

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7, as amended by Resolution VIII.13 of the Conference of the Contracting Parties.

Note for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers are strongly urged to provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of maps.

1. Name and address of the compiler of this form:

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

11 November 2004

3. Country:

UK (South Georgia and South Sandwich Islands)

4. Name of the Ramsar site:

South Georgia

5. Map of site included:

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps.

a) **hard copy** (required for inclusion of site in the Ramsar List): yes -or- no

b) **digital (electronic) format** (optional):

6. Geographical coordinates (latitude/longitude):

between 53 56'S and 54 55'S, and 34 45'W and 38 15'W

7. General location:

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

South Georgia and its associated smaller offshore islands, islets and stacks are very isolated, lying about 1400 km east-south-east of the Falkland Islands, 1550 km north-east of Cape Dubouzet (the nearest point on the Antarctic continent), 2150 km east of Dungeness (South America's nearest mainland point) and 4800 km from Cape Town, South Africa. The nearest land is Zavodovski Island, the northernmost island in the South Sandwich Islands group, lying 530 km to the south-east. The administrative centre is at King Edward Point, with the main government office at Stanley in the Falkland Islands.

The site comprises the whole of South Georgia and its island, islets and stacks, covering the entire territory (3,755 km²) with all its natural habitats and including the littoral zone, and should ideally include the near marine habitat.

Administrative region: South Georgia and the South Sandwich Islands

8. **Elevation** (average and/or max. & min.) (metres): 9. **Area** (hectares): 375,500

Min. 0
Max. 2,965

Mean No information available

10. Overview:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

The island group covers 3,755 km² and ranks as the third-largest subantarctic archipelago after the Falkland Islands and Iles Kerguelen. South Georgia itself is 170 km long and 2 to 40 km wide, and its long axis is orientated in a north-west to south-east direction. It is surrounded by over 70 islands, islets, stacks and rocks. The largest islands support vascular plants and breeding seabirds, and include Willis Islands and Bird Island off the north-west extremity, Cooper Island off the south-east extremity, and Annenkov Island, 15 km off the central south west coast. With a backbone of steeply uplifted mountain ranges (Allardyce and Salvesen Ranges) and at least 20 peaks over 2,000 m altitude culminating at 2,965 m on the island's summit, Mt Paget, South Georgia is the highest of all subantarctic islands. Its spectacular alpine topography dominates the landscape. Much of the land is over 1,000 m altitude and at least half is covered in permanent ice and snow with over 160 glaciers, many of which intersect a heavily indented coastline. Extensive ice-free peninsulas bounded by glaciers are typical of the north-east coast, where the permanent snow line starts at 400 to 600 metres altitude. The south-west coast is predominantly rock and ice, with a narrow coastal fringe of mainly tussac grassland and permanent snow and ice starting at 200 to 300 metres altitude.

There are 25 species of vascular plants native to South Georgia, over 50 naturalised introduced vascular species which mostly occur around the old whaling stations, and about 125 species of mosses, 80 of liverworts and 150 of lichens. There are no known endemic vascular plant species, although there are a few endemic bryophytes and lichens. There are no trees or shrubs and only mosses and lichens survive in the inland rock and ice environment. Of the vascular plants, only seven develop extensive stands and dominate distinct communities. They are tussac *Parodiochloa flabellata*, greater burnet *Acaena magellanica*, tufted fescue grass *Festuca contracta*, greater rush *Juncus scheuchzerioides*, brown rush *Rostkovia magellanica*, Antarctic hairgrass *Deschampsia antarctica*, and the introduced annual meadowgrass *Poa annua* which dominates areas grazed by reindeer and trampled by seals and penguins.

South Georgia has huge seabird colonies whose total breeding population probably exceeds 30 million pairs. The most abundant species on the island are *Eudyptes chrysolophus*, *Pachyptila desolata*, *Procellaria aequinoctialis*, and *Pelecanoides urinatrix exul*, with more than two million pairs estimated for each. A total of 31 bird species has been recorded breeding, of which 27 are seabirds. Of these, there are six species of penguin, four species of albatrosses and 13 species of smaller petrels and related species. There is one endemic passerine, *Anthus georgicu*. Three endemic subspecies/taxa have been recognised. They are the pintail *Anas georgica georgica* and the cormorant *Phalacrocorax atriceps georgianus* which are confined to the island group, and the tern *Sterna vittata georgiae*. Forty five species of vagrant migrants have been recorded from the island and its inshore waters, including a number of waders.

11. Ramsar Criteria:

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

1, 2, 3, 4, 5, 6, 7, 8

12. Justification for the application of each Criterion listed in 11. above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

- 1 Extensive areas of Ramsar global priority peatlands and natural (mainly tussac) wet grasslands, set in proximity to other globally under-represented wetland types, including ice-fields and meltwater systems and kelp beds.

- 2 Ten bird species of global conservation concern breed at South Georgia. These are *Pygoscelis papua* (NT), *Eudyptes chrysolophus* (NT), *Diomedea exulans* (VU), *Thalassarche melanophrys* (EN), *T. chrysostoma* (VU), *Phoebetria palpebrata* (NT), *Macronectes giganteus* (VU), *M. halli* (NT), *Procellaria aequinoctialis* (VU), *Anthus antarcticus* (NT).
- 3 Antarctic fur seals *Arctocephalus gazella* (3 million individuals and increasing) and elephant seals *Mirounga leonina* (400,000 individuals) breed on South Georgia. About one third of the 230 species of arthropod fauna are endemic. There are 70 species of freshwater invertebrates and 6 species of spiders. There is one endemic passerine, South Georgia Petrel *Anthus georgicus*, and an endemic duck, South Georgia Pintail *Anas georgica georgica*
- 4 The coastal waters are inhabited by small numbers of *Orcinus orca* (LR/cd), *Eubalaena australis*, *Balaenoptera musculus*, *B. physalus*, *B. borealis*, *B. acutorostrata*, *Megaptera novaeangliae*, *Physeter catodon*, *Hyperoodon planifrons*, *Globicephala melas*, *Lagenorhynchus cruciger*, *Australophocaena dioptrica*, and unidentified beaked whales.
- 5 The site regularly supports over 30 million pairs of breeding waterbirds, including those noted under criterion 6 below.
- 6 In global terms, South Georgia is the most important breeding site for *Thalassarche chrysostoma* and *Procellaria aequinoctialis*, the second most important site for *Diomedea exulans* (after the Prince Edward Islands) and *Aptenodytes patagonicus* (after Crozet Islands); the third most important site for *Thalassarche melanophrys* (after the Falkland Islands and Chile). About 40% of the world population of *Aptenodytes patagonicus* breed here, as do nearly 25% of *Eudyptes chrysolophus*, 40% of *Pygoscelis papua*, 20% of *Diomedea exulans*, 14% of *Thalassarche melanophrys*; 90% of *Procellaria aequinoctialis*; over 25% of *Catharacta lonnbergi*, 20% of *Chionis alba*, over 50% of *Pelecanoides urinatrix exsul*, 14% of *Macronectes giganteus*, over 25% of *M. halli*.

The site contains the following internationally important breeding birds in internationally important numbers.

Breeding species	South Georgia population	World population (pairs unless otherwise specified)
King Penguin <i>Aptenodytes patagonicus</i>	40% of the world population	>1 million
Chinstrap Penguin <i>Pygoscelis antarcticus</i>		4 million
Gentoo Penguin <i>Pygoscelis papua</i>	40%	260,000
Macaroni Penguin <i>Eudyptes chrysolophus</i>	>2 million (25% of the world population)	>11 million
Rockhopper Penguin <i>Eudyptes chrysolophus</i>		3.5 million
Wandering Albatross <i>Diomedea exulans</i>	20% of the world population	<20,000
Black-browed Albatross <i>Thalassarche melanophrys</i>	14% of the world population	>550,000
Grey-headed Albatross <i>Thalassarche chrysostoma</i>		80,000
Light-mantled Sooty Albatross <i>Phoebetria palpebrata</i>		30,000

Southern Giant Petrel <i>Macronectes giganteus</i>	14% of the world population	36,000
Northern Giant Petrel <i>Macronectes halli</i>	over 25% of the world population	7-12,000
Cape Petrel <i>Daption capense</i>		sev. million birds
Snow Petrel <i>Petrodroma nivea</i>		2 million birds
Blue Petrel <i>Halobaeana caerulea</i>		sev. million birds
Dove Prion <i>Pachyptila desolata</i>	>2 million	many millions
Fairy Prion <i>Pachyptila turtur</i>		sev. million birds
White-chinned Petrel <i>Procellaria aequinoctialis</i>	>2 million (90% of the world population)	>2.2 million
Wilson's Storm-petrel <i>Oceanites oceanicus</i>		sev. million
Black-bellied Storm-petrel <i>Fregatta tropica</i>		100-150,000
Grey-backed Storm-petrel <i>Garrodia nereis</i>		10-50,000
Georgian Diving-petrel <i>Pelecanoides georgicus</i>		>6 million
Common Diving-petrel <i>Pelecanoides urinatrix exsul</i>	>2 million (over 50% of the world population of subspecies)	>7 million
Blue-eyed Cormorant <i>Phalacrocorax atriceps georgica</i>	All world population of subspecies	1.2 million birds
Antarctic Skua <i>Catharacta lonnbergi</i>	25% of the world population	7,000
Kelp Gull <i>Larus dominicanus</i>		2,500 birds
Antarctic Tern <i>Sterna vittata georgiae</i>	All world population of subspecies	125,000
South Georgia Pintail <i>Anas georgica georgica</i>	All world population	10,000
Yellow-billed Teal <i>Anas flavirostris</i>		20,000
Snowy Sheathbill <i>Chionis alba</i>	20% of the world population	10,000
South Georgia Pipit <i>Anthus antarcticus</i>	All world population	3-4,000

7 & 8 The kelp beds are important for marine life, including commercially important squid species.

13. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

b) biogeographic regionalisation scheme (include reference citation):

14. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	The island lies close to the north-east edge of the tectonically active Scotia Plate and is the emergent part of a small block of continental crust, the Scotia Arc. This steep submarine ridge runs as a continuous submarine feature from the Patagonian Shelf off the South American continent to the Antarctic Peninsula. Although itself volcanically inactive, South Georgia is connected by a line of subsurface Scotia Arc seamounts to the volcanically active South Sandwich Islands. Most of the island consists of sedimentary rocks of various types, of which the volcanoclastic sandstones and shales of the Cumberland Bay Formation form well over half the island and most of its high peaks. Remnants of the volcanic island arc from which these rocks originated occur on islands off the south-west coast. Older still are igneous rocks from the original continental rocks of Gondwana, found in the south-west corner of the island.
Geomorphology and landscape	The coastline is characterised by impressive sea cliffs, intersected by steep-sided fjords up to 15 km long and often over 100 metres depth, with extensive wave-cut platforms surrounding headlands and numerous glaciers terminating in the sea. Beaches of sand or shingle form at the head of sheltered bays. Offshore, the coast is fringed with extensive beds of giant kelp <i>Macrocystis pyrifera</i> which grows to about 30 metres depth, while inshore, the bull kelp <i>Durvillea antarctica</i> grows from sea level to 5 m depth. The tidal range is about 1 metre. The south and south-west coasts of the island are exposed to heavy wave action under the influence of the prevailing westerly wind and ocean swell. The north-east coast is more sheltered, but occasionally subject to the effect of long-distance ocean swell generated by northerly and more rarely easterly winds.
Nutrient status	
pH	
Salinity	Fresh in ice-dominated areas on land; saline at coast
Soil	
Water permanence	Permanent in sea at coast and in ice-fields and glaciers; generally wet in other areas.
Summary of main climatic features	<p>South Georgia's high-altitude glaciated interior, together with its position south of the Antarctic Polar Frontal Zone and surrounded by cold Antarctic waters, results in a cooler oceanic climate than that of most other subantarctic islands, and a harsher climate than expected from its latitude.</p> <p>The orographic effects of the island's central mountain ranges greatly influence regional precipitation and weather. The south-west side and the extremities of the island, being exposed to the prevailing westerly weather systems, are typically cold, wet and cloudy with strong winds. The north-east coastal areas are more</p>

	<p>temperate, being sheltered by the mountain ranges and local topography. Here, the average annual precipitation is 1600 mm, annual wind speed is 4.4 metres per second, and annual temperature is +2 C with an absolute range of –19 to 24 C. Winter and summer seasons are clearly defined with temperatures averaging +4.8 C in the summer and –1.2 C in winter. Fohn winds also occur on this north-east side and produce localised rapid increases in temperature. Catabatic winds associated with passing frontal systems and gusting to over 100 knots are not uncommon.</p>
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15. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

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The island lies close to the north-east edge of the tectonically active Scotia Plate and is the emergent part of a small block of continental crust, the Scotia Arc. This steep submarine ridge runs as a continuous submarine feature from the Patagonian Shelf off the South American continent to the Antarctic Peninsula. Although itself volcanically inactive, South Georgia is connected by a line of subsurface Scotia Arc seamounts to the volcanically active South Sandwich Islands. Most of the island consists of sedimentary rocks of various types, of which the volcanoclastic sandstones and shales of the Cumberland Bay Formation form well over half the island and most of its high peaks. Remnants of the volcanic island arc from which these rocks originated occur on islands off the south-west coast. Older still are igneous rocks from the original continental rocks of Gondwana, found in the south-west corner of the island.

South Georgia lies in the Scotia Sea about 350 km south of the Polar Front and is surrounded by the eastward-flowing Antarctic surface waters of the Antarctic Zone, with temperatures between 0 and 4C. Of major biological significance to the South Georgia marine ecosystem is the area to the north-east of the island where Antarctic Zone water meets colder waters that originate in the polar regions to the south and south-east of the island. Biological productivity is further enriched by favourable oceanic conditions created at the edge of the continental shelf where depths increase rapidly to over 3,000 m. The continental shelf itself is relatively wide, extending for 50 to 150 km from the island. It is mostly less than 200 m deep except for the deep submarine canyons which are the offshore extensions of many of the glaciated fjords on the island.

16. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

17. Wetland types

Code	Name	% Area
B	Marine subtidal aquatic beds, including kelp beds	
D	Rocky marine shores	
Tp	Permanent freshwater marshes/ pools	
Ts	Seasonal/ intermittent freshwater marshes/ pools	
U	Non-forested peatlands	
Va	Alpine wetlands	
Vt	Tunda wetlands	

18. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site.

See 19 for ecosystem descriptions.

The biodiversity of large areas on the island has been modified by the introduction of three species of mammals. They are the Norway rat *Rattus norvegicus*, reindeer *Rangifer tarandus* and the house mouse *Mus musculus*. The greatest threats to the terrestrial environment come from predation of birds and insects by rats and from damage to vegetation by reindeer. Rats are thought to have been introduced by sealing vessels in the late 1700s, and now occupy virtually the entire north-east coastline and the northern quarter of the south coast. In rat-infested coastal areas, *Anthus antarcticus* and smaller burrowing petrel species have been eliminated, and populations of *Procellaria aequinoctialis* and *Anas georgica georgica* significantly reduced. Reindeer are present on the central north coast region and have overgrazed significant areas of the native tussac *Parodiochloa flabellata*, the native burnet *Acaena magellanica* and various species of lichens, and their selective grazing habits have encouraged the spread of the introduced annual meadowgrass *Poa annua*. Other common alien plant species include chickweed *Cerastium fontanum*, and dandelions *Taraxacum officinale* but none are considered to present a threat to the native flora.

19. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.

There are 25 species of vascular plants native to South Georgia, over 50 naturalised introduced vascular species which mostly occur around the old whaling stations, and about 125 species of mosses, 80 of liverworts and 150 of lichens. There are no known endemic vascular plant species, although there are a few endemic bryophytes and lichens. There are no trees or shrubs and only mosses and lichens survive in the inland rock and ice environment. Of the vascular plants, only seven develop extensive stands and dominate distinct communities. They are tussac *Parodiochloa flabellata*, greater burnet *Acaena magellanica*, tufted fescue grass *Festuca contracta*, greater rush *Juncus scheuchzerioides*, brown rush *Rostkovia magellanica*, Antarctic hairgrass *Deschampsia antarctica*, and the introduced annual meadowgrass *Poa annua* which dominates areas grazed by reindeer and trampled by seals and penguins. The vegetation changes with altitudinal and regional climatic differences, and 7 main vegetation types are described, but because of topographic and environmental gradients, much of the vegetation comprises a series of intermediate zones sharing floristic features of adjacent communities. Extensive areas of vascular vegetation are principally confined to low altitude coastal areas and offshore islands, islets and stacks where the landscape is dominated by tussac

grassland, with *Parodiochloa flabellata* dominant. This extends from sea level to a maximum altitude of 200 metres altitude on the south coast and 400 m on the north coast. Short grassland dominated by *Festuca contracta* is widespread up to 200 m altitude on coastal areas of the central north coast; pure stands of *Acaena magellanica* herbfield occur most frequently in sheltered damp tussock grassland but are absent in areas grazed by reindeer. Mire and bog communities dominated by *Juncus scheuchzerioides* and *Rostkovia magellanica* occur wherever there are seepage slopes, streams and springs. Moss banks are dominated by *Polytrichastrum strictum/alpinum?* and *Chorisodontium aciphyllum*. In wetter areas of the island in non-reindeer areas, *C. aciphyllum* is usually the dominant moss bank species, whereas *P. alpinum* is dominant in reindeer areas, where the original tussock grassland has been replaced by mosses due to selective grazing. Fellfield communities consisting of scattered mosses, lichens, and various vascular plants occur on dry stony ground in exposed windswept sites on the coast and on inland plateaux, screes, rock faces and mountain ridges.

20. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

There are no indigenous terrestrial mammals, reptiles, amphibians or freshwater fish. The terrestrial and freshwater invertebrate fauna is limited in terms of numbers and species diversity. It includes flies, mites, springtails, diving beetles, spiders, annelid worms and molluscs.

31 bird taxa are known to breed and there are 17 resident seabird species. Of these, *Halobaena caerulea*, *Pelecanoides urinatrix exsul*, *Garrodia nereis*, *Pachyptila turtur* and *Fregatta tropica* are confined virtually exclusively to rat-free areas, while *Pachyptila desolata*, *Pelecanoides georgicus* and *Oceanites oceanicus* breed only at the higher inland margins of vegetated land if rats are present lower down.

South Georgia has huge seabird colonies whose total breeding population probably exceeds 30 million pairs. The most abundant species on the island are *Eudyptes chrysolophus*, *Pachyptila desolata*, *Procellaria aequinoctialis*, and *Pelecanoides urinatrix exul*, with more than two million pairs estimated for each. A total of 31 bird species has been recorded breeding, of which 27 are seabirds. Of these, there are six species of penguin, four species of albatrosses and 13 species of smaller petrels and related species. There is one endemic passerine, *Anthus georgicus*, and two species of waterfowl, *Anas georgica georgica* and *Anas flavirostris*, the latter believed to be a relatively recent arrival from South America or the Falkland Islands. Three endemic subspecies/taxa have been recognised. They are the pintail *Anas georgica georgica* and the cormorant *Phalacrocorax atriceps georgianus* which are confined to the island group, and the tern *Sterna vittata georgiae*. Forty five species of vagrant migrants have been recorded from the island and its inshore waters, including a number of waders.

Although virtually all areas at South Georgia have been surveyed ornithologically, the quality of survey has been of variable precision, with the exception of Bird Island where detailed surveys are conducted annually. Although any re-assessments are unlikely to impact the conclusions, it should be noted that the degree of precision with which the estimates of proportions of world populations have been applied to species varies significantly due to the variable precision of population data. With the exception of breeding pair estimates for the Bird Island, and those for populations of *Diomedea exulans*, *Thalassarche melanophrys* and *T. chrystoma*, all other population data are of variable precision and at least 20 years old. Additionally, only the data for *Pygoscelis antarctica*, *Pygoscelis papua* and *Phalacrocorax atriceps georgiana* are thought to be reasonably accurate at the island level at the time of survey. All other ground-nesting seabird population data are based on broad-scale unvalidated surveys. Estimates for *Anthus antarcticus*, *Anas georgica georgica* and all species of burrowing petrels are based on estimates of area of suitable breeding habitat and likely to be the least accurate. Furthermore, it is known that the sizes of some populations have changed considerably in the past two decades. For example, *Aptenodytes patagonicus* have undergone an estimated threefold

increase while *Eudpytes chrysolophus* appears to have decreased threefold. It is also likely that some burrowing petrel populations may have been underestimated.

21. Social and cultural values:

e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc.
Distinguish between historical/archaeological/religious significance and current socio-economic values.

South Georgia has the longest period of continuous human habitation and economic history of all subantarctic islands. Permanent habitations were established in 1904 with the construction of the first whaling station at Grytviken, followed by civil administration buildings at King Edward Point in 1912, and further whaling stations at Leith Harbour, Stromness, Husvik, Prince Olav Harbour and Ocean Harbour. The last whaling station closed in 1964 and with the exception of Grytviken and King Edward Point, these sites are now unoccupied. The island was occupied continuously by military garrisons from 1982 to 2001, and military visits of inspection and exercises are carried out on a regular basis. Horses, sheep, pigs, cats, dogs and other domestic animals were introduced to the island in the past but are no longer present and with the exception of the visitor facility at the South Georgia Museum and the Post Office at King Edward Point, there are no public service facilities on the island, nor are there any land-based manufacturing industries.

There are three centres of human population on the island, at Bird Island, Grytviken and King Edward Point. An Administrative Officer appointed by the Commissioner is resident at King Edward Point, the island's administrative centre. Although there is no permanent human population, there are 4 long-term residents living at King Edward Point and nearby Grytviken, and employed by the Government. User organisations include the British Antarctic Survey, the South Georgia Museum, an international fishing fleet and the Armed Forces of the United Kingdom. Non-resident British Antarctic Survey research and support personnel are present year-round at King Edward Point and Bird Island research stations. The former is occupied by 15 people in the winter and up to 30 in the summer. The latter has 3 people in the winter and up to 10 in the summer, and the principal activity is seabird and seal research. Cargo to the island is shipped from the United Kingdom by British Antarctic Survey vessels and from the Falkland Islands by Falkland Islands Government fisheries protection vessels. Sources of Government revenue are principally fishing and trans-shipping licenses, augmented by passenger landing fees, vessel harbour dues and philatelic sales. Annually, about 6,000 people visit South Georgia. The majority are recreational visitors arriving on cruise ships that regularly include the island as part of their Antarctic Peninsula itineraries during the summer months. Other visitors include yacht crews, and contract workers, researchers, military personnel and passengers on a variety of vessels associated with resupply, research, fishing and military activities. Ship-based tourist activities include shore landings and Zodiac cruising, with occasional sub-aqua diving, camping, mountaineering and kayaking excursions. The only land-based tourism facility on the island is the South Georgia Museum at King Edward Point. There are no accommodation facilities for tourists on the island although climbing and scientific expeditions are permitted to camp, and both day and longer-term visitors occasionally occupy the 7 field huts on the central north coast.

22. Land tenure/ownership:

Ownership category	On-site	Off-site
Crown	+	+

23. Current land (including water) use:

Activity	On-site	Off-site	Scale
Nature conservation	+	+	
Research	+	+	
Fishing: commercial	+	+	
Tourism	+	+	
Harbour/port	+	+	

Military activities	+	+	
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24. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

Activity	On-site	Off-site	Scale
Introduction/invasion of exotic animal species	+		
Introduction/invasion of exotic plant species	+		
Overgrazing by reindeer	+		
Seabird mortality by-catch in longline and trawl fisheries. (Measures taken to reduce the number of these deaths have been extremely effective within the Maritime Zone, but their use cannot be enforced in international waters or for ships fishing illegally)		+	
Unlicensed fishing within the Maritime Zone		+	
Pollutants from vessels passing through territorial waters, or more critically, those that are wrecked on the islands' shores and the dispersal of pollutants from the abandoned whaling stations (now minimal)	+	+	

The most important threat to the conservation value of South Georgia is the introduction of exotic animal and plant species, most notably rats. Breeding bird distribution is limited by the distribution of rats. One species of endemic arthropod is preyed upon by an introduced carabid. All insects are at risk of predation by rats and mice.

25. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
SGSSI national legislation undergoing review	+	+
Seven Procellariidae taxa are protected under the Agreement for Conservation of Albatrosses and Petrels. They are <i>Diomedea exulans</i> , <i>Thalassarche melanophrys</i> , <i>T. chrysostoma</i> , <i>Macronectes giganteus</i> , <i>M. halli</i> and <i>Procellaria aequinoctialis</i> .	+	+
<i>Environmental Management Plan for South Georgia</i> produced in 2000, and being revised 2004/5	+	
Fisheries managed under Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR, 1980)		+
The site includes two Areas of Special Tourist Interest, proclaimed in 1975, under the 1975 Conservation Ordinance.	+	
Rats were successfully eradicated from Grass Island (30ha.) in 2000.	+	
Three islands (Bird Island, Cooper Island and Annenkov Island) which support significant seabird colonies and are protected under the 1975 Ordinance as Specially Protected Areas or Sites of Special Scientific Interest	+	

The primary ordinance for environmental protection at South Georgia is the Falkland Islands Dependencies Conservation Ordinance of 1975. This provides for the designation of protected areas

and visitor areas in the territory and for regulations to protect fauna and flora including the prohibition of the introduction of non-indigenous species. Other subsidiary legislation includes the Wild Mammals and Birds (Export) Regulations of These provide for the designation of protected areas and visitor areas in the territory, for regulations to protect fauna and flora including the prohibition of the introduction of non-indigenous species, and for the export under licence of wild animals and birds. Under the current provisions of the Ordinance, all native plants, birds and mammals (except whales and dolphins) are protected, as are the introduced reindeer. Fur seals are also afforded maximum protection as a Specially Protected Species under the Protocol on Environmental Protection to the Antarctic Treaty. The Fisheries (Conservation and Management) Ordinance of 1993 provides for the regulation of conservation and management of the fishing waters around the islands, and includes internal waters, the territorial sea (defined as inshore waters up to 12 nautical miles seaward of specified sites on the islands) and the Maritime Zone which extends up to 200 nautical miles (370 km) from the outer boundary of the territorial sea. Regular surveillance of the Zone is maintained by fisheries protection vessels, and a rigorous framework of licensing ensures that Government's conservation and management obligations under CCAMLR are respected. These Ordinances and Regulations are expected to be amended in accordance with revised environmental policies presented in 2000 in the *Environmental Management Plan for South Georgia* with emphasis on protection of indigenous wildlife and ecosystems.

Under the 1975 Ordinance, three categories of managed areas were created at South Georgia: Specially Protected Areas (SPA), Sites of Special Scientific Interest (SSSI) and Areas of Special Tourist Interest (ASTI). These designations limit access to and activities at certain areas. SPAs were designated to preserve their natural ecological systems from any interference. SSSIs were designated to prevent scientific investigations being jeopardised by disturbance. Permits to enter these areas are issued only for compelling scientific purposes which cannot be served elsewhere. ASTIs were designated specifically for tourism on the assumption that they are representative areas of wildlife and scenic beauty where the effects of tourist activity may be systematically assessed. The Management Plan proposes a revised land management framework involving the categorisation of South Georgia, its offshore islands, stacks and territorial waters (but not including the South Sandwich Islands) into three types of area: Protected Areas, Environmentally Sensitive Areas and Open Areas.

International treaties that have been ratified by the United Kingdom and extended to South Georgia and the South Sandwich Islands include the *Convention on the Conservation of Migratory Species of Wild Animals 1979* (Bonn Convention), which includes an *Agreement on the Conservation of Albatross and Petrels* (ACAP) ratified in 2004; the *Convention on Trade in Endangered Species 1973* (CITES); the *Convention on Wetlands of International Importance 1999* (Ramsar Convention) provides for the protection of wetlands; the *Convention on Biological Diversity 1992*. Of relevance to South Georgia is that the United Kingdom has signed the *Convention for the Protection of Seals 1978*; and, most importantly, the *Convention for the Conservation of Antarctic Marine Living Resources* (CCAMLR, 1980), which apply to both South Georgia and the South Sandwich Islands.

26. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

Despite their unique biodiversity, there are no other internationally recognised sites such as World Heritage Sites or Biosphere Reserves on these islands.

All rat-free areas at South Georgia have been proposed as Environmentally Sensitive Areas, but without enforcing legislation. Similarly, there are 5 proposed Protected Areas.

Most of the island is completely unprotected (although certain sections are designated Areas of Special Tourist Interest under the 1975 Conservation Ordinance, and three islands (Bird Island, Cooper Island and Annenkov Island) which support significant seabird colonies and are protected under the 1975 Ordinance as Specially Protected Areas or Sites of Special Scientific Interest).

27. Current scientific research and facilities:

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

South Georgia's administrative centre and two British research stations are inhabited year-round by Government representatives and scientists.

28. Current conservation education:

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

Information available at the South Georgia Museum and web-site; specialist cruises involve wildlife lecturers.

29. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

There is no airlink to the island, which are accessible only by sea and are visited by fisheries protection vessels under contract to the Government from the Falkland Islands Government, by British naval vessels and by research vessels, cruise ships and yachts en route to and from the Antarctic and other destinations. The local economy is dependent primarily on fishing licenses sold to foreign fleets, and secondarily on tourism and philately.

30. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Office of the Commissioner for South Georgia and the South Sandwich Islands, Stanley, Falkland Islands

31. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Office of the Commissioner for South Georgia and the South Sandwich Islands, Stanley, Falkland Islands
Administrator at King Edward Point, South Georgia

32. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 13 above), list full reference citation for the scheme.

Site-relevant references

Poncet, S. (2005, in prep) Important Bird Areas in South Georgia and the South Sandwich Islands. In Sanders, S.M. et al (eds) *Important Bird Areas in the United Kingdom Overseas Territories*. RSPB, Sandy, UK.

Strange, I.J. (1992) *A Field Guide to the Wildlife of the Falkland Islands and South Georgia*. Harper Collins, London.

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Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7, as amended by Resolution VIII.13 of the Conference of the Contracting Parties.

Note for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers are strongly urged to provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of maps.

1. Name and address of the compiler of this form:

UK Overseas Territories Conservation Forum
102 Broadway
Peterborough PE1 4DG
UK
Email: pienkowski@cix.co.uk

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

11 November 2004

3. Country:

UK (South Georgia and South Sandwich Islands)

4. Name of the Ramsar site:

South Sandwich Islands

5. Map of site included:

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps.

a) **hard copy** (required for inclusion of site in the Ramsar List): yes -or- no

b) **digital (electronic) format** (optional):

6. Geographical coordinates (latitude/longitude):

07 30 S, 72 00 E

7. General location:

Include in which part of the country and which large administrative region(s), and the location of the nearest large town. Zavodovski Island, the northernmost island in the South Sandwich Islands group, lies 530 km to the south-east of South Georgia (which is 1300 km SE of the Falkland Islands). The South Sandwich Islands consist of a chain of 11 volcanic islands some 350 km long.

The Administrative Centre is at King Edward Point, in South Georgia, but much of the administration is conducted from Stanley in the Falkland Islands.

Administrative region: South Georgia and the South Sandwich Islands

8. Elevation (average and/or max. & min.) (metres): **9. Area** (hectares): 27,760

Min. 0

Max. ?

Mean No information available

10. Overview:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

The South Sandwich Islands consist of a chain of 11 volcanic islands some 350 km long. Some of these islands are still active volcanoes. The climate is wholly Antarctic. In the late winter the Islands may be surrounded by pack ice. The site regularly supports millions of pairs of breeding penguins and other seabirds, as well as breeding populations of five species of seals.

11. Ramsar Criteria:

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

1, 2, 3, 4, 5, 6

12. Justification for the application of each Criterion listed in 11. above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

1

2 *Macronectes giganteus* (VU), a bird species of global conservation concern breeds in the South Sandwich Islands.

3 Five species of seals breed.

4 Breeding site for numerous seabirds and seals (see other criteria).

5 The site regularly supports millions of pairs of breeding penguins and other seabirds, including those noted under criterion 6 below.

6 The following species breed in the South Sandwich Islands, with internationally important numbers noted:

Breeding species	South Sandwich Islands Population	World population (pairs unless otherwise specified)
Chinstrap Penguin <i>Pygoscelis antarcticus</i>	1.5 million pairs (30% of the world population)	4 million
Adelie Penguin <i>Pygoscelis adeliae</i>	Globally important numbers	
King Penguin <i>Aptenodytes patagonicus</i>		>1 million
Gentoo Penguin <i>Pygoscelis papua</i>	Globally important numbers	260,000
Macaroni Penguin <i>Eudyptes chrysolophus</i>		>11 million
Southern Giant Petrel <i>Macronectes giganteus</i>	Globally important numbers	36,000
Cape Petrel <i>Daption capense</i>	Globally important numbers	several million birds
Antarctic Fulmar <i>Fulmarus glacialis</i>	Globally important numbers	2 million
Snow Petrel <i>Petrodroma nivea</i>	Globally important numbers	2 million birds
Dove Prion <i>Pachyptila desolata</i>		many millions

Wilson's Storm-petrel <i>Oceanites oceanicus</i>	Globally important numbers	several million
Black-bellied Storm-petrel <i>Fregatta tropica</i>		100-150,000
Blue-eyed Cormorant <i>Phalacrocorax atriceps georgica</i>		1.2 million birds
Antarctic Skua <i>Catharacta lonnbergi</i>	Globally important numbers	7,000
Kelp Gull <i>Larus dominicanus</i>		2,500 birds
Antarctic Tern <i>Sterna vittata georgiae</i>		125,000

13. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

b) biogeographic regionalisation scheme (include reference citation):

14. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	The South Sandwich Islands consist of a chain of 11 volcanic islands some 350 km long. Some of these islands are still active volcanoes. The islands lie close to the north-east edge of the tectonically active Scotia Plate. South Georgia is connected by a line of subsurface Scotia Arc seamounts to the volcanically active South Sandwich Islands.
Geomorphology and landscape	
Nutrient status	
pH	
Salinity	
Soil	
Water permanence	
Summary of main climatic features	The climate is wholly Antarctic. In the late winter the Islands may be surrounded by pack ice.

15. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

16. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

17. Wetland types

Code	Name	% Area

18. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site.

19. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

20. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Most of the islands in the South Sandwich Islands have never been explored in detail, and population estimates are based on the infrequent visits that have been made. These are, however, consistent in the great importance, even if estimates (and possibly real population sizes) fluctuate.

21. Social and cultural values:

e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

The islands have no indigenous human populations and are uninhabited. There are no harbours, and severe fogs, other adverse conditions, and volcanic activity mean that visits are rare.

Aesthetic
Current scientific research
Fisheries production
Non-consumptive recreation

22. Land tenure/ownership:

Ownership category	On-site	Off-site
Crown	+	+

23. Current land (including water) use:

Activity	On-site	Off-site	Scale
Nature conservation	+	+	
Research	+	+	
Fishing: commercial		+	

24. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

Activity	On-site	Off-site	Scale
Introduction/invasion of exotic animal species	+	+	Large-scale

25. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
SGSSI national legislation undergoing review	+	+
Seven Procellariidae taxa are protected under the Agreement for Conservation of Albatrosses and Petrels. They are <i>Diomedea exulans</i> , <i>Thalassarche melanophrys</i> , <i>T. chrysostoma</i> , <i>Macronectes giganteus</i> , <i>M. halli</i> and <i>Procellaria aequinoctialis</i> .	+	+
Fisheries managed under Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR, 1980)		+

Conservation legislation at the South Sandwich Islands, like that of South Georgia, is provided for under the Falkland Islands Dependencies Conservation Ordinance of 1975, and the Wild Mammals and Birds (Export) Regulations of 1975. Aspects of these Ordinances and Regulations are scheduled for amendment in a review of legislation for the islands. The Fisheries (Conservation and Management) Ordinance of 1993, as for South Georgia, provides for the regulation of conservation and management of the fishing waters around the islands. The area managed includes internal waters, the territorial sea and the Maritime Zone which extends south to 60 S latitude and up to 200 nautical miles (370 km) from the outer boundary of the territorial sea.

26. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

The South Sandwich Islands lack any form of site protection (except their difficulty of access).

There is no Environmental Management Plan for these islands.

27. Current scientific research and facilities:

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

28. Current conservation education:

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

29. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

30. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Office of the Commissioner for South Georgia and the South Sandwich Islands, Stanley, Falkland Islands

31. Management authority:

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Office of the Commissioner for South Georgia and the South Sandwich Islands, Stanley, Falkland Islands

Administrator at King Edward Point, South Georgia

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Convey, P., Morton, A. & Poncet, J. (1999) Survey of marine birds and mammals of the South Sandwich Islands. *Polar Record* 35 (193): 107-124.

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