



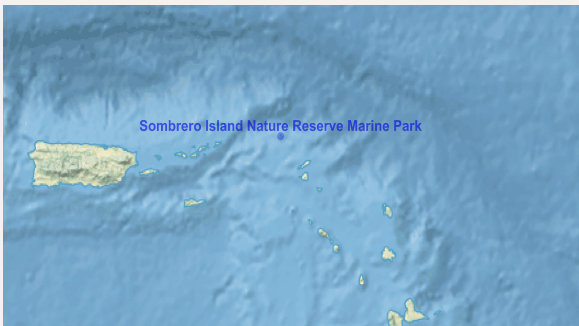
Ramsar Information Sheet

Published on 22 December 2023

Update version, previously published on : 5 September 2018

United Kingdom of Great Britain and Northern Ireland (Overseas territories)

Sombrero Island Nature Reserve Marine Park



Designation date	22 May 2018
Site number	2354
Coordinates	18°35'11"N 63°25'35"W
Area	1 050,71 ha

RIS for Site no. 2354, Sombrero Island Nature Reserve Marine Park, United Kingdom of Great Britain and Northern Ireland (Overseas territories)

<https://rsis.ramsar.org/ris/2354>

Created by RSIS V.1.6 on - 22 December 2023

Color codes

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

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

1 - Summary

Summary

Sombrero Island is a small, uninhabited, flat-topped, rocky, oceanic island. It is characterised by karst topography, limestone sea cliffs and sparse vegetation. Historical phosphate mining has left an array of craters and rubble across the island.

The island is rich in biodiversity. It supports the endemic Critically Endangered Sombrero Island ground lizard *Pholidoscelis corvinus*, the Sombrero Island dwarf gecko (a probable endemic *Sphaerodactylus* species), and a potentially endemic *Anolis* lizard species. Over 40 endemic species of insects have been recorded. It is also acts as an important breeding site for various seabird species, including internationally or regionally important populations of Bridled tern *Onychoprion anaethetus*, Brown booby *Sula leucogaster*, Brown noddy *Anous stolidus*, and Masked booby *Sula dactylatra*. Other breeding birds include Sooty tern *Onychoprion fuscata* and Laughing gull *Leucophaeus atricilla*. The island acts as a refuge during hurricanes and storms, as well as for migrating birds during spring and autumn.

The surrounding waters within a 2000 yards radius, which are also included in the Ramsar Site, support areas of coral reef, submerged Sargassum and large seaweed beds, and deeper marine water. They are used for foraging by the Endangered Green turtle *Chelonia mydas*.

House mice *Mus musculus* were eradicated from the island in 2021 and vegetation restoration work is on-going. A management plan has been developed that covers both the Ramsar Site and surrounding Sombrero Island Nature Reserve Marine Park. In addition, the Anguilla National Trust has initiated a public awareness campaign to highlight the unique biodiversity of the island and its cultural connections.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency

Postal address

National Ramsar Administrative Authority

Institution/agency

Postal address

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

From year

To year

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

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

(Update) A. Changes to Site boundary Yes No

(Update) B. Changes to Site area No change to area

(Update) For secretariat only: This update is an extension

2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS? No

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<2 file(s) uploaded>

Former maps

Boundaries description

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

2.2.4 - Area of the Site

Official area, in hectares (ha): 1050.71

Area, in hectares (ha) as calculated from GIS boundaries 1049.947

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Udvardy's Biogeographical Provinces	Neotropic
WWF Terrestrial Ecoregions	Neotropic
Marine Ecoregions of the World (MEOW)	Tropical Northwestern Atlantic

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

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

Hydrological services provided See section 4.5.

Other ecosystem services provided See section 4.5.

Other reasons Sombrero Island is a small, uninhabited, isolated island, located in the centre of a wide channel between the Caribbean Sea and Atlantic Ocean, which contains examples of rare wetland types to this region, including coral reefs, rocky marine shores, and subterranean karst features.

- Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information The site supports the endemic Sombrero Island ground lizard *Pholidoscelis corvinus* and the Green turtle *Chelonia mydas* forages within the surrounding protected waters. These are respectively listed as Critically Endangered and Endangered on the IUCN Red List.

- Criterion 3 : Biological diversity

Justification The site is rich in biodiversity. The vegetation provides habitat for the endemic Sombrero Island ground lizard *Pholidoscelis corvinus*, the Sombrero Island dwarf gecko (a probable endemic *Sphaerodactylus* species), and a potentially endemic *Anolis* lizard species. Over 40 endemic species of insects, including an endemic species of bee, have been recorded (Holliday et al., 2007). These species are an important component of the ecological diversity of the wider region. In addition, the island is noted as an important site for breeding birds (see Criterion 4). Periwinkles and small reef fish occur in shallow pools around the perimeter of the island. The site also includes areas of coral reef and subterranean hydrological karst features.

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

Optional text box to provide further information The island is listed as an Important Bird Area (IBA) based on the breeding populations of Bridled tern *Onychoprion anaethetus*, Brown booby *Sula leucogaster*, and Brown noddy *Anous stolidus* (BirdLife International, 2022). Other breeding bird species include Masked booby *Sula dactylatra*, Sooty tern *Onychoprion fuscata* and Laughing gull *Leucophaeus atricilla*. In addition, the location of the island and distance from other landforms means that the island acts as a refuge for other species during hurricanes and storms, as well as migrating birds during spring and autumn.

- Criterion 6 : >1% waterbird population

Optional text box to provide further information The breeding population of Bridled tern *Onychoprion anaethetus* is classified as a globally important congregation (representing $\geq 1\%$ of the Neotropical population), whilst the breeding populations of Brown booby *Sula leucogaster* and Brown noddy *Anous stolidus* are classified as regionally important congregations (Caribbean region) (BirdLife International, 2022). The breeding population of Masked booby *Sula dactylatra* is also considered to be regionally important.

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

<no data available>

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

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
Others																	
CHORDATA/REPTILIA	<i>Chelonia mydas</i>	<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"/>				EN	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Protected under the Anguilla Biodiversity and Heritage Conservation Act (2009)	Listed as Endangered on IUCN Red List; endemic to Sombrero Island; important component of biological diversity
CHORDATA/REPTILIA	<i>Pholidoscelis corvinus</i>	<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"/>	884	2021	100	CR	<input type="checkbox"/>	<input type="checkbox"/>	Protected under the Anguilla Biodiversity and Heritage Conservation Act (2009)	Listed as Critically Endangered on IUCN Red List; endemic to Sombrero Island; important component of biological diversity
Birds																	
CHORDATA/AVES	<i>Anous stolidus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1092	2021	6.2	LC	<input type="checkbox"/>	<input type="checkbox"/>		Breeds in regionally important numbers; important component of biological diversity
CHORDATA/AVES	<i>Leucophaeus atricilla</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	57	2021			<input type="checkbox"/>	<input type="checkbox"/>		Important component of biological diversity
CHORDATA/AVES	<i>Onychoprion anaethetus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	474	2021	3.3	LC	<input type="checkbox"/>	<input type="checkbox"/>		Breeds in internationally important numbers; important component of biological diversity
CHORDATA/AVES	<i>Onychoprion fuscatus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	36	2021		LC	<input type="checkbox"/>	<input type="checkbox"/>		Important component of biological diversity
CHORDATA/AVES	<i>Sula dactylatra</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1107	2021	2.8	LC	<input type="checkbox"/>	<input type="checkbox"/>	Protected under the Anguilla Biodiversity and Heritage Conservation Act (2009)	Breeds in regionally important numbers; important component of biological diversity
CHORDATA/AVES	<i>Sula leucogaster</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2205	2021	1.7	LC	<input type="checkbox"/>	<input type="checkbox"/>	Protected under the Anguilla Biodiversity and Heritage Conservation Act (2009)	Breeds in regionally important numbers; important component of biological diversity

1) Percentage of the total biogeographic population at the site

Percentage occurrence figures for bird species in the table above are based on the information from 2013 as reported in the Sombrero Island 2018 Ramsar Information Sheet;
 Brown noddy *Anous stolidus* = 1740 individuals, 580 pairs, 6.2% of Caribbean population;
 Bridled tern *Onychoprion anaethetus* = 660 individuals, 222 pairs, 4.4% of Neotropical population (race *melanopterus/recognita*);
 Brown booby *Sula leucogaster* = 225 individuals, 75 pairs, 1.7% of Caribbean population;
 Masked booby *Sula dactylatra* = 210 individuals, 70 pairs. 2.8% of Caribbean population – except that the percentage occurrence figure for Masked booby has been revised based on the estimate of 2500 pairs for the Caribbean region reported by Grace et al (2020).

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
Reptiles	<input checked="" type="checkbox"/>	See below	See below
Invertebrates	<input type="checkbox"/>	See below	See below
Seabirds	<input checked="" type="checkbox"/>	See below	See below

[Optional text box to provide further information](#)

The invertebrate community is diverse and unique with at least 40 endemic species (Holliday et al., 2007). Although the species have not been assessed by the IUCN, many are likely to qualify as threatened according to the IUCN Red List criteria.

The reptile community includes the endemic Sombrero Island ground lizard *Pholidoscelis corvinus* and the Green turtle *Chelonia mydas*, which are respectively listed as Critically Endangered and Endangered on the IUCN Red List. A recently discovered dwarf gecko (*Sphaerodactylus* species), which appears to be endemic, has been tentatively named as the Sombrero dwarf gecko. Its limited range and population size support listing under Criterion 2.

Sombrero Island provides important nesting ground for seabirds, as specified under Criterion 4.

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

4.1 - Ecological character

Sombrero Island is a remote, flat-topped, rocky, oceanic island. It is characterised by karst topography, limestone sea cliffs and sparse vegetation. Water tends to percolate relatively quickly through the island's permeable limestone and karst formations; there are no permanent pools of water. The island also has limited soil cover, which supports very sparse vegetation, concentrated primarily on the eastern half and limited primarily to vines of the Beach morning glory *Ipomoea pes-caprae* subspecies *brasiliensis*, a few cacti patches of the Prickly Pear *Opuntia dillenii*, and small grasses that can withstand the harsh salty conditions. Additional recorded plant species include Ashen hoary pea *Tephrosia cinerea*, Bay lavender *Tournefortia gnaphalodes*, Common purslane *Portulaca oleracea*, Jackass bitters *Neurolaena lobata*, Salt heliotrope *Heliotropium curassavicum*, Sea purslane (*Sesuvium maritimum* and *Sesuvium portulacastrum*), Tropical fimbry *Fimbristylis cymose*, various Euphorbias (*E. mesembryanthemifolia*, *E. serpens*, *E. thymifolia*), and some specimen coconut trees *Cocos nucifera* (apparently planted by lighthouse workers sometime in 20th century).

The ecological character of the island is dominated by the effects of past phosphate mining, which has resulted in the formation of large craters in the limestone, in addition to shallower pits formed through natural weathering and erosion. Some of these craters fill with water during high tides and unfavourable weather conditions; they are frequented by resting or nesting seabirds. The deeper craters, especially along the island's perimeter, often collect seawater in which periwinkles and small reef fish can be found.

Despite the restricted vegetation, the conditions are favourable to an endemic population of black lizards *Pholidoscelis corvinus*, a recently discovered and probably endemic dwarf gecko (*Sphaerodactylus* sp.), and at least 40 endemic invertebrate species. The island also acts as an important breeding site for various seabirds. The mixed-species seabird colony includes internationally or regionally important populations of Bridled tern *Onychoprion anaethetus*, Brown booby *Sula leucogaster*, Brown noddie *Anous stolidus* and Masked booby *Sula dactylatra*, which nest on cliffs and rocky areas.

In addition to the rocky marine shores, the waters surrounding Sombrero Island include areas of coral reef, submerged Sargassum and large seaweed beds, and deeper marine water to a depth of about 400 m.

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

Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
B: Marine subtidal aquatic beds (Underwater vegetation)	Sargassum and large seaweed beds in the surrounding marine waters	2		Representative
C: Coral reefs	Pavement reef and rocky reef in the surrounding marine waters	2		Representative
D: Rocky marine shores	Sombrero Island (NB: Type D includes rocky offshore islands and sea cliffs)	1	38	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, saline, brackish or alkaline water > Subterranean >> Zk(b): Karst and other subterranean hydrological systems	Subterranean features on Sombrero Island	3		Rare

Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type
7: Excavations		2	

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Marine waters >6m in depth	

4.3 - Biological components

4.3.1 - Plant species

<no data available>

4.3.2 - Animal species

Invasive alien animal species

Phylum	Scientific name	Impacts	Changes at RIS update
CHORDATA/MAMMALIA	<i>Mus musculus</i>	Actual (minor impacts)	decrease
CHORDATA/ACTINOPTERYGII	<i>Pterois volitans</i>	Potential	No change

Optional text box to provide further information

House mice *Mus musculus* were the subject of an eradication program in 2021 (see Tayton, Ross & Bell, 2021). The Lion fish *Pterois volitans* is a threat to species associated with surrounding waters and coral reefs.

4.4 - Physical components

4.4.1 - Climate

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

The island has the same dry tropical climate as the mainland, Anguilla, consisting of a rainy season from July to December with the amount of rainfall dependent on the number of storms that pass over. Average annual temperature on the mainland (as recorded between 2007 and 2011) is 28.6 C/82 F (Anguilla Meteorological Office, 2012). With climate change affecting both frequency and intensity of tropical storms, the potential impacts of storm damage on Sombrero Island's biodiversity (primarily birdlife and reptiles) could be severe.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

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

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

Sombrero Island is believed to have a volcanic-base capped with Pleistocene limestone.

4.4.3 - Soil

Mineral

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

No available information

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

Please provide further information on the soil (optional)

The site is mainly covered by bare rocky and has very little soil.

4.4.4 - Water regime

Water permanence

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

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from precipitation	<input type="checkbox"/>	No change
Marine water	<input checked="" type="checkbox"/>	No change

Water destination

Presence?	Changes at RIS update
Marine	No change

Stability of water regime

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

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

With its permeable karst formation, water tends to percolate relatively quickly through the island's limestone and there are no permanent pools of water. Water that does settle on the island fluctuates depending on tides, storm surges and rainfall.

4.4.5 - Sediment regime

Sediment regime unknown

4.4.6 - Water pH

Alkaline (pH>7.4)

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

Unknown

4.4.7 - Water salinity

Fresh (<0.5 g/l)

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

Euhaline/Eusaline (30-40 g/l)

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

Unknown

4.4.8 - Dissolved or suspended nutrients in water

Oligotrophic

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

Unknown

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

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

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

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

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Nature observation and nature-based tourism	Low
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Picnics, outings, touring	Low
Spiritual and inspirational	Cultural heritage (historical and archaeological)	High
Scientific and educational	Educational activities and opportunities	Medium
Scientific and educational	Long-term monitoring site	High
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	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

Optional text box to provide further information

Sombrero Island primarily provides benefits through the rich diversity of lifeforms and ecosystems that it supports.

It has few direct ecosystem service benefits to humans, as it is located 65 km from the mainland of Anguilla, making it relatively inaccessible, and has been uninhabited since 2002, prior to which it supported a manned lighthouse. However, the island is visited at times by passing yachts, with visitors disembarking to explore the island and to dive in the nearshore waters. The deep surrounding waters also provide provisioning services in the form of fish stocks that are harvested for both subsistence and commercial purposes.

Sombrero Island is currently being used for scientific research and monitoring, especially following the successful eradication of House mice *Mus musculus* in 2021 (see Tayton, Ross & Bell, 2021). Further restoration work is on-going with the launch of a vegetation restoration initiative in the same year. Research and monitoring focuses on fauna and flora recovery and the impacts of climate change.

Anguillans benefited culturally from the operation of the manned lighthouse, and it is closely linked to the history of those involved in the lighthouse keeping, provision of relief for lighthouse keepers and those involved in seafaring linked to the lighthouse's operation. The legacy of mining for phosphate in the 19-20th centuries is of cultural and historical significance.

Within the site:

0

Outside the site:

100s

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

4.5.2 - Social and cultural values

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

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

Description if applicable

Mining has left a rich industrial heritage. In the 19th century, after being surveyed by a British geologist, Sombrero Island was found to have deposits of lime phosphates. These were mined to provide fertilisers for use in the United States of America, with operations ceasing in 1890. The operations left an array of craters up to 10 m deep and a rubble surface of blasted rock across the island. Various buildings and decaying equipment also remain from mining operations, which ended in the early 20th century.

Alongside these are more recent buildings from the Island's long time use as a lighthouse station, erected in 1868 after wreckage of the Royal Mail Steam Packet Company's ship Paramatta. Until only recently, the island was permanently inhabited by a small number of lighthouse staff who travelled the 65 km between the mainland and the island with their supplies by small boats and sloops. A new unmanned lighthouse was installed in 2002 and visitors are now limited to the occasional fisherman, yacht sailors, and biologists engaged in surveys and fieldwork.

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

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

4.6 - Ecological processes

<no data available>

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

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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

The site is crown land owned by The Government of Anguilla.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Department of Natural Resources, Government of Anguilla

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

Ms Melissa Meade, Chief Natural Resources Officer

Postal address:

Department of Natural Resources, Government of Anguilla, Old Police Barracks, Parliament Drive, P.O. Box 60, The Valley, AI-2640, Anguilla

E-mail address:

melissa.meade@gov.ai

5.2 - Ecological character threats and responses (Management)

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

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Shipping lanes	unknown impact		<input 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
Fishing and harvesting aquatic resources	unknown 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	unknown 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		Medium impact	<input checked="" type="checkbox"/>	decrease	<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
Volcanoes		Low impact	<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change
Earthquakes/tsunamis		Medium impact	<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Climate change and severe weather

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

Please describe any other threats (optional):

Potential threats are listed above. The main concern is that rats and mice are inadvertently introduced to the island, through unregulated visitation, and the resulting impact on breeding seabirds. Lionfish are a threat to species associated with surrounding waters and coral reefs.

In addition, there is a high potential for shipwrecks and oil spills from damaged vessels and tankers on or around Sombrero Island. The island is located between the Anguilla Bank and the British Virgin Islands and within the Anegada Passage, a popular route for shipping and commercial vessels. While the unmanned lighthouse aids in reducing this risk, the light is not monitored regularly to ensure proper performance.

Climate change is affecting both the frequency and intensity of tropical storms, with the potential for severe impacts on the biodiversity; for example, the Sombrero Island ground lizard population was noticeably reduced as a result of storm-damage caused by Hurricane Luis in 1995 (Hodge, et al. 2003).

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Nature Reserve Marine Park	Sombrero Island Nature Reserve Marine Park		partly

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Sombrero Island	http://datazone.birdlife.org/site/factsheet/sombrero-island-iba-anguilla-(to-uk)/details	whole

5.2.3 - IUCN protected areas categories (2008)

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

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Partially implemented

Habitat

Measures	Status
Habitat manipulation/enhancement	Partially implemented

Species

Measures	Status
Control of invasive alien animals	Implemented

Human Activities

Measures	Status
Fisheries management/regulation	Partially implemented
Harvest controls/poaching enforcement	Partially implemented
Communication, education, and participation and awareness activities	Partially implemented
Research	Implemented

Other:

The management plan is evidence-based and has been informed by on-going ecological and socio-economic surveys. Anguilla National Trust (ANT) conducts regular seabird and migratory bird surveys (counts as well as passive acoustic monitoring stations for the latter), lizard surveys, and vegetation surveys. FMRU has conducted baseline benthic surveys.

Working with the management plan in draft form, House mice *Mus musculus* were eradicated from the island in 2021 and on-going monitoring indicates that the island has remained mouse-free. The eradication program involved ANT, Fauna & Flora International, New Zealand-based Wildlife International Management Ltd, and independent island restoration experts (for further details see Tayton, Ross & Bell, 2021). Note that no other rodent species or invasive mammal species were found to be present.

Following a survey of existing flora and an assessment of plants that may have been present on the island prior to the mining of guano and based on the island's location between the Anguilla mainland and the British Virgin Islands, a pilot vegetation restoration programme was initiated. Over a dozen different types of seeds have been planted on the island, with three species germinating (Spider lily *Hymenocallis caribaea*, Beach morning glory *Ipomoea pes-caprae* and Seabeam *Canavalia roseus*). Vegetation restoration efforts are on-going and will include the construction of a nursery in situ, where seeds will be germinated in existing substrate and hardened before being planted out in suitable locations.

Fisheries management within the waters of the marine park and the Ramsar Site are guided by the Anguilla Fisheries Development Plan, the enforcement of the Fisheries Protection Act (and supporting regulations) and the newly developed Sombrero Island Nature Reserve Marine Park and Ramsar Site management plan. Recognising that Marine Park and Ramsar Site boundaries overlap only partially, additional benthic surveys are scheduled for the latter half of 2022 from which the Park's boundaries will be finalised.

Communications surrounding Sombrero Island Nature Reserve Marine Park and Ramsar Site is similarly guided by the site management plan and focus on both the ecological and cultural heritage. ANT is currently developing a public awareness campaign that highlights the diverse and unique biodiversity and cultural connections to when the lighthouse was physically manned.

The Sombrero ground lizard *Pholidoscelis corvinus* and Green turtle *Chelonia mydas* are protected under Schedule 1 of the Anguilla Biodiversity and Heritage Conservation Act (2009). Although not endangered, the Brown booby *Sula leucogaster* and Masked booby *Sula dactylatra* are also protected under this Act.

5.2.5 - Management planning

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

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

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

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, but restoration is needed

Further information

Restoration is on-going. House mice have been successfully eradicated from the island (no other rodent species or invasive mammal species appear to be present). A pilot vegetation restoration initiative has begun (planting of seeds) following a survey of existing flora and an assessment of plants that could have been found on the island (based on historical reports as well as the island's location between Anguilla and the British Virgin Islands). Vegetation restoration work is on-going, including expanding the range of existing species and reintroduction of one species; this will be expanded on to include the out-planting of seedlings (applying best practice to ensure that no invasive pests, diseases or fungi are brought to the island on the plants or seeds. This work is based on a study that Fauna & Flora International and ANT commissioned. There are proposals to build perches for passerines to encourage migratory birds to use Sombrero as a stop-over during the migration seasons.

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Plant community	Implemented
Animal species (please specify)	Implemented
Birds	Implemented

Monitoring of the Sombrero ground lizard *Pholidoscelis corvinus* population has been implemented and is on-going. The success of the plant restoration initiative is being monitored with monthly visits (when sea conditions allow) to measure survival and growth of seedlings. On-going sea bird surveys are carried out every five years.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Anguilla National Trust (2020). Marine and terrestrial biodiversity of Sombrero island nature reserve and marine park, Anguilla. Report for Fauna and Flora International.

Biodiversity and Heritage Conservation Act (2009) Government of Anguilla.

BirdLife International (2022) Important Bird Areas factsheet: Sombrero Island. <http://www.birdlife.org>

Government of Anguilla (2011) Preliminary report of 2011 Population and Housing Census Department of Statistics, Government of Anguilla.

Grace, J., D. J. Anderson, C. Carboneras, D. A. Christie, F. Jutglar, E. F. J. Garcia, and G. M. Kirwan (2020). Masked Booby (*Sula dactylatra*), version 1.0. In *Birds of the World* (S. M. Billerman, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bow.masboo.01>

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Hodge, K.V.D., Censky, E.J. & Powel, R. (2003) The Reptiles and Amphibians of Anguilla, British West Indies. The Valley, Anguilla.

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Lindsay, K.C. (2021) On the flora of Sombrero Island and opportunities for revegetation. Report for Fauna & Flora International and the Anguilla National Trust.

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Lloyd C. & Mukhida, F. (2014) The State of Anguilla's Birds 2012-2013. The Valley, Anguilla: Anguilla National Trust.

Marine Park Act and Regulations (2000) Government of Anguilla.

Olson, D.M., Dinerstein, E., Wikramanayake, E.D. and others (2001) Terrestrial Ecoregions of the World: A New Map of Life on Earth A new global map of terrestrial ecoregions provides an innovative tool for conserving biodiversity. *BioScience* 51(11), 933-938.

Pritchard, D (1990) The Ramsar Convention in the Caribbean with special reference to Anguilla. Report of an RSPB sabbatical project June-July 1990. RSPB, Sandy, UK.

Sombrero Island Nature Reserve Marine Park Ramsar Information Sheet, site number 2354. Created by RSIS V.1.6, 5 September 2018.

Tayton, J., Ross, T., Bell, E.A. (2021) Technical report for the eradication of house mice (*Mus musculus*) from Sombrero Island, Anguilla. Report from Wildlife Management International Ltd. to the Anguilla National Trust, The Valley, Anguilla.

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)

<no file available>

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

<3 file(s) uploaded>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

<1 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



View across Sombrero Island showing Old industrial workings associated with past phosphate mining. - note the date the photo was taken is unknown, not as given ([Farah Mukhida/Anguilla National Trust, 09-04-2018](#))



Pools in craters caused by previous phosphate extraction, Sombrero Island - note the date the photo was taken is unknown, not as given ([Farah Mukhida/Anguilla National Trust, 09-04-2018](#))



Brown Noddy *Anous stolidus* on Sombrero Island - note the date the photo was taken is unknown, not as given ([Farah Mukhida/Anguilla National Trust, 09-04-2018](#))



Endemic Sombrero Island Ground Lizard *Ameiva corvina*, Sombrero Island - note the date the photo was taken is unknown, not as given ([Farah Mukhida/Anguilla National Trust, 09-04-2018](#))



Endemic Sombrero Island Ground Lizard *Ameiva corvina*, Sombrero Island - note the date the photo was taken is unknown, not as given ([Farah Mukhida/Anguilla National Trust, 09-04-2018](#))


















Brown Boobys *Sula leucogaster* on Sombrero Island - note the date the photo was taken is unknown, not as given ([Farah Mukhida/Anguilla National Trust, 09-04-2018](#))



Masked Booby *Sula dactylatra* chick on Sombrero Island - note the date the photo was taken is unknown, not as given ([Farah Mukhida/Anguilla National Trust, 09-04-2018](#))



Masked Booby *Sula dactylatra* on Sombrero Island - note the date the photo was taken is unknown, not as given ([Farah Mukhida/Anguilla National Trust, 09-04-2018](#))

 <p>Pair of Masked Boobys <i>Sula dactylatra</i> chick on Sombrero Island - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>	 <p>Probable Anguilla Anole <i>Anolis gingivinus</i>, Sombrero Island. However DNA samples from Sombrero in the late 1990s showed Anoles on Sombrero to be quite different to those on Anguilla and St Martin: further samples might indicate endemism. Note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>	 <p>View across Sombrero Island showing old industrial workings associated with past phosphate mining, - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>	 <p>View across Sombrero Island showing vegetation on old industrial workings associated with past phosphate mining, - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>
 <p>Bridled Tern <i>Sterna anaethetus</i>, Sombrero Island - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>	 <p>View across Sombrero Island showing vegetation on old industrial workings associated with past phosphate mining, - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>	 <p>View across Sombrero Island showing vegetation on old industrial workings associated with past phosphate mining, - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>	 <p>Seabirds on telecommunications mast, Sombrero Island - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>
 <p>Old industrial equipment associated with past phosphate mining, note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>	 <p>Bridled Tern <i>Sterna anaethetus</i>, Sombrero Island - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>	 <p>Sombrero Island - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>	 <p>Old industrial workings associated with past phosphate mining, Sombrero Island - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>
 <p>Brown Booby <i>Sula leucogaster</i> on Sombrero Island - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>	 <p>View across old phosphate mining areas, Sombrero Island - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>	 <p>Nest site of Brown Noddy <i>Anous stolidus</i> in shelter of rocks, Sombrero Island - note the date the photo was taken is unknown, not as given (Farah Mukhida/Anguilla National Trust, 09-04-2018)</p>	

6.1.4 - Designation letter and related data

Designation letter

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Date of Designation