**ANGUILLA WETLANDS INVENTORY – SUMMARY SHEET**

IBA Site Code: AI001

Site Name: Sombrero Island

Site Designations: Marine Park Designation (Marine Parks Act & Regulations)
Important Bird Area (IBA) by BirdLife International and Government of Anguilla
Ramsar Site

IBA Justification: *Criterion A4i:* Criterion A4i: Known to hold at least 1% of the Caribbean population of several species of nesting seabirds. These include Brown noddy (*Anous stolidus*) (580 pairs/6.2% of regional population in 2013), Bridled tern (*Onychoprion anaethetus*) (222 pairs/3.3% of global population in 2013), Brown booby *(Sula leucogaster) (*75 pairs/1.69% of regional population in 2013*)* andMasked booby (*Sula dactylatra*) (70 pairs/17.5% of regional population in 2013)

Ramsar Justification: *Criterion 1:* Rare/unique examples of near natural wetland types i.e. Contains rocky marine shores (rock cliffs) - D and karst and other subterranean hydrological systems (human made - Zk(c) and marine/coastal - Zk(a))

*Criterion 2:* Black Lizard (Ameiva corvina) - IUCN (vulnerable) species which is also nationally protected in BHC Act

*Criterion 3:* Ameiva corvina (endemic) - see #152(ii) and (iv) as well as regionally typical species - seabirds (i.e. 6 breeding species)

*Criterion 4:* Breeding Seabird Populations see #169 and Ameiva corvine (endemic)

*Criterion 6:* Bridled tern (222 pairs/4.4% of population in 2013)

Ownership: Crown

Coordinates: The boundary of the proposed Sombrero Island Nature Reserve Marine Park Ramsar Site includes both the terrestrial and marine areas within the radius 2000 yards from Lat. 18º 35' 11" N Long.63º 25' 35” W.

General Location: Sombrero Island lies approximately 65 km NW of the main island of Anguilla. The island lies isolated from the islands of the Anguilla Bank by the Sombrero Passage, a 32 mile long passage. The island lies between the islands of the Anguilla bank and Anegada, within the Anegada Passage which separates the Greater and Lesser Antilles.

Map Reference: 

Area: 1050.7 hectares (2596 acres) – (includes water area)

Altitude: < -750 to 12 metres above sea level

Date: 2016

Updated by: Clarissa Lloyd

**PHYSICAL FEATURES OF THE SITE:**

Sombrero is a remote, flat-topped, rocky outcrop, approximately 65 kilometres northwest of Anguilla. The island is isolated within the Anegada channel and is part of the Sombrero Bank. This body of water surrounding the island is usually rough since it is exposed to direct currents from the Atlantic Ocean. The surrounding waters are deep, averaging around 24 fathoms around the island and extending to approximately 200 to 400 fathoms further offshore. The water provides habitat to different species of soft and hard coral.

The cliffs and rocky surface are home to large nesting seabird colonies, an endemic ground lizard (*Ameiva corvina*) and several endemic species of invertebrate. This slightly elevated block of limestone is almost always partially covered in sea water. The island has surface layers of phosphates which were extensively mined in the 19th and early 20th century, leaving the surface pitted with craters up to 10 metres deep. The stone buildings once used during phosphate mining era are still standing. There is little standing water although small, temporary pools can develop in the craters left by the mining. There are two lighthouses on the island: the remnants of the first manned lighthouse and the more recently automated lighthouse which was installed in 2000.

 Weathering of the limestone rock has left jagged, sharp edges on the rock. There is little to no soil but a few plants find a foothold among the rocks. Geologist (Julien, 1866) believed the origin of Sombrero Island to be of a volcanic base capped with Pleistocene limestone.

**HYDROLOGICAL VALUE:**

The island has the same dry tropical climate as Anguilla with a rainy season from July to December. The amount of rainfall is dependent on the number of storms that are experienced. The exposed nature of the island leaves it vulnerable to hurricane damage. There is no information on pH or salinity.

Both fresh and salt water collect in the crater remnants of phosphate mining operations.

**MAIN HABITAT TYPES:**

The island is solely comprised of rocky limestone substrate with sparse vegetation. Phosphate mining in previous years has resulted in the formation of large craters in this limestone cap. Some of these craters fill with water during high tides and unfavourable weather conditions. These pools are frequented by resting or feeding seabirds.

The eastern most portion of the island is covered in a rubble surface of blasted rock, another remnant of phosphate mining activity on the island. Despite the relative instability of the rubble in this area, nesting masked and brown boobies along with Brown noddies and Bridled terns appeared to have favoured this area.

**OVERVIEW OF BIRD INTERESTS:**

The islands support seabird colonies of Sooty tern (*Sterna fuscata*), Brown booby (*Sula leucogaster*), Laughing gull (Larus atricilla), Brown noddy (*Anous stolidus*), Masked booby (*Sula dactylatra*) and Bridled tern (Sterna anaethetus).

The cay hold regionally important breeding populations of Brown noddy (*Anous stolidus*) (580 pairs/6.2% of regional population in 2013), Bridled tern (*Onychoprion anaethetus*) (222 pairs/3.3% of regional population in 2013), Brown booby *(Sula leucogaster) (*75 pairs/1.69% of regional population in 2013*)* andMasked booby (*Sula dactylatra*) (70 pairs/17.5% of regional population in 2013)*.*

**OVERVIEW OF BOTANICAL INTERESTS:**

The island has very little to no soil as the substrate is predominantly hard limestone rock with crevices. This makes the island unable to sustain significant plant life. Species of plant that have adapted to the limited soil availability and salty conditions of the island include the invasive Morning glory vine (*Ipomoea pes-caprae*) and Sea purslane (*Sesuvium portulacastrum*). There are small patches of Prickly pear cacti (*Opuntia dillenii*)

**OVERVIEW OF OTHER BIODIVERSITY INTERESTS:**

The island is noted for the endemic Sombrero black lizard (*Ameiva corvina*) which is widespread and easily seen on the island. A recently discovered dwarf gecko (*Sphaerodactylus sp*) may be endemic and has been tentatively named Sombrero dwarf gecko. The tree lizard (*Anolis gingivinus*) is also found on the island. Green sea turtles (*Chelonia mydas*)*,* have been recorded foraging around the island.

Recent invertebrate surveys yet to be published suggest a number of endemic invertebrates are present.

**CURRENT USAGE:**

Sombrero Island, until recently, was inhabited by a small number of lighthouse staff, who were transported by small boat across the 65km from mainland Anguilla. Since the use of the automated lighthouse began in 2002, the island has been uninhabitated. Visitors are now limited to the occasional fisherman, yacht sailors, and biologists engaged in surveys and fieldwork.

The island is rich in industrial heritage. Buildings and decaying equipment remain from former phosphate-mining programme which ended in the early 20th century. Alongside these are more recent buildings from Sombrero’s long time use as a lighthouse station.

The island’s surrounding waters are used for fishing as well as some recreational diving. Boats and other water vessels from the British Virgin Islands visit to engage in whale watching and diving (Per comm. Samuel Richardson, former lighthouse keeper).

The waters directly surrounding Sombrero Island, have a depth which ranges between 29 to 100 fathoms, are used mainly for fishing by subsistence and commercial fishermen.

The island has been and continues to be a source of interest for scientific research. Biological surveys were carried out on Sombrero in the late 1990’s in response to a proposed rocket launch station. Occasional breeding seabird counts are currently carried out.

**CONSERVATION ISSUES:**

The small amount of soil present on the island is instrumental to sustaining the presence of indigenous plants and animals. These plants and animals provide food, habitat, and security as well as encourage an ecosystem consisting of species able to thrive in this salt dominant environment. Invasive flora and fauna pose a threat to existing indigenous and native flora and fauna by competing for limited soil and space as well as by feeding on the limited food sources available to native or indigenous species. Mice are thought to be present on the island, although no assessment has been carried out to confirm this.

Hurricanes are especially treacherous around this area. Climate change brings increased frequency of storms and hurricanes. For such an isolated and exposed island, with endemic species, this presents the risk for loss of those terrestrial species due to waves covering a larger area of the island in the event of a storm. The likelihood of this happening and the extent of damage that can be experienced are evident in the result of Hurricane Luis in 1995 as described by Hodge, Censky and Powell (2003). Their description involves the reduction in population size of the Sombrero Ground Lizard (*Ameiva corvina*). Earthquakes and tremors are felt as Anguilla and its offshore cays lie on the Caribbean Plate.

In the 19th century, after being surveyed by a British geologist Sombrero Island was found to have deposits of lime phosphates. Mining of these phosphates was conducted by Americans so it could b used as fertilisers in areas of the United States where the nutrients in the soil had been exhausted. Soon after, the British requested compensation for the Americans’ occupation of the island. During the American occupation of the island, the first lighthouse was erected in 1868 after wreckage of the Royal Mail Steam Packet Company’s ship *Paramatta*. Phosphate mining on the island ended in 1890. The lighthouse was damaged during a hurricane in 1960 and was replaced and manned by Anguillians in 1962. An automated fibreglass lighthouse was constructed in 2002.

There is 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.

With the possibility of shipwreck comes that of oil spills depending on the types of vessels opting to sail through this route.

 A proposal by Beal Aerospace to launch rockets off of Sombrero was put forward to the British and Anguillian Government in 1999. The proposal was met with much disapproval by locals and environmental activists who we concerned about how this would affect health of people fishing around and living downwind of the site as well as the wildlife on Sombrero. The proposal was ultimately rejected.

**CONSERVATION MEASURES AND ACTIONS:**

* Continue to promote site in educational material used during IBA and bird education material.
* Continue to secure funds for ensuring the sustainable and wise use of the island and protection of the island’s rich environment.
* Monitor site for eligibly for national and international recognition and protection.
* Encourage compliance and lobby for enforcement of related policies and provisions.

**RECOMMENDATIONS:**

* Encourage the consistent monitoring of the lighthouse to reduce risk of vessel wreckage.
* Check with Department of Fisheries and Marine Resources on water quality and condition of surrounding water.
* Develop a programme of regular seabird monitoring.
* Determine presence of mice on island and their effect on nesting seabird population.
* Conduct feasibility study of rodent eradication.

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Harrison Marooned: The Story of a Sombrero Island Lighthouse Keeper

<http://theanguillian.com/2013/07/marooned-the-story-of-a-sombrero-island-lighthouse-keeper-by-mrs-sarah-harrison/>

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