



Ramsar Information Sheet

Published on 9 August 2018

Update version, previously published on : 1 March 1996

Australia

Shoalwater and Corio Bays Area



Designation date	1 March 1996
Site number	792
Coordinates	22°33'56"S 150°29'41"E
Area	202 023,00 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

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)

Shoalwater and Corio Bays Area Ramsar Site includes approximately 330 km of coastline (including islands) along the central coast of Queensland, Australia. The southern boundary, at Corio Bay, and northern boundary, at Broome Head, are approximately 50 km and 125 km north of Rockhampton, respectively.

The site is part of the largest ‘wilderness’ area within the Central Queensland Coast Biogeographic Region. It represents a climatic overlap of tropical, sub-tropical and temperate species and supports diverse, extensive and relatively undisturbed wetland systems including subtidal beds, shallow marine waters, coral reefs, intertidal marshes and forests, peatlands, freshwater marshes and pools, sinkholes and springs.

The site contains over 13,000 ha of seagrass beds that are considered to be some of the most extensive on Australia’s east coast. These beds provide important feeding grounds for dugongs and green turtles and habitat for fisheries species. Diverse and abundant mangrove communities provide habitat for many species, including nursery areas for fish and roosting and sheltering sites for shorebirds. Extensive freshwater peat swamps in the site are rare within the bioregion and elsewhere in Australia.

The site is biodiverse, housing approximately 908 native plants and native animals comprising 445 fish, 11 frogs, 60 reptiles, 265 birds, and 42 mammals. Globally threatened marine species include the green (Chelonia mydas), hawksbill (Eretmochelys imbricate), flatback (Natator depressus), loggerhead (Caretta caretta) turtles and dugong (Dugong dugong). It is of international importance to listed migratory bird species and regularly supports more than 20,000 waterbirds; many listed under the Japan-Australia Migratory Bird Agreement (JAMBA), China-Australia Migratory Bird Agreement (CAMBA) and/or Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA). Shoalwater Bay is also listed as a Network Site under the East Asian-Australasian Flyway Partnership (Site code EAAF094).

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Mr Mike Ronan
Institution/agency	Queensland Department of Environment and Heritage Protection
Postal address (This field is limited to 254 characters)	GPO Box 2454, Brisbane Queensland 4001, Australia
E-mail	info@ehp.qld.gov.au
Phone	+61 7 33305917
Fax	

Compiler 2

Name	
Institution/agency	
Postal address (This field is limited to 254 characters)	
E-mail	
Phone	
Fax	

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

From year	1996
To year	2017

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Shoalwater and Corio Bays Area
Unofficial name (optional)	

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 <input type="radio"/> No <input checked="" type="radio"/>
(Update) The boundary has been delineated more accurately	<input type="checkbox"/>
(Update) The boundary has been extended	<input type="checkbox"/>
(Update) The boundary has been restricted	<input type="checkbox"/>
(Update) B. Changes to Site area	the area has decreased
(Update) The Site area has been calculated more accurately	<input checked="" type="checkbox"/>
(Update) The Site has been delineated more accurately	<input type="checkbox"/>
(Update) The Site area has increased because of a boundary extension	<input type="checkbox"/>
(Update) The Site area has decreased because of a boundary restriction	<input type="checkbox"/>

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

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?	No
(Update) Are the changes	Positive <input type="radio"/> Negative <input type="radio"/> Positive & Negative <input checked="" type="radio"/>

What extent of the Ramsar site is affected (%)

(Update) Positive %	<input type="text"/>
(Update) Negative %	<input type="text"/>
(Update) No information available	<input type="checkbox"/>

(Update) Optional text box to provide further information

(This field is limited to 2000 characters)

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

(Update) Changes resulting from causes operating within the existing boundaries?	<input type="checkbox"/>
(Update) Changes resulting from causes operating beyond the site's boundaries?	<input type="checkbox"/>
(Update) Changes consequent upon site boundary reduction alone (e.g., the exclusion of some wetland types formerly included within the site)?	<input type="checkbox"/>
(Update) Changes consequent upon site boundary increase alone (e.g., the inclusion of different wetland types in the site)?	<input type="checkbox"/>

(Update) 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.

(This field is limited to characters)

(Update) Is the change in ecological character negative, human-induced AND a significant change (above the limit of acceptable change)	Yes <input type="radio"/> No <input checked="" type="radio"/>
--	---

(Update) Has an Article 3.2 report been submitted to the Secretariat?	Yes <input type="radio"/> No <input checked="" type="radio"/>
---	---

2.2 - Site location

2.2.1 - Defining the Site boundaries

a) GIS boundaries [link](#)

Materials presented on this website, particularly maps and territorial information, are as-is and as-available based on available data and do not imply the expression of any opinion whatsoever on the part of the Secretariat of the Ramsar Convention concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

b) Digital map/image

 [AU792_map171117_Overview_map.pdf](#)

 [AU792_map171117_Wetland_detail.png](#)

 [AU792_map171117_Protected_areas.pdf](#)

Former maps

<no file available>

Boundaries description

(This field is limited to 2500 characters)

The Shoalwater and Corio Bays Area Ramsar Site encompasses three separate sections – Broome Head, Shoalwater Bay and Corio Bay.

The Broome Head section is the most north western area of the site. It includes tidal lands and an adjacent marine area from the southern side of Broome Head to the highest astronomical tide (HAT).

The Shoalwater Bay section of the site includes the Shoalwater Bay Training Area (military training) (SWBTA) from near West Bight, in the northwest, to Five Rocks Beach, along the south eastern coastline. It encompasses estuarine waters and associated intertidal habitats to HAT in the SWBTA. The Shoalwater Bay section extends seaward to the marine boundaries of the SWBTA including Akens Island, Triangular Islands and Skull Island. This section also extends inland from the coast at Cape Manifold to include most of the Dismal Sector of the SWBTA.

The Corio Bay and an adjacent marine area include part of Byfield National Park, along Sandy Point Spit, and Water Park Creek to about 10 km from its connection with the bay. It does not include Water Park Point or the open beach areas of Little Corio Bay.

The boundary of the Broome Head section of the site commences at: (see Additional material section for more detail).

Coordinates of the centre of the site, as automatically estimated from the GIS boundaries (for information only)

2.2.2 - General location

- a) In which large administrative region does the site lie?
- b) What is the nearest town or population centre?

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 ☒
- c) Is the site part of a formal transboundary designation with another Contracting Party? Yes ☐ 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):

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

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
Marine Ecoregions of the World (MEOW)	Central Indo-Pacific; Northeast Australian Shelf (33); Central and Southern Great Barrier Reef (143)
Udvardy's Biogeographical Provinces	6.1.1, Australian Realm, Queensland Coastal (Udvardy, 1975)
Bailey's Ecoregions	Province - Seasonally Humid Mixed (Evergreen and Deciduous) Forests (89) (Bailey)
WWF Terrestrial Ecoregions	Tropical and Subtropical Grasslands, Savannah and Shrublands – Brigalow Tropical Savannah (terrestrial); Tropical and Subtropical Moist Broadleaf Forest – Queensland Tropical Rainforests (terrestrial) (WWF)

Other biogeographic regionalisation scheme

(This field is limited to 2500 characters)

Eastern Coastal Australia (807) (FEOW)

Interim Biogeographic Regionalisation for Australia version 7 (IBRA7) (Commonwealth of Australia. 2012) - Terrestrial:

- Australian Drainage Division – North East Coast Drainage Division.
 - Brigalow Belt North and Central Queensland Coast Biogeographic Regions.
- <http://www.environment.gov.au/land/nrs/science/ibra>

Interim Marine and Coastal Regionalisation for Australia (IMCRA version 4, June 2006) – Tropical Waters:

- Provincial-scale bioregion – Northeast.
 - Meso-scale marine bioregion – Shoalwater Coast.
- <http://www.environment.gov.au/resource/guide-integrated-marine-and-coastal-regionalisation-australia-version-40-june-2006-imcra>

Australian Hydrological Geospatial Fabric – Topographic Drainage Divisions and River Regions (Commonwealth of Australia. Bureau of Meteorology. 2012):

- Water Park Creek.
 - Shoalwater Creek.
- <http://www.bom.gov.au/water/about/riverBasinAuxNav.shtml>

3 - 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?'. More guidance on how to justify a criterion will appear when you tick it as well as in the help box.

☒ 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.

<p>Hydrological services provided (This field is limited to 3000 characters)</p>	<p>The Ramsar Site is a significant regional asset in terms of water supply to the Capricorn Coast and will provide a reserve for freshwater in the future.</p>
<p>Other ecosystem services provided (This field is limited to 3000 characters)</p>	<p>The Ramsar Site supports a range of ecosystem services driven by interacting climate, geomorphologic and hydrodynamic processes. These ecosystem services include benefits to people such as:</p> <ul style="list-style-type: none"> • providing nursery habitat of critical importance to regional commercial and recreational fisheries • supporting a range of pristine/near natural wetland environments important for scientific research and assessing the future impacts of climate change • being a part of a broader 'wilderness area' – there is a strong community attitude toward supporting this value.
<p>Other reasons (This field is limited to 3000 characters)</p>	<p>The Ramsar Site contains 22 marine, estuarine and freshwater Ramsar wetland types that are representative of the North East Coast Drainage Division (from IMBRA 7) of Australia. These include estuarine waters, subtidal beds, shallow marine waters, intertidal marshes and forests, forested and non-forested peatlands, and shrub dominated wetlands. Many of these wetland types are spatially extensive in Shoalwater and Corio Bays Area and form complex assemblages. These wetland types are also unusually good examples within the Drainage Division because of their near-natural state and the relatively undisturbed nature of the catchments flowing through the Ramsar Site.</p> <p>The freshwater peat swamps within the Ramsar Site are rare in the Drainage Division. Major examples of this type of sedge-heath wetland (or 'fens') occur in Dismal Swamp, near Freshwater Beach and in parts of the Clinton Lowlands. Peat-based wetlands are extremely rare in the bioregion, and Australia, and mainly occur in relatively small areas of the coastal sand mass.</p> <p>The Ramsar Site is widely regarded to have 'wilderness' qualities of remoteness and naturalness (Lesslie and Maslen 1995; www.environment.gov.au/node/20141) - the North East Coast Drainage Division of Queensland, south of the Cape York Peninsula otherwise includes coastline that is urbanised or somewhat modified.</p>

☒ Criterion 2 : Rare species and threatened ecological communities

Justification, see: - 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)

The Shoalwater and Corio Bays Area Ramsar Site supports a high diversity of nationally and internationally threatened flora and fauna species and ecological communities. At least three EPBC listed plant species have been recorded including the endangered lesser swamp orchid (*Phaius australis*), which exists in isolated population in central eastern Queensland and the vulnerable Byfield matchstick (*Comesperma oblongatum*), which is endemic to coastal central Queensland.

The site supports a range of threatened marine megafauna, including the largest feeding population of green turtle (*Chelonia mydas*) on the east coast of Australia, and the largest habitat for dugong (*Dugong dugon*) in the Mackay/ Capricorn Management Area of the Great Barrier Reef Marine Park. In addition it supports EPBC listed loggerhead (*Caretta caretta*), flatback (*Natator depressus*) and hawksbill turtles (*Eretmochelys imbricata*) as well as internationally significant indo-pacific humpback dolphin (*Sousa chinensis*) and Australian snubfin dolphin (*Orcaella heinsohni*).

The site provides critical habitat for the highly restricted, nationally vulnerable and globally endangered freshwater fish species, honey blue-eye (*Pseudomugil mellis*) and nationally and globally vulnerable water mouse (*Xeromys myoides*). Most notably, the Shoalwater and Corio Bays Area Ramsar Site is known for its high abundance and diversity of waterbirds. Of particular significance are the globally endangered great knot (*Calidris tenuirostris*) and eastern curlew (*Numenius madagascariensis*) and nationally endangered curlew sandpiper (*Calidris ferruginea*).

☒ **Criterion 3 : Biological diversity**

Justification, see: - 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 site supports at least 445 fish species, of which 428 are marine and estuarine, and 17 are freshwater (Trnski et al., 1993). The freshwater assemblage represents approximately 35% of the total number of freshwater species in the Northeast Coastal Drainage area (Pusey et al., 2004). The site further supports 22 frog species (Nix, 1972; Habitat, 1974; Schodde et al., 1992; Catling et al., 1994 and DoD, 2009 in BMT WBM, 2010), 60 reptile species, 42 mammal species (including approximately 20 bat species) and 265 bird species.

At least 77 waterbird species have been recorded at the site, including substantial numbers of migratory shorebirds (26 species). This includes breeding by notably species including the resident Australian pied oystercatcher (*Haematopus longirostris*) and beach stone-curlew (*Esacus magnirostris*), and raptors such as the eastern osprey (*Pandion cristatus*). The site also supports the the entire life cycles of a range of frog species, as well as the EPBC listed freshwater fish species honey blue-eye (*Pseudomugil mellis*).

Eight species of seagrass and thirteen species of mangrove are also known to occur within the site, representing 53% and 37% of the species known to occur in Queensland, respectively (Lee Long et al., 1997; Coles et al., 2004; DoD, 2009; Lovelock, 1999). These communities provide important habitat and nursery grounds for not only fish species but important megafauna species such as dugong (*Dugong dugon*).

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

Justification, see: - 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)

The Ramsar Site supports habitats, and other ecological components and processes, which are important at critical stages in the life cycles of numerous wetland-dependent species. In particular, it provides critical feeding and roosting for at least 77 species of waterbird, 26 of which are listed under JAMBA, CAMBA and RoKAMBA migratory agreements and contribute to the site's listing as a Flyway Network site (EAAF094) under the East Asian-Australasian Flyway Partnership. It also supports breeding of the resident pied oystercatcher (*Haematopus longirostris*) and beach stone-curlew (*Esacus magnirostris*).

Akens Island (and other shorelines) within the Ramsar Site provides important nesting habitat for flatback turtle (*Natator depressus*) and the largest Australian pelican (*Pelecanus conspicillatus*) rookery found within the Great Barrier Reef Marine Park. Freshwater wetlands of the site further support the entire life cycle of honey blue-eye (*Pseudomugil mellis*) and eleven frog species.

☒ **Criterion 5 : >20,000 waterbirds**

Justification, see:- 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 >20,000 regularly

Start year 1995

End year 2016

Source of data: AECOM, 2016; Kingsford & Porter (unpubl. data); Jaensch, 2008a; Driscoll, 1996.

Optional text box to provide further information

(This field is limited to 3000 characters)

The Shoalwater and Corio Bays Area Ramsar Site supports an abundance of waterbirds, with counts in excess of 23,000 individuals recorded on several occasions. The site is listed under the East Asian-Australasian Flyway Site Network with Shoalwater Bay also listed as an Important Bird Area by BirdLife International.

Due to the remoteness of the site and its location within a military training area, limited surveys have been conducted at the site:

- 1995 – an estimated 24,193 waterbirds (23,440 of which were migrants) were recorded along the Shoalwater Bay Training Area coastal zone in December 1995 (Driscoll, 1996)
- 2007 – using an extrapolation method, shorebird numbers were estimated at 21,000-32,000 in January 2007, 12,000-23,000 in March-April 2007, and 16,000-22,000 in September 2007 (Jaensch, 2008a).
- 2008 – 8,182 waterbirds estimated during a series of site based surveys conducted as part of the 2008 National Waterbird Survey (Kingsford, R.T., and J.L., Porter unpubl. data).
- 2016 – an estimated 21,232 and 14,655 waterbirds were counted at the Shoalwater Bay Training Area, during February 2016 and April 2016, respectively (AECOM, 2016).

☒ **Criterion 6 : >1% waterbird population**

Justification, see: Criteria & justification> Animal species (3.3)

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

Using 1% population thresholds developed by Hansen et al., 2016, and limited population counts undertaken by O'Neill & Driscoll 1995, Jaensch, 2008 and AECOM, 2016, the Ramsar Site provides habitat to >1% of the estimated population of the following six species of migratory shorebirds:

- Grey-tailed tattler (*Heteroscelus brevipes*)
- Eastern curlew (*Numenius madagascariensis*)
- Whimbrel (*Numenius phaeopus*)
- Terek sandpiper (*Xenus cinereus*)
- Australian pied oystercatcher (*Haematopus longirostris*)
- Bar-tailed godwit (*Limosa lapponica*)¹

Under the previous Wetlands International Waterbird Population Estimates the site regularly supported >1% of the population of bar-tailed godwit (*Limosa lapponica*). However, under the revised Hansen et al., 2016 estimates, this threshold had only been met two out of the five surveys undertaken between 1995-2016.

☒ **Criterion 7 : Significant and representative fish**

Justification, see: Criteria & justification > Animal species (3.3)

Justification
(This field is limited to 3000 characters)

The Ramsar Site supports the nationally vulnerable honey blue-eye (*Pseudomugil mellis*), a small freshwater fish species typically found in acidic, freshwater lakes, pools and small streams with coastal lowland wallum ecosystems. It is endemic to Queensland, with a restricted range extending from Brisbane to Bundaberg (Arthington et al., 1994). The Shoalwater and Corio Bays Area Ramsar Site is one of only a handful of sites that support the species.

☒ **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.

The waters of the SWBTA support 428 marine and estuarine fish species (Trnski et al. 1993). This represents 12% of Australia's marine fish fauna, and approximately 22% of Australia's northeastern tropics marine fish fauna. Seventeen freshwater fish species were recorded within the boundaries of SWBTA. An additional 8 species were recorded in adjoining streams and it is likely they also occur in SWBTA.

Pusey et al (2004) suggest up to 37 freshwater fish species occur in the catchments of Shoalwater Creek and Water Park Creek, however this does not include honey blue-eye found by Trnski et al (1993). The overall number of freshwater fish species within SWBTA is approximately 35% of the total North East Coast Drainage Division fish fauna (Pusey et al 2004). Significantly, no invasive pest species were sampled, making the Shoalwater Bay region nationally significant.

Fish species recorded for the Corio Bay Fish Habitat Area (FHA-067) include: barramundi (Lates calcarifer); blue threadfin salmon (Eleutheronema tetradactylum); bream (Acanthopagrus spp.); estuary cod/rockcod (Epinephelus spp.); flathead (Platycephalus spp.); grunter; grey mackerel (Scomberomorus semifasciatus); jewfish; mangrove jack (Lutjanus argentimaculatus); queenfish (Scomberoides spp.); sea mullet (Mugil cephalus); school mackerel (Scomberomorus queenslandicus); whiting (Sillago spp.); banana prawns (Penaeus merguensis); anguillid eels (Anguilla spp.).

Justification

(This field is limited to 3000 characters)

Fish assemblages at the site comprise species with different life-history features, including potadromous (entirely freshwater) species, catadromous (requiring marine and freshwaters to complete life-cycle), and fully marine species. The site also supports a wide variety of life-history stages (i.e. eggs, larvae, recruitment sites, spawning sites).

The seagrass is critical nursery and feeding habitats for species that contribute to locally and regionally important fish stocks and fisheries. These include commercial prawn trawl and fin-fish gill-net fisheries, as well as fin-fish fisheries of recreational and tourism value. Seagrass-associated baitfish contributes to the health of target-species valued by commercial and recreational fisheries (Lee Long et al 1997).

Extensive mangroves and saltmarsh at both the Corio Bay and Shoalwater Bay sections of the Ramsar Site are utilised by juvenile stages of a variety of fish, prawns and crab species. Corio Bay is particularly important as a nursery for recreational fisheries (Walker 1997). Rocky reefs present at SWBTA also support fish diversity and provide nursery habitat.

The complexity of habitats created by the tropical and subtropical climatic overlap zone in the area has contributed to the occurrence of four fish species exhibiting their northern- most range distribution: ornate rainbowfish (Radinocentrus ornatus), firetail gudgeon (Hypseleotris galii), short-headed lamprey (Mordacia mordax) and honey blue-eye (Pseudomugil mellis) (Moore & Marsden 2011).




☐ 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	CITES Appendix I	Other status	Justification
<i>Comesperma oblongatum</i> 	Byfield matchstick	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Environment Protection and Biodiversity Conservation Act 1999 – VU Nature Conservation Act 1992 – VU	Byfield matchstick is endemic to coastal central Queensland and has been recorded from a relatively low number of collections including within Byfield National Park and the SWBTA
<i>Phaius australis</i> 	lesser swamp orchid	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Environment Protection and Biodiversity Conservation Act 1999 – EN Nature Conservation Act 1992 – EN	There is a large discontinuity in this species' range in central eastern Queensland, between the Fraser Island populations and an isolated population at Byfield National Park.
<i>Quassia bidwillii</i> 	quassia	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Environment Protection and Biodiversity Conservation Act 1999 – VU Nature Conservation Act 1992 – VU	Quassia is endemic to Queensland.



























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





(This field is limited to 3000 characters)

The precise number of wetland plant species within the Ramsar Site is not known. The Queensland State Government WildNet database records 909 species of native plants (<http://www.qld.gov.au/environment/plants-animals/species-list/>, 09/09/2015), Melzer et al. (1993) recorded 791 plant species within the SWBTA and Brushe (2002) recorded 1341 plant species and subspecies within the SWBTA.

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	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								
Birds																		
CHORDATA/ AVES	<i>Calidris ferruginea</i> 	curlew Sandpiper	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	Environment Protection and Biodiversity Conservation Act 1999 – CE, Marine, Migratory; Bonn, CAMBA, JAMBA, ROKAMBA Nature Conservation Act 1992 - EN	Wildnet report of presence in site.
CHORDATA/ AVES	<i>Calidris tenuirostris</i> 	great knot	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				EN 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Environment Protection and Biodiversity Conservation Act 1999 – CE, Marine, Migratory; Bonn, CAMBA, JAMBA, ROKAMBA Nature Conservation Act 1992 – EN	Feeding and roosting habitat.
CHORDATA/ AVES	<i>Esacus magnirostris</i> 	beach stone-curlew	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	Environment Protection and Biodiversity Conservation Act 1999 – Marine Nature Conservation Act 1992 – LC	Breeding habitat for resident population.
CHORDATA/ AVES	<i>Haematopus longirostris</i> 	Australian pied oystercatcher	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	286	1995-2016	2.6	LC 	<input type="checkbox"/>	<input type="checkbox"/>	Nature Conservation Act 1992- LC	Breeding habitat for resident population. Population size is a mean based on multiple surveys between 1995-2016. As species is not a migratory shorebird, there is no Hansen et al., 2016 population estimate for the species. Instead the Waterbird Population Estimates (WPE) has been used to determine the 1% threshold for this species.
CHORDATA/ AVES	<i>Limosa lapponica baueri</i> 	bar-tailed godwit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2806	1995-2016	0.86	NT 	<input type="checkbox"/>	<input type="checkbox"/>	Environment Protection and Nature Conservation Act 1992 – LC Environmental Protection and Biodiversity Conservation Act 1999 –VU, Marine, Migratory- Bonn, CAMBA, JAMBA, ROKAMBA Nature Conservation Act 1992 – VU	Feeding and roosting habitat. Population size is a mean based on multiple surveys between 1995-2016.

Phylum	Scientific name	Common 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	<i>Numenius madagascariensis</i> 	eastern Curlew; Far Eastern Curlew	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1114	1995-2016	3.18	EN 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Environmental Protection and Biodiversity Conservation Act 1999 – CE, Marine, Migratory- Bonn, CAMBA, JAMBA, ROKAMBA Nature Conservation Act 1992 – EN	Feeding and roosting habitat. Population size is a mean based on multiple surveys between 1995-2016.
CHORDATA/AVES	<i>Numenius phaeopus variegatus</i> 	whimbrel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2598	1995-2016	7.42	LC 	<input type="checkbox"/>	<input type="checkbox"/>	Environmental Protection and Biodiversity Conservation Act 1999- Marine, Migratory- Bonn, CAMBA, JAMBA, ROKAMBA Nature Conservation Act 1992 – SL	Feeding and roosting habitat. Population size is a mean based on multiple surveys between 1995-2016.
CHORDATA/AVES	<i>Pandion cristatus</i> 	Eastern Osprey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	Environmental Protection and Biodiversity Conservation Act 1999 - Migratory - Bonn	Reported in the marine waters of the site.
CHORDATA/AVES	<i>Pelecanus conspicillatus</i> 	Australian Pelican	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	Environment Protection and Biodiversity Conservation Act 1999 - Marine Nature Conservation Act 1992 – LC	Largest breeding colony on Akens Island and Pelican Rock in Great Barrier Reef Marine Park.
CHORDATA/AVES	<i>Tringa brevipes</i> 	gray-tailed Tattler; Grey-tailed Tattler	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2130	1995-2016	3.04	NT 	<input type="checkbox"/>	<input type="checkbox"/>	Environmental Protection and Biodiversity Conservation Act 1999- Marine, Migratory- Bonn, CAMBA, JAMBA, ROKAMBA Nature Conservation Act 1992 – SL	Feeding and roosting habitat. Population size is a mean based on multiple surveys between 1995-2016.
CHORDATA/AVES	<i>Tringa incana</i> 	wandering Tattler	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	Environment Protection and Biodiversity Conservation Act 1999 – Marine, Migratory, Bonn, JAMBA	Feeding and roosting habitat.
CHORDATA/AVES	<i>Xenus cinereus</i> 	terek Sandpiper	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	420	1995-2016	2.84	LC 	<input type="checkbox"/>	<input type="checkbox"/>	Environment Protection and Biodiversity Conservation Act 1999 – Marine, Migratory, Bonn, CAMBA, JAMBA, ROKAMBA Nature Conservation Act 1992 – SL	Feeding and roosting habitat. Population size is a mean based on multiple surveys between 1995-2016.
Fish, Mollusc and Crustacea																		
CHORDATA/ACTINOPTERYGII	<i>Pseudomugil melis</i> 	honey blue-eye; honey blue-eye; Honey Rainbow Fish	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				EN 	<input type="checkbox"/>	<input type="checkbox"/>	Environment Protection and Biodiversity Conservation Act 1999 – VU Nature Conservation Act 1992 – VU	Site provides freshwater habitat that is essential to the life cycle of the honey blue-eye freshwater fish
Others																		
CHORDATA/REPTILIA	<i>Caretta caretta</i> 	loggerhead turtle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Environmental Protection and Biodiversity Conservation Act 1999 – EN, Marine, Migratory- Bonn Nature Conservation Act 1992 – EN	Marine waters provide habitat
CHORDATA/REPTILIA	<i>Chelonia mydas</i> 	green turtle	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				EN 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Environmental Protection and Biodiversity Conservation Act 1999 – VU, Marine, Migratory- Bonn Nature Conservation Act 1992 – VU	Largest feeding population on east coast of Australia.
CHORDATA/MAMMALIA	<i>Dugong dugon</i> 	dugong	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Environmental Protection and Biodiversity Conservation Act 1999 – Marine, Migratory- Bonn Nature Conservation Act 1992 – VU	Largest habitat in the Mackay/Capricorn Management Area of the Great Barrier Reef Marine Park.
CHORDATA/REPTILIA	<i>Eretmochelys imbricata</i> 	hawksbill turtle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				CR 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Environmental Protection and Biodiversity Conservation Act 1999 – VU, Marine, Migratory- Bonn Nature Conservation Act 1992 – EN	Marine waters provide habitat
CHORDATA/REPTILIA	<i>Natator depressus</i> 	flatback turtle	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input checked="" type="checkbox"/>	<input type="checkbox"/>	Environmental Protection and Biodiversity Conservation Act 1999 – VU, Marine, Migratory- Bonn Nature Conservation Act 1992 – VU	Nesting habitat (Akens Island).
CHORDATA/MAMMALIA	<i>Orcaella heinsohni</i> 	Australian snubfin dolphin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Environmental Protection and Biodiversity Conservation Act 1999 - Marine, Migratory- Bonn Nature Conservation Act 1992 - VU	Reported in the marine waters of the site

Phylum	Scientific name	Common 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/ MAMMALIA	<i>Sousa chinensis</i> 	Indo-Pacific Humpbacked Dolphin; Indo-Pacific Humpback Dolphin	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Environmental Protection and Biodiversity Conservation Act 1999 - Marine, Migratory- Bonn Nature Conservation Act 1992 - VU (Sousa sahalensis)	Alternative name is Australian humpback dolphin (Sousa sahalensis)
CHORDATA/ MAMMALIA	<i>Xeromys myoides</i> 	false water rat	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Environment Protection and Biodiversity Conservation Act 1999 – VU; Nature Conservation Act 1992 - VU	A specimen was recorded in March 2008 in mangrove habitat on the western shore of Shoalwater Bay, between Shoalwater and Georges Creeks on the SWBTA

1) Percentage of the total biogeographic population at the site

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

(This field is limited to 3000 characters)

The Australian snubfin dolphin and Indo-Pacific humpback dolphin have both been observed in the site's marine waters. Respectively, these species are listed as internationally "vulnerable" and "near threatened" and as 'vulnerable' at a state-level.

The previous Ramsar Information Sheet of 1999 estimated the population of the great knot as exceeding 1% (3,800) threshold. However, this was based on numbers reported in Lane and Davies (1987) that included extensive intertidal areas associated with the Broad Sound area that is not within the Ramsar Site. Surveys conducted exclusively within the Ramsar Site during 1995 (see Driscoll 1996) and 2007 (Jaensch 2008a) recorded numbers of this species well below the 1% threshold.

Numbers of up to 90 birds have been recorded for the beach stone-curlew in the SWBTA (DoD, 2009). This abundance exceeds the 1% threshold for the Australian population (estimate of 50 as per Garnett and Crowley, 2000); however, this is less than the 1% threshold for the whole East Asian-Australasian Flyway population (estimate of 250).

A specimen of the water mouse was recorded in March 2008 in mangrove habitat on the western shore of Shoalwater Bay, between Shoalwater and Georges Creeks on the SWBTA.

While sufficient data is not available to demonstrate the site meets Criterion 9, it has been suggested that estimates indicate the 1% population threshold is likely to be met for dugong. The honey blue-eye freshwater fish also meet the Criterion on the basis that the extent of suitable wallum habitat types elsewhere in the drainage division is limited and these species are likely to exist as discrete populations within a local area.

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
Palustrine wetland (eg vegetated swamp) (REgional Ecosystem RE.) 8.1.5) Ramsar wetland type Xf	<input checked="" type="checkbox"/>	Melaleuca spp. and/or Eucalyptus tereticornis and/or Corymbia tessellaris woodland to open forest (estuarine wetland) with a ground stratum of salt tolerant grasses and sedges, usually in a narrow zone adjoining tidal ecosystems	Vegetation Management Act 1999 – listed 'of concern'. Biodiversity status (Qld) is 'endangered' - this status reflects that these communities have previously been substantially cleared at the bioregional scale.
Contains palustrine wetland (e.g. in swales) (RE 8.2.7) - Ramsar wetland type Xf (freshwater tree-dominated wetlands)	<input checked="" type="checkbox"/>	Melaleuca spp. and/or Lophostemon suaveolens and/or Eucalyptus robusta open woodland to open forest in wetlands associated with parabolic dunes	Vegetation Management Act 1999 – listed 'of concern'. Biodiversity status (Qld) is 'endangered' - this status reflects that these communities have previously been substantially cleared at the bioregional scale.

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Palustrine wetland (e.g. vegetated swamp) (RE 8.2.11) - Ramsar wetland type Xf (freshwater tree-dominated wetlands)	<input checked="" type="checkbox"/>	Melaleuca spp. woodland in parallel dune swales (wetlands)	Vegetation Management Act 1999 – listed 'of concern'. Biodiversity status (Qld) is 'of concern' - this status reflects that these communities have previously been substantially cleared at the bioregional scale.
Mangroves - stilted mangrove (Rhizophora stylosa), grey mangrove (Avicennia marina), river mangrove (Aegiceras corniculatum), yellow mangrove (Ceriops tagal)	<input checked="" type="checkbox"/>	Extensive mangrove communities occur along the sheltered sections of coastline in Shoalwater Bay, Port Clinton and Corio Bay occupying approximately 21,000 hectares, and are considered to be a near-natural, representative habitat type in the drainage div	13 of 35 mangrove species known to occur in Queensland are found within the Ramsar Site,
Riverine wetland or fringing riverine wetland (RE 8.3.1) - Ramsar wetland type Xf (freshwater tree-dominated wetlands)	<input checked="" type="checkbox"/>	Semi-deciduous notophyll/mesophyll vine forest fringing watercourses on alluvial plains	Vegetation Management Act 1999 – listed 'of concern'. Biodiversity status (Qld) is 'endangered' - this status reflects that these communities have previously been substantially cleared at the bioregional scale.
Riverine wetland or fringing riverine wetland (RE 8.3.8) - Ramsar wetland type Xf (freshwater tree-dominated wetlands)	<input checked="" type="checkbox"/>	Syncarpia glomulifera, Eucalyptus portuensis, Corymbia intermedia open forest on sandy creek flats and granite outwash	Vegetation Management Act 1999 – listed 'of concern'. Biodiversity status (Qld) is 'of concern' - this status reflects that these communities have previously been substantially cleared at the bioregional scale.
Palustrine wetland (e.g. vegetated swamp) (8.3.13) - Ramsar wetland type Xf (freshwater tree-dominated wetlands)	<input checked="" type="checkbox"/>	Eucalyptus tereticornis and/or Corymbia tessellaris and/or Melaleuca spp. open woodland to open forest on alluvial and old marine plains, often adjacent to estuarine areas	Vegetation Management Act 1999 – listed 'of concern'. Biodiversity status (Qld) is 'endangered' - this status reflects that these communities have previously been substantially cleared at the bioregional scale.
RE 11.2.2 - Complex of Spinifex sericeus, Ipomoea pescaprae and Casuarina equisetifolia grassland and herbland on foredu	<input checked="" type="checkbox"/>	Casuarina equisetifolia varies from dumps of open forest, to woodland, to isolated trees. The ground layer is quite dense. Occurs on Quaternary coastal fore dunes and beaches.	Vegetation Management Act 1999 – listed 'of concern'. Biodiversity status (Qld) is 'of concern' - this status reflects that these communities have previously been substantially cleared at the bioregional scale.
Seagrass. Family Zosteraceae (Zostera capricorni), Family Cymodoceaceae: (Cymodocea serrulata, Halodule uninervis, Halodule pinifolia, Syringodium isoetifolium Family Hydrocharitaceae (Halophila decipiens, Halophila ovalis, Halophila spinulosa)	<input checked="" type="checkbox"/>	The site contains over 13,000 hectares of seagrass beds, considered to be some of the most extensive seagrass meadows on the east coast of Australia, and a near-natural, representative habitat type in the drainage division.	8 of 15 seagrass species known to occur in Queensland are found within the Ramsar Site,

Optional text box to provide further information

(This field is limited to 3000 characters)

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

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)

The ecological character of the Ramsar Site is primarily derived from its size, diversity of habitats and relatively undisturbed condition. The site contains a significant representation of a number of relatively intact vegetation types that were previously widespread in southern Queensland, with half of the wetland types found in Queensland present in the Shoalwater and Corio Bays Area. The biodiversity supported by the site's wetlands is extremely rich, in part due to its coastal location at a climatic overlap of tropical and subtropical zones. The seagrasses and mangroves of the site are of 'outstanding universal value' for the purpose of the Great Barrier Reef World Heritage listing (Geoscience Australia, 2013).

Several of the notable wetland habitats of the site and their values include:

- seagrass beds - grazing habitat for marine megafauna including dugongs, marine turtles; habitat for fish species of recreational and commercial importance
- mangroves and saltmarshes - habitat for juvenile fish and other marine organisms; roosting sites for birds; protecting the shoreline from erosion
- freshwater tree-dominated swamps, shrub-dominated swamps and marshes - habitat for a variety of wetland flora and fauna, including species of conservation significance
- peat swamps - carbon sink properties; retention of paleo-environmental information about previous landscapes and climate states.

Please see Additional material section for more information on ecological character.

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
A: Permanent shallow marine waters	Shoalwater Bay, Island Head Creek	2	46400	Representative
B: Marine subtidal aquatic beds (Underwater vegetation)	Leicester Island, Townshend Island, Island Head Creek, Shoalwater Bay	4	13000	Representative
C: Coral reefs	Rockyreefs e.g. Marquis Reef	0	3779	Representative
D: Rocky marine shores	E.g. Akens Island, Sabina Point	0		Representative
E: Sand, shingle or pebble shores	RE 11.2.2	0		Representative
F: Estuarine waters	E.g. Shoalwater Bay, Corio Bay	1	100237	Representative
G: Intertidal mud, sand or salt flats	Mangroves, saltmarsh	0		Representative
H: Intertidal marshes	RE 8.1.2, 8.1.3, 11.1.2	0	2742	Representative
I: Intertidal forested wetlands	RE 8.1.1, 11.1.4	3	20057	Representative
Zk(a): Karst and other subterranean hydrological systems	Associated sinkholes	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	RE 8.3.1, 8.3.3, 8.3.8, 11.3.25 e.g. Water Park Creek	0		Representative
Fresh water > Flowing water >> N: Seasonal/ intermittent/ irregular rivers/ streams/ creeks	E.g. eastern sand mass of Shoalwater Bay section	0		Representative
Fresh water > Marshes on inorganic soils >> Tp: Permanent freshwater marshes/ pools		0		Representative
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools	RE8.2.4 e.g. Clinton Lowlands, Freshwater Swamp	0		Representative
Fresh water > Lakes and pools >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils	RE8.2.4 e.g. Clinton Lowlands, Freshwater Swamp	0		Representative
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		0		Representative
Fresh water > Marshes on peat soils >> U: Permanent Non-forested peatlands	E.g. Dismal swamp, Freshwater Swamp	0		Representative
Fresh water > Marshes on inorganic soils >> V: Shrub-dominated wetlands	RE 8.2.4	0		Representative
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands	REs 8.1.5, 8.2.7, 8.2.11, 8.3.1, 8.3.8, 8.3.13	0		Representative
Fresh water > Marshes on peat soils >> Xp: Permanent Forested peatlands	E.g. Dismal swamp, Freshwater Swamp	0		Representative
Fresh water > Flowing water >> Y: Permanent Freshwater springs; oases	RE 8.2.5	0	184	Representative
Fresh, saline, brackish or alkaline water > Subterranean >> Zk(b): Karst and other subterranean hydrological systems	Associated with sinkholes	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
<no data available>				

What non-wetland habitats are within the site?

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
<no data available>	

idem

(ECD) Habitat connectivity	
----------------------------	--

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
<i>Sowerbaea subtilis</i>	lily	Nature Conservation Act 1992 – VU. Species is conserved within the SWBTA, Byfield National Park and Byfield State Forest

Invasive alien plant species

Scientific name	Common name	Impacts	Changes at RIS update
<i>Asclepias curassavica</i>	red-head cotton bush	Potentially	unknown
<i>Asystasia gangetica micrantha</i>	Chinese violet	Potentially	unknown
<i>Catharanthus roseus</i>	pink periwinkle	Potentially	unknown
<i>Cenchrus echinatus</i>	Mossman River grass	Potentially	unknown
<i>Cryptostegia grandiflora</i>	rubber vine	Potentially	unknown
<i>Dolichandra unguis-cati</i>	cats claw creeper	Potentially	unknown
<i>Eragrostis curvula</i>	African love grass	Potentially	unknown
<i>Gloriosa superba</i>		Potentially	unknown
<i>Indigofera vohemarensis</i>		Potentially	unknown
<i>Ipomoea purpurea</i>	Morning Glory	Potentially	unknown
<i>Lantana camara</i>	lantana	Potentially	unknown
<i>Macroptilium atropurpureum</i>	Purple Bean	Potentially	unknown
<i>Melinis minutiflora</i>	molasses grass	Potentially	unknown
<i>Mimosa pudica pudica</i>	Sensitive Plant	Potentially	unknown
<i>Praxelis clematidea</i>	praxelis	Potentially	unknown
<i>Sansevieria trifasciata</i>	mother-in-laws tongue	Potentially	unknown
<i>Sida ciliaris</i>	bracted fanpetals	Potentially	unknown
<i>Solanum torvum</i>	devils fig	Potentially	unknown
<i>Sorghum halepense</i>	Johnson grass	Potentially	unknown
<i>Sphagnetocola trilobata</i>	Singapore daisy	Potentially	unknown
<i>Sporobolus fertilis</i>	giant Parramatta grass	Potentially	unknown
<i>Sporobolus natalensis</i>	giant rat's tail grass	Potentially	unknown
<i>Sporobolus pyramidalis</i>	giant rat's tail grass	Potentially	unknown
<i>Stylosanthes scabra</i>	seca stylo	Potentially	unknown
<i>Themeda quadrivalvis</i>	grader grass	Potentially	unknown
<i>Xanthium pungens</i>	noogoora burr	Potentially	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	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/AVES	<i>Calyptrorhynchus lathami</i>	Glossy Black Cockatoo				Nature Conservation Act 1992 - VU
CHORDATA/REPTILIA	<i>Crocodylus porosus</i>	estuarine crocodile				Nature Conservation Act 1992 - VU

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts	Changes at RIS update
CHORDATA/MAMMALIA	<i>Bos taurus taurus</i>	European cattle	Potentially	decrease
CHORDATA/MAMMALIA	<i>Canis lupus familiaris</i>	wild dog	Potentially	unknown
CHORDATA/MAMMALIA	<i>Capra hircus</i>	goat	Potentially	unknown
CHORDATA/MAMMALIA	<i>Equus caballus</i>	Horse	Potentially	unknown
CHORDATA/MAMMALIA	<i>Felis catus</i>	feral Cat	Potentially	unknown
CHORDATA/MAMMALIA	<i>Mus musculus</i>	house mouse	Potentially	No change
CHORDATA/AVES	<i>Streptopelia chinensis</i>	spotted dove	Potentially	No change
CHORDATA/MAMMALIA	<i>Sus scrofa</i>	pig	Potentially	No change
CHORDATA/MAMMALIA	<i>Vulpes vulpes</i>	red fox	Potentially	No change

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)
C: Moist Mid-Latitude climate with mild winters	Cfa: Humid subtropical (Mild with no dry season, hot summer)

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

(This field is limited to 1000 characters)

Climate change has been identified as a key potential threat to the Ramsar Site, in particular, sea level rise, and changes to rainfall and runoff, temperature and evaporation patterns. There are concerns that the peat swamps are more susceptible to damage from fire during prolonged dry conditions.

4.4.2 - Geomorphic setting

a) Mnimum elevation above sea level (in metres)

0

a) Maximum elevation above sea level (in metres)

209

b) Position in landscape/river basin:

Entire river basin

☐

Upper part of river basin

☐

Middle part of river basin

☐

Lower part of river basin

☐

Mbre than one river basin

☐

Not in river basin

☐

Coastal

☒

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.
(This field is limited to 1000 characters)

Drainage Sub-Basins: Water Park Creek, Shoalwater Creek.
Drainage Basin: Fitzroy
Drainage Division: North East Coast
Sea/Ocean: Coral Sea; South Pacific Ocean

4.4.3 - Soil

Mneral

☒

(Update) Changes at RIS update

No change

☒

Increase

☐

Decrease

☐

Unknown

☐

Organic

☒

(Update) Changes at RIS update

No change

☒

Increase

☐

Decrease

☐

Unknown

☐

No available information

☐

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

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

Soil is a mix of mineral and organic material.

See Additional material section for details.

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
Marine water	<input checked="" type="checkbox"/>	No change
Water inputs from groundwater	<input type="checkbox"/>	No change
Water inputs from surface water	<input type="checkbox"/>	No change
Water inputs from rainfall	<input type="checkbox"/>	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 largely stable	No change
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)

See Additional material section for details.

(ECD) Connectivity of surface waters and of groundwater

(ECD) Stratification and mixing regime

4.4.5 - Sediment regime

Significant erosion of sediments occurs on the site ☒

(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown

Significant accretion or deposition of sediments occurs on the site ☒

(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown

Significant transportation of sediments occurs on or through the site ☒

(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown

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

(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown

Sediment regime unknown ☐

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

See Additional material section for details.

(ECD) Water turbidity and colour

(ECD) Light - reaching wetland

(ECD) Water temperature

4.4.6 - Water pH

Acid (pH<5.5) ☒

(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown

Circumneutral (pH: 5.5-7.4) ☒

(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown

Alkaline (pH>7.4) ☒

(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown

Unknown ☐

Please provide further information on pH (optional):

(This field is limited to 1000 characters)

A brief comparison of water quality data sampled within the SWBTA against the regional Queensland Water Quality Guidelines (QWQG) found: pH – The 80th percentile, maximum and mean pH values are within the recommended QWQG range. Water pH data and water quality analysis is not available for the Corio Bay section of the site.
<http://www.ehp.qld.gov.au/water/pdf/water-quality-guidelines.pdf>

4.4.7 - Water salinity

Fresh (<0.5 g/l) ☒(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐Mixohaline (brackish)/Mixosaline (0.5-30 g/l) ☒(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐Euhaline/Eusaline (30-40 g/l) ☒(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐Hyperhaline/Hypersaline (>40 g/l) ☐(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐Unknown ☐

Please provide further information on salinity (optional):

(This field is limited to 1000 characters)

A brief comparison of water quality data sampled within the SWBTA against the regional Queensland Water Quality Guidelines (QWQG) found: Conductivity – Mean electrical conductivity values range from <80 to 480 µS/cm. Values above the recommended guideline value of 375 µS/cm were recorded at sites that have naturally high salinity.

Salinities of Corio Bay in the El Nino year of 2006/07 reached up to 40 PSU (practical salinity units) towards the mouth. In the La Nina year of 2007/08 salinities down to 23 PSU were recorded, which were associated with Keppel Bay waters that were affected by flooding of the adjacent Fitzroy River and local catchment run off.

(ECD) Dissolved gases in water

(This field is limited to 1000 characters)

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic ☐(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐Mesotrophic ☒(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐Oligotrophic ☒(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐Dystrophic ☒(Update) Changes at RIS update No change ☒ Increase ☐ Decrease ☐ Unknown ☐Unknown ☐

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

(This field is limited to 1000 characters)

Please Additional Material section for details

(ECD) Dissolved organic carbon

(ECD) Redox potential of water and sediments

(ECD) Water conductivity

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 i) broadly similar ☒ ii) significantly different ☐ site itself:

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 ☐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)	Low
Fresh water	Drinking water for humans and/or livestock	Low

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Low
Erosion protection	Soil, sediment and nutrient retention	Medium
Pollution control and detoxification	Water purification/waste treatment or dilution	Medium
Climate regulation	Local climate regulation/buffering of change	Low
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climatic processes	Low
Hazard reduction	Flood control, flood storage	Low
Hazard reduction	Coastal shoreline and river bank stabilization and storm protection	Medium

Cultural Services

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

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Sediment retention	High
Soil formation	Accumulation of organic matter	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	Medium
Nutrient cycling	Carbon storage/sequestration	High
Pollination	Support for pollinators	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)

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:

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

The landscape is important to the Darumbal people QC2012/008. A report finalised in November 2015 clearly demonstrates the value of the Ramsar Site and its management to the Darumbal people. This report "Shoalwater and Corio Bays Ramsar Area Aboriginal Cultural Values: Description, Risks and Management" was prepared for the Fitzroy Basin Association.

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

(ECD) Primary production	Please see Additional Material section for details
(ECD) Nutrient cycling	Please see Additional Material section for details
(ECD) Carbon cycling	Carbon flows in freshwater wetlands are not well known and require further investigation, although freshwater marshes and peat swamps are recognised as important sinks for carbon as they actively accumulate organic matter.
(ECD) Animal reproductive productivity	Nil
(ECD) Vegetational productivity, pollination, regeneration processes, succession, role of fire, etc.	Nil
(ECD) Notable species interactions, including grazing, predation, competition, diseases and pathogens	Please see Additional Material section for details

(ECD) Notable aspects concerning animal and plant dispersal	Nil
(ECD) Notable aspects concerning migration	Nil
(ECD) Pressures and trends concerning any of the above, and/or concerning ecosystem integrity	Nil

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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Provincial/region/state government	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Public land (unspecified)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Local authority, municipality, (sub)district, etc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Commercial (company)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other types of private/individual owner(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Other

Category	Within the Ramsar Site	In the surrounding area
<no data available>		

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

(This field is limited to 1000 characters)

The Broome Head section is adjacent to and includes 70 ha of the Shoalwater Bay Regional Park.

The Shoalwater Bay section is within the SWBTA; gazetted as a Defence Practice Area under the Defence Act 1903 (Cwth). The land immediately adjacent to the Shoalwater Bay section is largely Commonwealth freehold land associated with the SWBTA and also Byfield National Park and Byfield State Forest. To the north are the islands of the Broad Sound Islands National Park and a small portion of the southern extent of the Shoalwater Bay section is adjacent to several freehold land parcels in the township of Byfield.

Part of the Corio Bay section (approximately 700 ha) is within the Byfield National Park.

This section is adjacent to Byfield National Park, Byfield State Forest and freehold and leasehold land parcels. To the south of Corio Bay is freehold land associated with the Iwasaki Sangyo Company Australia Pty Ltd Mercure Capricorn Integrated Resort tourism complex.

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)

The Shoalwater Bay Training Area is managed by the Australian Government Department of Defence. The Great Barrier Reef Marine Park (Commonwealth) is jointly managed by the Great Barrier Reef Marine Park Authority (Commonwealth Government) and the Queensland Department of National Parks, Sport and Racing (Queensland Parks and Wildlife Service). The Great Barrier Reef Coast Marine Park (Queensland), Byfield National Park and Shoalwater Bay Regional Park are managed by the Queensland Department of National Parks, Sport and Racing (Queensland Parks and Wildlife Service). HQ Plantation manages Byfield State Forest that is adjacent to the Ramsar Site, for plantation forestry and associated purposes, including recreational access. The Corio Bay Fish Habitat Area is also managed by the Queensland Department of National Parks, Sport and Racing (Queensland Parks and Wildlife Service) and development applications in the declared FHA are assessed by Fisheries Queensland.

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

Department of Defence, Qld Dept National Parks, Sport and Racing, Great Barrier Reef Marine Park Authority, Qld Dept Environment and Heritage Protection.

Postal address:

(This field is limited to 1000 characters)

QLD Department of Environment and Heritage Protection
GPO Box 2454
Brisbane QLD 4001

E-mail address:

info@ehp.qld.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	Low impact		<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change
Housing and urban areas		Low impact	<input type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	No change

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Water abstraction	Low impact		<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Wood and pulp plantations	unknown impact		<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change
Livestock farming and ranching	unknown impact		<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Mining and quarrying	unknown impact		<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Roads and railroads	Low impact		<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Logging and wood harvesting	unknown impact		<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change
Fishing and harvesting aquatic resources	Low impact		<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	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	Low impact		<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change
(Para)military activities	Low impact		<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	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	Low impact		<input checked="" type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	unknown
Dams and water management/use	Low impact		<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change
Vegetation clearance/land conversion	Low impact		<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	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	Low impact		<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Industrial and military effluents	Low impact		<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change
Agricultural and forestry effluents	Low impact		<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change
Garbage and solid waste	Low impact		<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Geological events

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
<no data available>						

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		<input checked="" type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	unknown
Storms and flooding	Medium impact		<input checked="" type="checkbox"/>	unknown	<input checked="" type="checkbox"/>	unknown

Please describe any other threats (optional):

(This field is limited to 3000 characters)

Please see Additional Material section for details.

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
World Heritage site	Great Barrier Reef World Heritage Area	www.gbmpa.gov.au	partly

Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
<no data available>			

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Declared Fish Habitat Area	Corio Bay Fish Habitat Area (FHA-067)	www.npsr.qld.gov.au/mana_ging/area-summaries/coriobay.htm	whole
Dugong Protection Area	Shoalwater Bay and Port Clinton Dugong Sanctuaries	http://www.gbmpa.gov.au/zoning-permits-and-plans/special-management-areas	whole
National Protected Area	Great Barrier Reef Marine Park	www.gbmpa.gov.au	partly
State Protected Area (QLD)	Byfield National Park	www.npsr.qld.gov.au/parks/byfield	partly
State Protected Area (QLD)	Byfield State Forest	www.npsr.qld.gov.au/parks/byfield	partly
State Protected Area (QLD)	Great Barrier Reef Coast Marine Park	www.npsr.qld.gov.au/marine-parks/gbr_coast_marine_park.html	partly
State Protected Area (QLD)	Shoalwater Bay Regional Park	http://www.npsr.qld.gov.au/parks/shoalwater-bay/index.html	partly

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Shoalwater Bay	http://birdlife.org.au/documents/OTHPUB-IBA-suppl.pdf	whole
Other non-statutory designation	East Asian-Australasian Flyway Network Site (Site code EAAF094)	www.eaaflyway.net	partly

5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve ☐
- Ib Wilderness Area: protected area managed mainly for wilderness protection ☐
- II National Park: protected area managed mainly for ecosystem protection and recreation ☒
- III Natural Monument: protected area managed mainly for conservation of specific natural features ☐
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention ☒
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation ☐
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems ☒

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Catchment management initiatives/controls	Partially implemented
Improvement of water quality	Partially implemented
Re-vegetation	Partially implemented
Soil management	Partially implemented

Species

Measures	Status
Threatened/rare species management programmes	Implemented
Control of invasive alien plants	Implemented
Control of invasive alien animals	Implemented

Human Activities

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

Is the management plan/planning implemented? Yes ☒ No ☐

The management plan covers All of Ramsar Site

Is the management plan currently subject to review and update? Yes ☒ No ☐Has a management effectiveness assessment been undertaken for the site? Yes ☒ 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)

Byfield National Park (QPWS): www.npsr.qld.gov.au/parks/byfield/pdf/sandy-point-flyer.pdf
 Great Barrier Reef Marine Park Authority: www.gbrmpa.gov.au/
 Great Barrier Reef Coast Marine Park (Queensland): www.npsr.qld.gov.au/marine-parks/gbr_coast_marine_park.html
 GBR Strategic Assessment and 25-Year Management Plan: www.gbrmpa.gov.au/managing-the-reef/strategic-assessment
 Dept Defence, Shoalwater Bay Training Area (Military), SOE Report 2008: www.defence.gov.au/environment/swbta_report.htm

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:

(This field is limited to 1000 characters)

Queensland Parks and Wildlife Service (QPWS) online visitor information

URL of site-related webpage (if relevant): www.npsr.qld.gov.au/parks/byfield/pdf/sandy-point-flyer.pdf

5.2.6 - Planning for restoration

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

Has the plan been implemented? Yes ☒ No ☐

The restoration plan covers: Part of Ramsar Site

Is the plan currently being reviewed and updated? Yes ☐ 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
Water quality	Implemented
Plant community	Implemented
Plant species	Proposed
Animal species (please specify)	Implemented
Birds	Implemented

Please indicate other monitoring activities:

(This field is limited to 3000 characters)

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

(This field is limited to 3000 characters)

Please see document AU792_lit180116__Reference_list.docx' in Section 6.1.2, vi. other published literature, for full reference list.

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)

 [AU792_ECD180919.pdf](#)

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

<no file available>

vi. other published literature

 [AU792_lit170123_1_Boundary_description.docx](#)

 [AU792_lit170123_geo_coordinates.docx](#)

 [AU792_lit170309_1.docx](#)

 [AU792_lit170309_2.docx](#)

 [AU792_lit170330_additional_info.docx](#)

 [AU792_lit171102_Cultural_values.pdf](#)

 [AU792_lit180116_Reference_list.docx](#)

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:



Corio Bay (Queensland
Department of Environment
and Heritage, 20-04-2015)



Shoalwater (Queensland
Department of Environment
and Heritage Protection, 20-
04-2015)

6.1.4 - Designation letter and related data

Designation letter

 [AU792_DesLet171204.pdf](#)

Date of Designation 1996-03-01