland |  |
| Low woodland (divided into 7 associations) |  |
| Dune systems |  |
| Sandstone range open woodland |  |
| Rainforest (aquifer forest) |  |
| Savannah woodland |  |
|  |  |

Habitat connectivity (ECD)

|  |  |
| --- | --- |
|  | The freshwater floodplain (Parry Lagoons) grades into the estuarine (Ord Estuary) and marine (False Mouths of the Ord) influenced habitats. The habitats are directly related to the hydrological connectivity between fresh, estuarine and marine waters. |

4.3 Biological components

4.3.1 Plant species

Other noteworthy plant species

|  |  |  |
| --- | --- | --- |
| **Scientific name** | **Common name** (optional) | **Position in range / endemism / other** (optional) |
| Echinochloa kimberleyensis | null | Poorly known and likely to have a high degree of endemism. |
| Goodenia brachypoda | null | Poorly known and likely to have a high degree of endemism. |
| Nymphaea immutabilis | null | Poorly known and likely to have a high degree of endemism. |
| Paspalidium distans | null | Poorly known and likely to have a high degree of endemism. |
| Psilotum nudum | null | Poorly known and likely to have a high degree of endemism. |
| Utricularia aurea | null | Poorly known and likely to have a high degree of endemism. |
| Utricularia stellaris | null | Poorly known and likely to have a high degree of endemism. |
|  |  |  |

Invasive alien plant species

|  |  |  |  |
| --- | --- | --- | --- |
| **Scientific name** | **Common name** | **Impacts** | **Changes at RIS update** |
| Calotropis procera | Rubber bush | Actually (minor impacts) | unknown |
| Hyptis suaveolens | Hyptis | Actually (minor impacts) | unknown |
| Jatropha gossypiifolia | Bellyache bush | Actually (minor impacts) | unknown |
| Mimosa pigra | Mimosa | Actually (minor impacts) | unknown |
| Parkinsonia aculeata | Parkinsonia | Actually (minor impacts) | unknown |
| Passiflora foetida | Wild passionfruit | Actually (minor impacts) | unknown |
| Xanthium strumarium | Noogoora burr | Actually (minor impacts) | unknown |
|  |  |  |  |

Optional text box to provide further information (This field is limited to 2500 characters)

|  |  |
| --- | --- |
|  |  |

4.3.2 Animal species

Other noteworthy animal species

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Phylum** | **Scientific name** | **Common name** | **Pop. size** (optional) | **Period of pop. est.** (optional) | **% occurrence** (optional) | **Position in range /endemism/other** (optional) |
| Chordata/Aves | Cisticola juncidis | Zitting Cisticola |  |  |  | Only known site in Western Australia where Zitting Cisticolas occur and breed. Parry Lagoons is the western extent of the species range (they are common in Queensland and the Northern Territory). |
| Chordata/Aves | Cracticus quoyi | Black Butcherbird |  |  |  | Mangrove dependent species, likely to be highly endemic due to distance from other populations. |
| Chordata/Aves | Todiramphus chloris | Collared Kingfisher |  |  |  | Mangrove dependent species, likely to be highly endemic due to distance from other populations. |
| Arthropoda/Malacostraca | Fenneropenaeus indicus | Red-legged Banana Prawn |  |  |  | Significant numbers of post-larval and juvenile Red-Legged Banana Prawns in 1998 surveys. The Ramsar site is important for maintaining stocks of this commercial species and as a food source for migratory species. |
| Arthropoda/Malacostraca | Fenneropenaeus merguiensis | White Banana Prawn |  |  |  | Possibly also commercially significant, and as a food source for migratory species. |
| Chordata/Mammalia | Chaerephon jobensis | Northern mastiff bat |  |  |  |  |
| Chordata/Reptilia | Crocodylus johnsoni | Freshwater Crocodile | 400 |  |  | Endemic to Australia. Regionally protected due to impacts of hunting. |
| Chordata/Reptilia | Crocodylus porosus | Saltwater Crocodile | 80 |  |  | Regionally protected due to impacts of hunting. |
| Chordata/Mammalia | Pteropus alecto | Black flying fox |  |  |  |  |
|  |  |  |  |  |  |  |

Invasive alien animal species

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Phylum** | **Scientific name** | **Common name** | **Impacts** | **Changes at RIS update** |
| Arthropoda/Malacostraca | Cherax quadricarinatus | Redclaw crayfish | Potentially | unknown |
| Arthropoda/Insecta | Apis mellifera | Honey Bee | Actually (minor impacts) | unknown |
| Chordata/Mammalia | Bos taurus | Domestic Cattle (feral) | Actually (minor impacts) | No change |
| Chordata/Mammalia | Felis catus | Domestic Cat | Potentially | unknown |
| Chordata/Amphibia | Rhinella marina | Cane Toad | Actually (major impacts) | increase |
| Chordata/Mammalia | Sus scrofa | Pig (feral) | Potentially | unknown |
|  |  |  |  |  |

Optional text box to provide further information (This field is limited to 2500 characters)

|  |  |
| --- | --- |
|  |  |

4.4 Physical components

4.4.1 Climate

Please indicate the prevailing climate type(s) by selecting below the climatic region(s) and subregion(s), using the Köppen-Gieger Climate Classification System.

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

If changing climatic conditions are affecting the site, please indicate the nature of these changes:

(This field is limited to 1000 characters)

|  |  |
| --- | --- |
|  | An increasing trend in annual rainfall has been recorded as a result of higher summer rains and drier spring periods, effectively intensifying the Wet-Dry tropical climate in the region (Gehrke 2009). Changes in sea level may result in increased inundation of tidal flats and low-lying estuarine areas, and increased saline intrusion upstream during low flow periods (Gehrke 2009). Increased global air temperatures may cause some warming of aquatic habitats in the lower Ord River and estuary, which is likely to be more pronounced in shallow wetlands and intertidal habitats (Gehrke 2009). |

4.4.2 Geomorphic setting

a) Minimum elevation above sea level (in metres) (The online RIS only accepts numeric values)

|  |  |
| --- | --- |
|  | 0 |

a) Maximum elevation above sea level (in metres) (The online RIS only accepts numeric values)

|  |  |
| --- | --- |
|  | 350 |

b) Position in landscape/river basin:

[ ] 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

[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. (This field is limited to 1000 characters)

|  |  |
| --- | --- |
|  | Ord River / Timor Sea |

4.4.3 Soil

[x] Mineral

Changes at RIS update (Update)

[ ] No change / [ ] Increase / [ ] Decrease / [x] Unknown

.

.

.

[x] Organic

Changes at RIS update (Update)

[ ] No change / [ ] Increase / [ ] Decrease / [x] Unknown

.

.

.

[ ] No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)?

[ ] Yes / [x] No

.

Please provide further information on the soil (optional) (This field is limited to 1000 characters)

|  |  |
| --- | --- |
|  | The majority of the Ramsar Site comprises alluvium and coastal silt/ evaporite deposits of Quaternary origin. However, the area surrounding Parry Lagoons is comprised of black soils also formed in the Quaternary. |

4.4.4 Water regime

Water permanence

|  |  |
| --- | --- |
| **Presence?** | **Changes at RIS update** |
| Usually permanent water present |  |
| Usually seasonal, ephemeral or intermittent water present |  |
|  |  |

Source of water that maintains character of the site

|  |  |  |
| --- | --- | --- |
| **Presence?** | **Predominant water source** | **Changes at RIS update** |
| Water inputs from rainfall | [ ] | No change |
| Water inputs from surface water | [x] | No change |
| Water inputs from groundwater | [ ] | No change |
| Marine water | [ ] | No change |
|  |  |  |

Water destination

|  |  |
| --- | --- |
| **Presence?** | **Changes at RIS update** |
| Feeds groundwater | No change |
| 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: (This field is limited to 2000 characters)

|  |  |
| --- | --- |
|  | The floodplain of the lower Ord River is a complex network of intermittent (and occasionally permanent) streams. The major sources of freshwater directly into the site are from the Ord River itself, Parry Creek (into Parry Lagoons) and the major tributaries of the False Mouths of the Ord; Emu, Tanamurra and Station Creeks.    Large floods occur predominantly in the wet season, however, median flows are only slightly greater in the wet than the dry season, as constant releases from the Ord River Dam over the dry season ensure that the river is a permanent system. Peak flows in the lower Ord River are now predominantly governed by inflows from the unregulated Dunham River and localised catchments. It is only during very wet years that releases from the dams contribute to flood flows. These flood flows are important for a number of reasons including inundation of Parry Lagoons as well as for flushing the estuary and removing the build-up of deposited silt. |

Connectivity of surface waters and of groundwater (ECD)

|  |  |
| --- | --- |
|  | During the wet season, surface waters from the floodplain flow into the estuary towards the ocean. With the exception of Parry Lagoons, the majority of the site is tidally influenced. Groundwater flows to the lower Ord have not been quantified. |

Stratification and mixing regime (ECD)

|  |  |
| --- | --- |
|  | No information available. |

4.4.5 Sediment regime

[ ] Significant erosion of sediments occurs on the site

Changes at RIS update (Update)

[x] No change / [ ] Increase / [ ] Decrease / [ ] Unknown

.

.

.

[x] Significant accretion or deposition of sediments occurs on the site

Changes at RIS update (Update)

[ ] No change / [ ] Increase / [ ] Decrease / [x] Unknown

.

.

.

[x] Significant transportation of sediments occurs on or through the site

Changes at RIS update (Update)

[ ] No change / [ ] Increase / [ ] Decrease / [x] Unknown

.

.

.

[x] Sediment regime is highly variable, either seasonally or inter-annually

Changes at RIS update (Update)

[x] No change / [ ] Increase / [ ] Decrease / [ ] Unknown

.

.

.

[ ] Sediment regime unknown

Please provide further information on sediment (optional): (This field is limited to 1000 characters)

|  |  |
| --- | --- |
|  | The Ord River Estuary is characterised by high total suspended sediments, which influence light penetration and turbidity. The suspended solid concentrations are predominantly a result of tidal re-suspension of fine sediments that have accumulated in the estuary and channel (Wolanski et al. 2001). Suspended sediment concentrations are lower in the freshwater sections of the river and are typically <100 mg/L (Wolanski et al. 2001; Parslow et al. 2003). Suspended sediment concentrations are highest in the mid-estuary section with maximum values of between 4,000-5,000 mg/L recorded (Wolanski et al. 2001; Parslow et al. 2003). In the more open estuary areas, suspended sediment concentrations are lower and typically < 500 mg/L. |

Water turbidity and colour (ECD)

|  |  |
| --- | --- |
|  | Turbidity is high in the estuary due to the constant resuspension of accumulated sediments. |

Light - reaching wetland (ECD)

|  |  |
| --- | --- |
|  | Light penetration is reduced in the estuary due to high suspended sediments concentrations. |

Water temperature (ECD)

|  |  |
| --- | --- |
|  | No information available. |

4.4.6 Water pH

[ ] Acid (pH<5.5)

Changes at RIS update (Update)

[x] No change / [ ] Increase / [ ] Decrease / [ ] Unknown

.

.

.

[ ] Circumneutral (pH: 5.5-7.4 )

Changes at RIS update (Update)

[x] No change / [ ] Increase / [ ] Decrease / [ ] Unknown

.

.

.

[ ] Alkaline (pH>7.4)

Changes at RIS update (Update)

[x] No change / [ ] Increase / [ ] Decrease / [ ] Unknown

.

.

.

[x] Unknown

Please provide further information on pH (optional): (This field is limited to 1000 characters)

|  |  |
| --- | --- |
|  | pH is acknowledged in the ecological character description as a knowledge gap (Hale 2008). |

4.4.7 Water salinity

[x] Fresh (<0.5 g/l)

Changes at RIS update (Update)

[ ] No change / [ ] Increase / [ ] Decrease / [x] Unknown

.

.

.

[x] Mixohaline (brackish)/Mixosaline (0.5-30 g/l)

Changes at RIS update (Update)

[ ] No change / [ ] Increase / [ ] Decrease / [x] Unknown

.

.

.

[x] Euhaline/Eusaline (30-40 g/l)

Changes at RIS update (Update)

[ ] No change / [ ] Increase / [ ] Decrease / [x] Unknown

.

.

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[ ] Hyperhaline/Hypersaline (>40 g/l)

Changes at RIS update (Update)

[x] No change / [ ] Increase / [ ] Decrease / [ ] Unknown

.

.

.

[ ] Unknown

Please provide further information on salinity (optional): (This field is limited to 1000 characters)

|  |  |
| --- | --- |
|  | The estuarine areas around the False Mouths of the Ord, except following heavy local rainfall, are typically saline with salinities between 32 and 36 ppt (Kenyon et al. 2004). However, in the East Arm of the Ord Estuary, the constant freshwater inflows affect the seasonal patterns of salinity. During the dry season, salinity may be approximately 28–32 ppt, but during the wet season this can drop to < 4 ppt (Parslow et al. 2003; Kenyon et al. 2004). Further inland, water in the river is mostly fresh with salinities of < 4 ppt year round (Parslow et al. 2003). There are few data for Parry Lagoons, however, over two seasons salinity ranged from < 1 ppt during the wet season to 1–4 ppt during the dry season (Water and Rivers Commission 2003b). |

Dissolved gases in water (ECD)

|  |  |
| --- | --- |
|  | The system is well oxygenated with dissolved oxygen concentrations between 6 and 8 ppt and 90-110% saturation. |

4.4.8 Dissolved or suspended nutrients in water

[ ] Eutrophic

Changes at RIS update (Update)

[x] No change / [ ] Increase / [ ] Decrease / [ ] Unknown

.

.

.

[x] Mesotrophic

Changes at RIS update (Update)

[ ] No change / [ ] Increase / [ ] Decrease / [x] Unknown

.

.

.

[ ] Oligotrophic

Changes at RIS update (Update)

[x] No change / [ ] Increase / [ ] Decrease / [ ] Unknown

.

.

.

[ ] Dystrophic

Changes at RIS update (Update)

[x] No change / [ ] Increase / [ ] Decrease / [ ] Unknown

.

.

.

[ ] Unknown

Please provide further information on dissolved or suspended nutrients (optional): (This field is limited to 1000 characters)

|  |  |
| --- | --- |
|  | Total nitrogen concentrations ranged from < 300 g/L to > 2,000 g/L and total phosphorous concentrations from < 40 g/L to > 400 g/L. Nutrient concentrations were correlated with suspended sediment concentrations. Highest concentrations were recorded in the mid-estuary during the dry season, while concentrations in the upper estuary and the outer open estuary were typically lower. Highest nitrate-nitrite concentrations (> 200 g/L) occurred at the downstream open estuary section. Concentrations of nitrate-nitrite in the upper estuary were < 100 g/L and most often < 50 g/L. Phosphate concentrations were highest downstream (up to 40 g/L) and lowest in the upper estuary (15–20 g/L). Nutrient concentrations in Parry Lagoons are not known. Given that the water source is now predominantly from the Parry Creek Catchment, which does not have irrigated agriculture influences, it is possible that nutrient concentrations are lower than those in the Ord Estuary. |

Dissolved organic carbon (ECD)

|  |  |
| --- | --- |
|  | No information available. |

Redox potential of water and sediments (ECD)

|  |  |
| --- | --- |
|  | No information available. |

Water conductivity (ECD)

|  |  |
| --- | --- |
|  | No information available. |

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 / [x] ii) significantly different

.

If the surrounding area differs from the Ramsar Site, please indicate how: (Please tick all categories that apply)

[ ] Surrounding area has greater urbanisation or development

[ ] Surrounding area has higher human population density

[x] Surrounding area has more intensive agricultural use

[ ] Surrounding area has significantly different land cover or habitat types

Please describe other ways in which the surrounding area is different: (This field is limited to 2000 characters)

|  |  |
| --- | --- |
|  |  |

4.5 Ecosystem services

4.5.1 Ecosystem services/benefits

Please select below all relevant ecosystem services/benefits currently provided by the site and indicate their relative importance in the right-hand column.

Provisioning Services

|  |  |  |
| --- | --- | --- |
| **Ecosystem service** | **Examples** | **Importance/Extent/Significance** |
| Food for humans | Sustenance for humans (e.g., fish, molluscs, grains) | High |
|  |  |  |

Regulating Services

|  |  |  |
| --- | --- | --- |
| **Ecosystem service** | **Examples** | **Importance/Extent/Significance** |
|  |  |  |

Cultural Services

|  |  |  |
| --- | --- | --- |
| **Ecosystem service** | **Examples** | **Importance/Extent/Significance** |
| Recreation and tourism | Recreational hunting and fishing | Medium |
| Recreation and tourism | Picnics, outings, touring | Medium |
| Recreation and tourism | Nature observation and nature-based tourism | Medium |
| Spiritual and inspirational | Cultural heritage (historical and archaeological) | High |
| Spiritual and inspirational | Contemporary cultural significance, including for arts and creative inspiration, and including existence values | High |
| Spiritual and inspirational | Spiritual and religious values | High |
| Spiritual and inspirational | Aesthetic and sense of place values | High |
| Spiritual and inspirational | Inspiration | High |
| Scientific and educational | Educational activities and opportunities | Medium |
| Scientific and educational | Important knowledge systems, importance for research (scientific reference area or site) | High |
| Scientific and educational | Major scientific study site | 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 |
| Nutrient cycling | Storage, recycling, processing and acquisition of nutrients | Medium |
|  |  |  |

Optional text box to provide further information (This field is limited to 2500 characters)

|  |  |
| --- | --- |
|  |  |

Other ecosystem service(s) not included above: (This field is limited to 2000 characters)

|  |  |
| --- | --- |
|  | More information on ecosystem services:  Provisioning services  Wetland products: commercial fisheries for a number of species of fish, as well as prawns and crabs.    Regulating services  Erosion control: the mangroves of the estuary protect the coast from erosion.    Supporting services  Nutrient cycling: the Ord River Floodplain plays a role in nutrient cycling, but its significance beyond the site is not known.  Biodiversity: the system provides a wide range of biodiversity related ecological services critical for the ecological character of the site. |

Please make a rough estimate of the approximate number of people who directly benefit from the ecological services provided by this site (estimate at least in orders of magnitude: 10s, 100s, 1000s, 10 000s etc.):

Within the site:

|  |  |
| --- | --- |
|  |  |

Outside the site:

|  |  |
| --- | --- |
|  | 1,000s |

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site?

[ ] Yes / [x] No / [ ] Unknown

.

.

Where economic studies or assessments of economic valuation have been undertaken at the site, it would be helpful to provide information on where the results of such studies may be located (e.g. website links, citation of published literature): (This field is limited to 2500 characters)

|  |  |
| --- | --- |
|  |  |

4.5.2 Social and cultural values

Is the site considered internationally important for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? If so, please describe this importance under one or more of the four following categories. You should not list here any values derived from non-sustainable exploitation or which result in detrimental ecological changes.

[ ] 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 (This field is limited to 2500 characters)

|  |  |
| --- | --- |
|  |  |

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

Description if applicable (This field is limited to 2500 characters)

|  |  |
| --- | --- |
|  |  |

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

Description if applicable (This field is limited to 2500 characters)

|  |  |
| --- | --- |
|  |  |

[ ] 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 (This field is limited to 2500 characters)

|  |  |
| --- | --- |
|  | There are a significant number of Aboriginal sites within the Ramsar site including burial sites, artefact scatters, mythological sites, quarries, paintings, ceremonial sites and grinding/grooves (Department of Conservation and Land Management 1998). |

4.6 Ecological processes

This section is not intended for completion as part of a standard RIS, but is included for completeness as part of the agreed format of a ‘full’ Ecological Character Description (ECD) outlined by Resolution X.15

Primary production (ECD)

|  |  |
| --- | --- |
|  | The Ramsar site is driven by phytoplankton/microphytobenthos primary production. High phytoplankton productivity is linked to increased dissolved oxygen concentrations. |

Nutrient cycling (ECD)

|  |  |
| --- | --- |
|  | The site is a net exporter of nutrients to the ocean with exports higher in the wet season. Nutrient inflows from the catchment maintain productivity, however, high nutrient loads from agriculture may overload the capacity of the system to cycle nutrients |

Carbon cycling (ECD)

|  |  |
| --- | --- |
|  | Inundation of the floodplain during the wet season mobilises organic carbon from vegetated debris into a dissolved mineralised form. This provides an organic carbon source for the river and estuary and stimulates productivity. |

Animal reproductive productivity (ECD)

|  |  |
| --- | --- |
|  | A food web is provided in the ecological character description (Hale 2008). |

Vegetational productivity, pollination, regeneration processes, succession, role of fire, etc. (ECD)

|  |  |
| --- | --- |
|  | A food web is provided in the ecological character description (Hale 2008). |

Notable species interactions, including grazing, predation, competition, diseases and pathogens (ECD)

|  |  |
| --- | --- |
|  | Cane toads pose the greatest threat from an introduced species and can impact wildlife by poisoning, predation and competition. The 'Cane toad strategy for Western Australia 2014-2019' is being implemented. |

Notable aspects concerning animal and plant dispersal (ECD)

|  |  |
| --- | --- |
|  | Mangrove extent is approximately 26,000 ha. Distribution of other flora requires survey work. Distribution and population estimates of fauna requires survey work. |

Notable aspects concerning migration (ECD)

|  |  |
| --- | --- |
|  | Onset of the wet season triggers migration of fish and bird species, within and into the Ramsar site. Inundation of the floodplain and intertidal areas is critical to provide habitat and drive the high productivity required to support migratory species. |

Pressures and trends concerning any of the above, and/or concerning ecosystem integrity (ECD)

|  |  |
| --- | --- |
|  | Upstream agricultural activities have the potential to impact the hydrology and water quality of the site. |

How is the Site managed?

5.1 Land tenure and responsibilities (Managers)

5.1.1 Land tenure/ownership

Please specify if this category applies to the Ramsar Site, to the surrounding area or to both, by ticking the relevant option(s).

Public ownership

|  |  |  |
| --- | --- | --- |
| **Category** | **Within the Ramsar Site** | **In the surrounding area** |
| Provincial/region/state government | [x] | [x] |
|  |  |  |

Private ownership

|  |  |  |
| --- | --- | --- |
| **Category** | **Within the Ramsar Site** | **In the surrounding area** |
| Other types of private/individual owner(s) | [ ] | [x] |
|  |  |  |

Other

|  |  |  |
| --- | --- | --- |
| **Category** | **Within the Ramsar Site** | **In the surrounding area** |
|  |  |  |

Provide further information on the land tenure / ownership regime (optional): (This field is limited to 1000 characters)

|  |  |
| --- | --- |
|  | The majority of the land surrounding the Ramsar Site is Crown Land and a large area of that is leased and utilised for agriculture. |

5.1.2 Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: (This field is limited to 1000 characters)

|  |  |
| --- | --- |
|  | Department of Parks and Wildlife  Lot 248 Ivanhoe Road  Kununurra WA 6743. |

Provide the name and title of the person or people with responsibility for the wetland:

|  |  |
| --- | --- |
|  | District Manager, East Kimberley District. |

Postal address: (This field is limited to 1000 characters)

|  |  |
| --- | --- |
|  | PO Box 942  Kununurra WA 6743 |

E-mail address: (The online RIS only accepts valid e-mail addresses, e.g. example@mail.com )

|  |  |
| --- | --- |
|  | wetlands@dpaw.wa.gov.au |

5.2 Ecological character threats and responses (Management)

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

Please specify if this category applies to the Ramsar Site, to the surrounding area or to both, by ticking the relevant option(s).

Human settlements (non agricultural)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Factors adversely affecting site** | **Actual threat** | **Potential threat** | **Within the site** | **Changes** | **In the surrounding area** | **Changes** |
|  |  |  |  |  |  |  |

Water regulation

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Factors adversely affecting site** | **Actual threat** | **Potential threat** | **Within the site** | **Changes** | **In the surrounding area** | **Changes** |
| Canalisation and river regulation | High impact |  | [ ] | No change | [x] | 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 |  | [ ] | No change | [x] | unknown |
| Annual and perennial non-timber crops |  | Medium impact | [ ] | No change | [x] | unknown |
|  |  |  |  |  |  |  |

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 | [x] | increase | [ ] | No change |
|  |  |  |  |  |  |  |

Transportation and service corridors

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Factors adversely affecting site** | **Actual threat** | **Potential threat** | **Within the site** | **Changes** | **In the surrounding area** | **Changes** |
|  |  |  |  |  |  |  |

Biological resource use

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Factors adversely affecting site** | **Actual threat** | **Potential threat** | **Within the site** | **Changes** | **In the surrounding area** | **Changes** |
| Fishing and harvesting aquatic resources |  | Medium impact | [x] | unknown | [x] | unknown |
|  |  |  |  |  |  |  |

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 |  | Low impact | [x] | unknown | [ ] | No change |
|  |  |  |  |  |  |  |

Natural system modifications

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Factors adversely affecting site** | **Actual threat** | **Potential threat** | **Within the site** | **Changes** | **In the surrounding area** | **Changes** |
| Fire and fire suppression | Medium impact |  | [x] | unknown | [x] | unknown |
| Dams and water management/use | High impact |  | [ ] | unknown | [x] | unknown |
| Vegetation clearance/ land conversion |  | Medium impact | [ ] | unknown | [x] | unknown |
|  |  |  |  |  |  |  |

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 |  | [x] | increase | [x] | increase |
|  |  |  |  |  |  |  |

Pollution

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Factors adversely affecting site** | **Actual threat** | **Potential threat** | **Within the site** | **Changes** | **In the surrounding area** | **Changes** |
| Agricultural and forestry effluents |  | High impact | [ ] | No change | [x] | unknown |
|  |  |  |  |  |  |  |

Geological events

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Factors adversely affecting site** | **Actual threat** | **Potential threat** | **Within the site** | **Changes** | **In the surrounding area** | **Changes** |
|  |  |  |  |  |  |  |

Climate change and severe weather

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Factors adversely affecting site** | **Actual threat** | **Potential threat** | **Within the site** | **Changes** | **In the surrounding area** | **Changes** |
| Unspecified |  | High impact | [x] | unknown | [x] | unknown |
|  |  |  |  |  |  |  |

Please describe any other threats (optional): (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  | More information on threats:  The threat level from the factors relating to water regulation may increase due to future development of the Ord Stage 2 proposal.    High levels of agrichemicals (pesticides) have been linked to fish kills and there is evidence of bioaccumulation of DDT in Barramundi and Freshwater Crocodiles (Morrissey 2000; Yoshikane et al. 2006).    Dams upstream in the Ord River (Lakes Argyle and Kununurra Ramsar site) have reduced the inflows to the Ord River Floodplain Ramsar Site (Trayler et al. 2006). These dams maintain a supply of water for irrigation and hydroelectric power. |

5.2.2 Legal conservation status

Please list any other relevant conservation status, at global, regional or national level and specify the boundary relationships with the Ramsar Site:

Global legal designations

|  |  |  |  |
| --- | --- | --- | --- |
| **Designation type** | **Name of area** | **Online information url** | **Overlap with Ramsar Site** |
|  |  |  |  |

Regional (international) legal designations

|  |  |  |  |
| --- | --- | --- | --- |
| **Designation type** | **Name of area** | **Online information url** | **Overlap with Ramsar Site** |
|  |  |  |  |

National legal designations

|  |  |  |  |
| --- | --- | --- | --- |
| **Designation type** | **Name of area** | **Online information url** | **Overlap with Ramsar Site** |
| State Protected Area (WA) | Ord River and Parry Lagoons Nature Reserves |  | partly |
|  |  |  |  |

Non-statutory designations

|  |  |  |  |
| --- | --- | --- | --- |
| **Designation type** | **Name of area** | **Online information url** | **Overlap with Ramsar Site** |
|  |  |  |  |

5.2.3 IUCN protected areas categories (2008)

[x] 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** |
|  |  |

Species

|  |  |
| --- | --- |
| **Measures** | **Status** |
| Control of invasive alien plants | Implemented |
| Control of invasive alien animals | Implemented |
|  |  |

Human Activities

|  |  |
| --- | --- |
| **Measures** | **Status** |
| Management of water abstraction/takes | Implemented |
| Livestock management/exclusion (excluding fisheries) | Partially implemented |
| Fisheries management/regulation | Implemented |
| Communication, education, and participation and awareness activities | Implemented |
| Research | Partially implemented |
| Regulation/management of recreational activities | Implemented |
|  |  |

Other: (This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  |  |

5.2.5 Management planning

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

|  |  |
| --- | --- |
|  | Yes[[6]](#footnote-6) |

Is the management plan/planning implemented?

[x] Yes / [ ] No

.

The management plan covers

|  |  |
| --- | --- |
|  | All of Ramsar Site[[7]](#footnote-7) |

Is the management plan currently subject to review and update?

[ ] Yes / [x] No

.

Has a management effectiveness assessment been undertaken for the site?

[ ] Yes / [x] No

.

Please give link to site-specific plan or other relevant management plan if this is available via the Internet or upload it in section 'Additional material': (This field is limited to 500 characters)

|  |  |
| --- | --- |
|  | Ord River and Parry Lagoons nature reserves management plan 77 2012 (Department of Environment and Conservation 2012)  http://www.dpaw.wa.gov.au/images/documents/parks/management-plans/decarchive/ord-river-and-parry-lagoons-nature-reserves-management-plan-2012\_webversion.pdf |

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 / [x] No

.

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site: (This field is limited to 1000 characters)

|  |  |
| --- | --- |
|  | Walkways and bird viewing platforms have been constructed at Marglu Billabong within Parry Lagoons. Interpretive signs about the site were installed during 1998-99. |

URL of site-related webpage (if relevant):

|  |  |
| --- | --- |
|  | http://www.environment.gov.au/cgi-bin/wetlands/ramsardetails.pl?refcode=31 |

5.2.6 Planning for restoration

Is there a site-specific restoration plan?

|  |  |
| --- | --- |
|  | No need identified[[8]](#footnote-8) |

Has the plan been implemented?

[ ] Yes / [x] No

.

The restoration plan covers:

|  |  |
| --- | --- |
|  | No need identified[[9]](#footnote-9) |

Is the plan currently being reviewed and updated?

[ ] Yes / [x] No

.

Where the restoration is being undertaken to mitigate or respond to a threat or threats identified in this RIS, please indicate it / them: (This field is limited to 1000 characters)

|  |  |
| --- | --- |
|  |  |

Further information (This field is limited to 2500 characters)

|  |  |
| --- | --- |
|  |  |

5.2.7 Monitoring implemented or proposed

|  |  |
| --- | --- |
| **Monitoring** | **Status** |
|  |  |

Please indicate other monitoring activities:

(This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  | The Department of Water has an extensive monitoring network within and upstream of the catchment area. Surface and groundwater are monitored along with some rainfall gauging stations. The department has a Water Information Reporting tool available on its website that includes measurement information and data for numerous locations within the Ramsar Site.  Link to Water Information Reporting tool http://wir.water.wa.gov.au/SitePages/SiteExplorer.aspx |

Additional material

6.1 Additional reports and documents

6.1.1 Bibliographical references

(This field is limited to 3000 characters)

|  |  |
| --- | --- |
|  | Due to space limitations the Reference list is included as an attachment under 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)

-UPLOAD via online form-

ii. a detailed Ecological Character Description (ECD) (in a national format)

-UPLOAD via online form-

iii. a description of the site in a national or regional wetland inventory

-UPLOAD via online form-

iv. relevant Article 3.2 reports

-UPLOAD via online form-

v. site management plan

-UPLOAD via online form-

vi. other published literature

-UPLOAD via online form-

Please note that any documents uploaded here will be made publicly available.

6.1.3 Photograph(s) of the Site

Please provide at least one photograph of the site:

|  |  |  |  |
| --- | --- | --- | --- |
| **File** | **Copyright holder** | **Date on which the picture was taken** | **Caption** |
| files/29303747/pictures/ParryLagoons\_GlenDaniel\_2008.jpg | Glen Daniel | 2008 | Parry Lagoons |
| files/29303747/pictures/McAulay M 2009 Ord River Floodplain.jpg | Michelle McAulay | 2009 | Ord River Floodplain |
| files/29303747/pictures/Brennan K 1996 False Mouths of the Ord.jpg | Kim Brennan | 2009 | False Mouths of the Ord |
|  |  |  |  |

[x] I certify that I am the photographer, the valid holder of rights over the photograph(s), or an authorized representative of the organization which is the valid holder of rights over the photograph(s), and I hereby assign an irrevocable, perpetual and royalty-free right to use, reproduce, edit, display, transmit, prepare derivative works of, modify, publish, affix logos to, and otherwise make use of the submitted photograph(s) in any way, to the Ramsar Convention Secretariat, its affiliates and partners, for non-commercial purposes in conjunction with the mission of the Ramsar Convention. This use includes, but is not limited to, internal and external publication and materials, presentation on the websites of the Ramsar Convention or any affiliated body, and any and all other communication channels with copyright attributed to the holder in all published forms. The full accuracy of all data submitted rests with the submitter, or organization submitting the photograph(s). In submitting, I hereby agree to the aforementioned terms, personally or on behalf of the organization of which I am an authorized official, certifying that the Ramsar Convention Secretariat, its affiliates and partners are explicitly held harmless for any and all costs, expenses, or damages arising from use of the submitted photograph(s) and any additional information provided.

6.1.4 Designation letter and related data

Designation letter\*

-UPLOAD via online form-

Please upload a letter of designation from the Ramsar Administrative Authority. This letter must clearly state that the wetland is being designated for inclusion in the Ramsar List and specify the formal date of designation wished. The letter can be uploaded in two formats: Word document (doc); pdf Strategic Framework: 408. The RIS for a newly designated Site (or an update to the RIS for a previously designated site) must be officially transmitted to the Secretariat by the Ramsar Administrative Authority (AA) of the Contracting Party concerned, with a letter clearly stating that the wetland is being designated for inclusion in the Ramsar List and specifying the formal date of designation if wished. 413. The date of designation of a Ramsar Site is that indicated or requested by the Ramsar Administrative Authority (AA). The designation date required should be indicated in the designation letter from the AA to the Secretariat that accompanies the RIS. 414. If no designation date is indicated to the Secretariat, the Secretariat assigns the date of the designation letter from the Administrative Authority as the designation date of the site. 415. If, following the receipt and review of the RIS by the Secretariat (see below), a significant time-period elapses before any problems with the RIS content are resolved with the Administrative Authority, the Secretariat may propose that, with the agreement of the AA, the date of designation is that on which the RIS is finalised.

Transboundary Designation letter

-UPLOAD via online form-

Date of Designation

|  |  |
| --- | --- |
|  | 1990-06-07 |

Number of certificates wished (The online RIS only accepts numeric values)

|  |  |
| --- | --- |
|  | 0 |

1. No change to area | the area has increased | the area has decreased [↑](#footnote-ref-1)
2. Not evaluated | No | Uncertain | Yes -likely- | Yes -actual- [↑](#footnote-ref-2)
3. [↑](#footnote-ref-3)
4. Percentage of the total biogeographic population at the site. These fields are only compulsory to justify criteria 6 & 9 [↑](#footnote-ref-4)
5. [↑](#footnote-ref-5)
6. No | Yes | In preparation [↑](#footnote-ref-6)
7. All of Ramsar Site | Part of Ramsar Site [↑](#footnote-ref-7)
8. No need identified | No; the site has already been restored | No; but restoration is needed | No; but a plan is being prepared | Yes; there is a plan [↑](#footnote-ref-8)
9. All of Ramsar Site | Part of Ramsar Site [↑](#footnote-ref-9)