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 1JY
UK
Email: pienkowski@cix.co.uk

FOR OFFICE USE ONLY.

DD MM YY

Designation date | Site Reference Number

2. Date this sheet was completed/updated:
11 November 2004

3. Country:
UK (Tristan da Cunha)

4. Name of the Ramsar site:
Gough Island

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): Yes

6. Geographical coordinates (latitude/longitude)**:**
40°21'S 09°53'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.

Gough Island lies 350 km to the south-southeast of Tristan da Cunha itself, in the mid South Atlantic Ocean, and about 2,500 km from South Africa (Cape Town) and about 4,000 km from South America (Mar del Plata). The site includes the shallow coastal waters.

Administrative region: Tristan da Cunha

8. Elevation (average and/or max. & min.) (metres)**:** **9. Area** (hectares)**:** 6500 [? + marine area]

Min. 0
Max. 910
Mean No information available

10. Overview:

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

Gough is the largest relatively unmodified cool temperate island ecosystem in the South Atlantic. Only some 24 introduced plant species have been recorded, and they form a relatively minor component. The site has been described as 'a strong contender for the title most important seabird

colony in the world'. As many as 54 bird taxa are recorded, of which 20 are non-breeding seabirds and two are endemic landbirds. The seabirds include *Eudyptes chrysocome moseleyi* (about 48% of world population), *Diomedea e. dabbenena*, *D. chlororhynchos*, *Phoebetria fusca*, *Macronectes giganteus*, *Pterodroma brevirostris*, *P. macroptera*, *P. mollis*, *P. incerta*, *Pachyptila vittata*, *Procellaria cinerea*, *Puffinus gravis*, *P. assimilis*, *Garrodia nereis*, *Pelagodroma marina*, *Fregetta grallaria*, *Pelecanoides urinatrix* (>20,000 pairs), *Catharacta antarctica*, *Sterna vittata* and *Anous stolidus*. The terrestrial species are *Gallinula comeri* and *Rowettia goughensis* (1,000 pairs, 1993 estimate).

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, 5, 6, 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 Important ecosystems occur, with the vegetation exhibiting marked changes with altitude in relation to climatic differences.

At the coast it consists of tussock grassland on the offshore stacks, sea cliffs and adjacent slopes where salt spray is regular. This is up to 300 m on the exposed west side of the island, below 100 m on the east, with *Spartina arundinacea* and *Parodiochloa flabellata* dominant.

Fern bush, a dynamic community, is dependent on peat slips to maintain plant diversity. Fresh slip faces are first colonised by mosses and *Scirpus bicolor*, followed by *Nertera depressa*, *Empetrum rubrum*, *Lycopodium diaphanum* and various grasses and sedges, as well as *Phylica* and *Blechnum* seedlings. As the slip site ages, *Histiopteris incisa* and *Acaena sarmentosa* appear, the former eventually dominating the area. The fern bush is a mosaic of recent and old slips, each supporting different plant assemblages. These are more open on steeper slopes, where slips are more frequent, whereas on flatter ground where slips occur less fequently, there is a preponderance of *Histiopteris*-dominated assemblages.

Wet heath occurs from the upper limit of fern bush to above 800 m in sheltered locations.

Peat bogs are widespread on the level uplands above 600 m.

2 Vulnerable or endangered species:
Diomedea exulans dabbenena
Diomedea chlororhynchos
Eudyptes chrysocome
Phoebetria fusca
Pterodroma incerta
Gallinula comeri
Rowettia goughensis

3 The endemic *Cotula goughensis* is restricted to the upper beach and coastal cliffs.

Off shore, 40 species of algae are recorded, of which two are endemic.

Gallinula comeri and *Rowettia goughensis*

5 More than 10,000 pairs of waterbirds occur regularly at this site.

6 Breeding populations

Common Name	Species	Max (pairs)	% of population
	Gallinula comeri	2,500	
	Sterna vittata	500	
	Eudyptes chrysocome	144,235	
	Diomedea exulans	1,000	
	Diomedea chlororhynchos	5,000	
	Phoebetria fusca	5,000	
	Pterodroma brevirostris	>20,000	
	Pterodroma macroptera	5,000	
	Pterodroma incerta	>20,000	
	Pterodroma mollis	>50,000	
	Pachyptila vittata	>100,000	
	Procellaria cinerea	>10,000	
	Puffinus gravis	>300,000	
	Puffinus assimilis	>10,000	
	Garrodia nereis	>10,000	
	Pelagodroma marina	>10,000	
	Fregetta grallaria	>10,000	
	Catharacta antarctica	500	

8 [Add info on lobster fishery etc]

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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:

South Atlantic Islands

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	Gough is a basaltic shield volcano with a complex structure resulting from four main periods of volcanic activity, the last of which ceased at least 0.2 to 0.1 million years ago.
Geomorphology and landscape	
Nutrient status	
pH	
Salinity	
Soil	
Water permanence	
Summary of main climatic features	The climate is cool temperate oceanic. Lying on the edge of the west wind belt, the islands are under the influence of both maritime tropical (mT) and maritime polar (mP) air masses from the western South Atlantic. The pattern is dominated by the passage of often severe cyclonic storms, generated by outbursts of mP air on the Polar Front. The prevailing winds are northwesterly to southwesterly, occasionally from the north and south and only rarely from the east. Since the mP air is cooler than the ocean, and many fronts are occluded by the time they arrive, the weather is mostly cloudy with frontal rain. The islands also induce much orographic rainfall. Frontal rainfall occurs throughout the year at Gough, where the mean monthly rainfall in summer is 230 mm; in winter it is 289 mm. The mean annual temperature near sea level on the southeast coast of Gough, it is 11.3ºC. Gough has a recorded mean annual rainfall of 3,397 mm with rain on 296 days. Rainfall on the uplands may be at least twice as heavy as that at sea level. Snow lies intermittently during the winter above about 300 m on Gough, but frosts at sea level are almost unknown. At Gough the cloud base is typically between 300 m and 500 m, occasionally descending virtually to sea-level. The islands lie within the West Wind Drift, where the prevailing winds in the Southern Ocean impart an easterly set to the surface waters of some 13 km per day. The Subtropical Convergence usually lies between the Tristan group and Gough, but occasionally south of Gough. The area is therefore affected by both subantarctic and cold temperate mixed water types. Mean sea temperatures are around 13ºC in summer and 11ºC in winter.

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).

More or less rectangular, 65 km², it is 13 km in length from northwest to southeast, and over 5 km from southwest to northeast at its widest point. The summit, Edinburgh or Diego Alvarez peak, reaches 910 m, and the second highest point, Expedition Peak, 894 m. Both rise from a central upland of rounded hills and broad boggy plateaux, in the northwestern half of the island. The northern and eastern sides of the island form a deeply dissected landscape of narrow ridges and steep sided valleys or ‘glens’. There are seven main valleys, ranging from 1.2 km to 2.5 km in length and the ridges

between them attain a rather uniform elevation of around 600 m. On the western side, the upland plateaux slope more gently down to precipices 450 m to 170 m in height. Towards the south is an undulating but thickly wooded lowland, the only area below 200 m, much of which is drained by a meandering stream behind Transvaal Bay in the southeast. The entire coastline is cliffed; of the numerous streams, only those draining The Glen (the largest of the eastern valleys), its neighbour Sophora Glen, and the southern slopes, discharge their water close to sea level. The other valleys are truncated by cliffs over which their streams form picturesque cascades, or into which they have incised deep gullies. Boulder beaches lie beneath the cliffs. Off shore are some 20 islets, stacks and rocks, the largest of which support vascular plants and breeding birds. Most lie within 100 m of the main island, none at a distance greater than 1 km.

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.

Gough is the largest relatively unmodified cool temperate island ecosystem in the South Atlantic. Only some 24 introduced plant species have been recorded, and they form a relatively minor component. The site has been described as 'a strong contender for the title most important seabird colony in the world'. As many as 54 bird taxa are recorded, of which 20 are non-breeding seabirds and two are endemic landbirds. The seabirds include *Eudyptes chrysocome moseleyi* (about 48% of world population), *Diomedea e. dabbenena*, *D. chlororhynchos*, *Phoebetria fusca*, *Macronectes giganteus*, *Pterodroma brevirostris*, *P. macroptera*, *P. mollis*, *P. incerta*, *Pachyptila vittata*, *Procellaria cinerea*, *Puffinus gravis*, *P. assimilis*, *Garrodia nereis*, *Pelagodroma marina*, *Fregetta grallaria*, *Pelecanoides urinatrix* (>20,000 pairs), *Catharacta antarctica*, *Sterna vittata* and *Anous stolidus*. The terrestrial species are *Gallinula comeri* and *Rowettia goughensis* (1,000 pairs, 1993 estimate).

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.*

The vegetation exhibits marked changes with altitude in relation to climatic differences, and five types are described. At the coast it consists of tussock grassland on the offshore stacks, sea cliffs and adjacent slopes where salt spray is regular. This is up to 300 m on the exposed west side of the island, below 100 m on the east, with *Spartina arundinacea* and *Parodiochloa flabellata* dominant. The endemic *Cotula goughensis* is restricted to the upper beach and coastal cliffs. Scattered *Phylica* trees also occur. Sites disturbed by marine erosion (landslips, slumps and rockslides) and trampling by seals and penguins support the greatest diversity of introduced species, including *Agrostis stolonifera*, *Holcus lanatus*, *Poa annua*, *Plantago lanceolata*, *Rumex obtusifolius*, *Stellaria media* and *Sonchus*

spp. Native species found in these disturbed habitats include *Scirpus bicolor*, *Cotula goughensis*, *Apium australe* and *Callitriche christensenii*.

Fern bush occurs above the coastal grassland, up to about 500 m. It is better developed on the more sheltered eastern side and is most extensive on the southern coastal lowlands. The deciduous fern *Histiopteris incisa* forms the dominant climax assemblage. Fern bush is also characterised by *Phylica arborea* (canopy 2 – 3 m high) and *Blechnum palmiforme* (0 – 1 m high, up to 2 m in sheltered spots). *Sophora microphylla*, the only other woody tree on the island, is restricted to a few individuals in Sophora Glen.

Fern bush, a dynamic community, is dependent on peat slips to maintain plant diversity. Fresh slip faces are first colonised by mosses and *Scirpus bicolor*, followed by *Nertera depressa*, *Empetrum rubrum*, *Lycopodium diaphanum* and various grasses and sedges, as well as *Phylica* and *Blechnum* seedlings. As the slip site ages, *Histiopteris incisa* and *Acaena sarmentosa* appear, the former eventually dominating the area. The fern bush is a mosaic of recent and old slips, each supporting different plant assemblages. These are more open on steeper slopes, where slips are more frequent, whereas on flatter ground where slips occur less fequently, there is a preponderance of *Histiopteris*-dominated assemblages.

Wet heath occurs from the upper limit of fern bush to above 800 m in sheltered locations. It is a transitional vegetation type, with fairly short plants, less than 1 m high. Diverse, it contains species found in virtually all other vegetation types. Three assemblages are recognised, dominated by *Blechnum*, *Empetrum* and grasses and sedges respectively. Feldmark, a community of dwarf, cushion-forming or crevice plants, is found on exposed areas such as ridges, above 600 m. Dwarf *Empetrum rubrum*, *Lycopodium magellanicum*, *Huperzia insularis*, *Acaena stangii*, *Agrostis media*, *A. carmichaelii* and several sedges, mosses and lichens characterise this alpine community. Peat bogs are widespread on the level uplands above 600 m. The bogs are sodden, and are dominated by *Sphagnum* mosses and a number of hepatics. The only abundant vascular plants are *Tetronicum magellanicum* and *Scirpus* spp. However, a wider diversity occurs along bog margins, including *Empetrum rubrum* and various grasses.

Off shore, 40 species of algae are recorded, of which two are endemic. From sea level to 5 m depth, the principal species is the bull kelp *Durvillea antarctica*. Beyond 20 m the dominants are *Laminaria pallida* and the giant kelp *Macrocystis pyrifera*.

Gough is the largest relatively unmodified cool temperate island ecosystem in the South Atlantic. Only some 24 introduced plant species have been recorded, and they form a relatively minor component; most are transient, requiring some form of disturbance to penetrate native vegetation. House mice *Mus musculus* are the only introduced mammals, and there is no record of them on the offshore islets and stacks. Goats and sheep have been introduced in the past, but are no longer present.

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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.*

Eleven species of global conservation concern occur in the Tristan Group, six of which are endemic and of restricted-range, whose distributions define two Endemic Bird Areas. These are *Atlantisia rogersi* (Vu), *Nesocichla eremita* (NT), *Nesospiza acunhae* (Vu) and *N. wilkinsi* (Vu), all confined to the Tristan group and comprising the Tristan Islands EBA (079). *Nesiotis comeri* (Vu) and *Rowettia goughensis* (Vu) occur only on Gough Island (EBA 080). The remaining five species are breeding seabirds, *Diomedea exulans* (Vu), *Pheobetria fusca* (NT), *Pterodroma incerta* (Vu), Diomedea chlororhynchos (En) and Eudyptes chrysocome (Vu).

On Gough Island, both *G. comeri* and *R. goughensis* are considered at risk from the threat of alien predators (especially cats and rats) being introduced. This is despite their numerical strength; up to 3,000 pairs of *G. comeri* and possibly 1,000 pairs of *R. goughensis*.

Several seabird taxa are largely confined to the Tristan Group when breeding. Both the Tristan da Cunha group and Gough are internationally important for their breeding populations of some twenty species. They include *Diomedea exulans dabbenena* (at its northernmost breeding locality on Inaccessible, only a few pairs, and on Gough, about 1,000 pairs per season), *Procellaria aequinoctialis conspicillata* (Inaccessible only), *Puffinus gravis* (almost confined to the Dependency) and *Pterodroma incerta* (some hundreds of pairs on Tristan, some thousands of pairs on Gough). Note that the taxonomy and threat status used here follow Collar *et al*. (1994)

The site has been described as 'a strong contender for the title most important seabird colony in the world'. As many as 54 bird taxa are recorded, of which 20 are non-breeding seabirds and two are endemic landbirds. The seabirds include *Eudyptes chrysocome moseleyi* (about 48% of world population), *Diomedea e. dabbenena*, *D. chlororhynchos*, *Phoebetria fusca*, *Macronectes giganteus*, *Pterodroma brevirostris*, *P. macroptera*, *P. mollis*, *P. incerta*, *Pachyptila vittata*, *Procellaria cinerea*, *Puffinus gravis*, *P. assimilis*, *Garrodia nereis*, *Pelagodroma marina*, *Fregetta grallaria*, *Pelecanoides urinatrix* (>20,000 pairs), *Catharacta antarctica*, *Sterna vittata* and *Anous stolidus*. The terrestrial species are *Gallinula comeri* and *Rowettia goughensis* (1,000 pairs, 1993 estimate).

Non-breeding visitors include *Diomedea melanophris*, *Macronectes halli*, *Fulmarus glacialoides*, *Daption capense*, *Pachyptila desolata*, *Procellaria a. aequinoctialis*, *Puffinus griseus*, *Oceanites oceanicus*, *Fregetta tropica*, *Bubulcus ibis* and *Larus dominicanus*.

Species of global conservation concern:
Diomedea exulans dabbenena
D. chlororhynchos
Phoebetria fusca
Pterodroma incerta
Gallinula comeri
Rowettia goughensis
Restricted-range species:
Gough Island EBA: the 2 species, *Gallinula comeri* and *Rowettia goughensis*, whose distributions define this EBA occur at this site.

Breeding populations

Species	Max (pairs)	Year
Gallinula comeri	2,500	1993
Sterna vittata	500	1993

Species	Max (pairs)	Year
Eudyptes chrysocome	144,235	1993
Diomedea exulans	1,000	1993
Diomedea chlororhynchos	5,000	1993
Phoebetria fusca	5,000	1993
Pterodroma brevirostris	>20,000	1993
Pterodroma macroptera	5,000	1993
Pterodroma incerta	>20,000	1993
Pterodroma mollis	>50,000	1993
Pachyptila vittata	>100,000	1993

Procellaria cinerea	>10,000	1993
Puffinus gravis	>300,000	1993
Puffinus assimilis	>10,000	1993
Garrodia nereis	>10,000	1993
Pelagodroma marina	>10,000	1993
Fregetta grallaria	>10,000	1993
Catharacta antarctica	500	1993

Other threatened / endemic wildlife

Arctocephalus tropicalis (200,000 individuals and increasing) and *Mirounga leonina* (about 100 individuals) are the only two native breeding mammals. Of 100 free living species of terrestrial invertebrates recorded, at least eight are endemic, while 14 are native to the Dependency as a whole. Only eight species of freshwater invertebrates are known.

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 only settlement is a small meteorological station (about 10 buildings), at Transvaal Bay, staffed by South Africans.

22. Land tenure/ownership:

Ownership category	On-site	Off-site
Crown	+	

23. Current land (including water) use:

Activity	On-site	Off-site	Scale
meteorological station	+		
fishery	+		
Nature reserve/World Heritage Site	+		

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
Sagina invasion			

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

Under the Tristan da Cunha Conservation Ordinance of 1976, Gough Island and its territorial waters out to three nautical miles was proclaimed a wildlife reserve. This was modified by the Tristan da Cunha Conservation Ordinance (Amendment) of 1997, such that Gough Island was renamed a nature reserve and the boundary was extended to 12 nautical miles. The Tristan da Cunha Fisheries Limits Ordinance of 1983, as amended by Ordinances Nos. 2 of 1991 and 1992, defines the fisheries limit around Gough Island as 200 nautical miles, and makes provision for fishing within these limits. The objectives of this comprehensive legislation are the maintenance of fauna, flora, geological, scenic and historical features of the island. Gough Island is divided into a logistic zone (six ha for support of the meteorological station), marine zone, scientific research zones, and the conservation zone that encompasses the vast majority of the island.	+	
Gough Island was granted World Heritage status in December 1995, only the third British site to be so recognised for its biological value.	+	
Management Plan	+	

26. Conservation measures proposed but not yet implemented:

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

Principal threats include unlicensed fishing within the reserve, the illegal use of drift nets, pollution from the meteorological station (now minimal), pollutants from vessels passing through territorial waters, the introduction of aliens (especially mammalian predators, the main threat), fires and disturbance. Introduced plants

27. Current scientific research and facilities:

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

A research project is being carried out on Gough from 2003 to 2006 to investigate the effect of predation by house mice on seabird productivity.

The project to control *Sagina* around the meteorological station is ongoing, with further work to control this species planned for September 04.

Annual monitoring is carried out an a selected colony of *Diomedea chlororhynchos*.

28. Current conservation education:

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

There are no facilities for visitors.

29. Current recreation and tourism:

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

The meteorological station personnel and research scientists are allowed on recreational walks from the meteorological station. Tourists visiting Gough are, however, not allowed to land on the island and can only circumnavigate by small boat close inshore.

30. Jurisdiction:

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

Administrator
Tristan da Cunha
TDC1 1UU

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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.

Management of the site is by :
James Glass
Natural Resources Department
Tristan da Cunha
TDC1 1UU

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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

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Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**
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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 1JY
UK
Email: pienkowski@cix.co.uk

FOR OFFICE USE ONLY.

DD MM YY

Designation date | Site Reference Number

2. Date this sheet was completed/updated:
11 November 2004

3. Country:
UK (Tristan da Cunha)

4. Name of the Ramsar site:
Inaccessible Island

5. Map of site included:

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

[to include surrounding marine areas - ? to limit of nature reserve?]

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

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

6. Geographical coordinates (latitude/longitude)**:**
37°18'S 12°41'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.

Inaccessible Island lies 40 km southwest of Tristan. The five islands of the main Tristan group lie within 40 km of each other in the mid South Atlantic Ocean, on similar latitudes 2,782 km from South Africa (Cape Town) and 3,947 km from South America (Mar del Plata).

Administrative region: Tristan da Cunha

8. Elevation (average and/or max. & min.) (metres)**:**
Min. 0
Max. 511
Mean No information available

9. Area (hectares)**:** 1400 [? + marine]

10. Overview:

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

Cliffs rise sheer from sea level round most of the coastline, to 300 m at South Hill. The inland plateau comprises three principal drainage systems, with numerous additional ravines and 'gulches', a shallow central basin and a few small, conical hills. Narrow boulder beaches are present at the base of most

cliffs, but are wider at Salt Beach and Waterfall Beach, in the northeast. Landslide material at West Point forms the only extensive, relatively flat land area at sea level. A recent bog, about 400 years old, incorporates the only area of open standing freshwater on the island. The vegetation comprises three main types. The lower slopes are blanketed with dense, uniform *Spartina* tussock grassland, up to 2.5 m high. The western part of the plateau comprises largely *Blechnum* tree ferns, interspersed with stunted thickets (about 1 m) of *Phylica* trees. Dense stands of taller *Phylica* (3 m or more) occur in the lower, eastern part of the plateau and at sea level at Skua Bog in the west. Scattered *Phylica* occurs elsewhere over much of the island, particularly in sheltered 'gulches'. Encircling the island is a sublittoral zone of *Macrocystis* kelp. The area is of outstanding importance for bird populations.

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, 5, 6, 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 Important ecosystems include:
Cliffs rising sheer from sea level round most of the coastline, to 300 m at South Hill;
The inland plateau comprising three principal drainage systems, with numerous additional ravines and 'gulches';
Narrow boulder beaches;
A recent bog, about 400 years old, incorporating the only area of open standing freshwater on the island;
Lower slopes blanketed with dense, uniform *Spartina* tussock grassland, up to 2.5 m high;
[other relevant ecosystems]
Offshore stacks;
Encircling the island, a sublittoral zone of *Macrocystis* kelp.

2 Species of global conservation concern:
Diomedea exulans dabbenena (northernmost breeding locality)
Phoebetria fusca
Atlantisia rogersi
Nesocichla eremita
Nesospiza acunhae
Nesospiza wilkinsi
Diomedea chlororhynchos
Eudyptes chrysocome

3 The Tristan group is exceptional in having three endemic bird genera – *Atlantisia*, *Nesocichla* and *Nesospiza*. The *Nesospiza* buntings are of particular interest because, as with the famous Darwin's finches (*Geospiza* spp.) of the Galapagos Islands, they have undergone remarkable speciation, with the two species (*N. acunhae* and *N. wilkinsi*) differing markedly in size and, on Nightingale Island, co-occur without interbreeding. On Inaccessible Island, where they also co-occur, there are two altitudinally segregated colour morphs of *N. acunhae*, as well as a hybrid complex involving *N. acunhae* and *N. wilkinsi*. Distinct subspecies of the thrush *Nesocichla eremita* are recognised from each of the three main islands.

All of the Tristan group's restricted-range bird species are found in a wide variety of habitats, but are more abundant in some than in others (e.g. *Atlantisia rogersi* is most common in coastal tussock grassland away from the cliffs). On Inaccessible Island all the extant species occur, and *A. rogersi* is confined to the island. *Atlantisia rogersi* is arguably the most vulnerable to potential threats, being flightless (indeed, the world's smallest flightless bird), even though it occurs at

high density (probably at carrying capacity) and numbers an estimated 8,400 birds.

Procellaria aequinoctialis conspicillata is entirely restricted to Inaccessible Island when breeding; estimates in 1999 put the population as between 2,500 – 10,000 inviduals and declining.

At least 39 species of native terrestrial invertebrates are known. The island is particularly rich in the listroderine weevils, endemic to the Tristan group as a whole.

5 More than 10,000 pairs of waterbirds occur regularly at this site.

6 **Breeding populations**

Common name	Species	Range (pairs)	% of population
	Atlantisia rogersi	2,500 – 5,000	100
	Sterna vittata	>86	
	Eudyptes chrysocome	17,000 – 27,000	
	Diomedea chlororhynchos	1,100	
	Phoebetria fusca	200	
	Pterodroma mollis	5,000 – 50,000	
	Pachyptila vittata	50,000 – 500,000	
	Puffinus gravis	1,500,000 – 2,000,000	
	Puffinus assimilis	5,000 – 50,000	
	Pelagodroma marina	5,000 – 50,000	
	Fregetta grallaria	5,000 – 50,000	

8 [Add info on lobster fishery etc]

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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:

South Atlantic Islands

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 islands are of volcanic origin, of varying geological age and stage of erosion, the oldest rocks dating back 18 million years. However, the three largest islands all show evidence of recent activity, and therefore cannot be regarded as volcanically extinct.
Geomorphology and landscape	Lying somewhat east of the crest of the mid-Atlantic Ridge, near its junction with the aseismic Walvis Ridge, the islands rise from a sea depth of about 3,500 m.
Nutrient status	
pH	
Salinity	
Soil	
Water permanence	
Summary of main climatic features	The climate of the Dependency is cool temperate oceanic, but can vary locally from island to island. Lying on the edge of the west wind belt, the islands are under the influence of both maritime tropical (mT) and maritime polar (mP) air masses from the western South Atlantic. The pattern is dominated by the passage of often severe cyclonic storms, generated by outbursts of mP air on the Polar Front. The prevailing winds are northwesterly to southwesterly, occasionally from the north and south and only rarely from the east. Since the mP air is cooler than the ocean, and many fronts are occluded by the time they arrive, the weather is mostly cloudy with frontal rain. The islands also induce much orographic rainfall. In summer (October to March), the Tristan group may be influenced by the subtropical high pressure cell bringing mT air with orographic cloud, fewer storms and less rain than in the winter (April to September), though summer droughts seldom exceed a few weeks. The mean annual temperature at the Tristan settlement is 14.5ºC. Tristan (settlement) has a recorded mean annual rainfall of 1,676 mm, with rain on 250 days of the year. Rainfall on the uplands may be at least twice as heavy as that at sea level. Frosts at sea level are almost unknown. On Inaccessible Island, orographic cloud is a common feature. At all the islands cloud occasionally descends virtually to sea-level. The islands lie within the West Wind Drift, where the prevailing winds in the Southern Ocean impart an easterly set to the surface waters of some 13 km per day. The Subtropical Convergence usually lies between the Tristan group and Gough, but occasionally south of Gough. The area is therefore affected by both subantarctic and cold temperate mixed water types. Mean sea temperatures are around 18ºC in summer and 13ºC in winter.

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).

Lying somewhat east of the crest of the mid-Atlantic Ridge, near its junction with the aseismic Walvis Ridge, the islands rise from a sea depth of about 3,500 m.

Inaccessible Island lies 40 km southwest of Tristan. Roughly rhomboidal, it is 13 km² in size, about 5.7 km from west to east, and 4.6 km north-south. The highest part, Swales Fell, in the west, rises to

511 m. Geologically, it is the second youngest in the Tristan group, around three million years, and it is a volcanic remnant dominated by interbedded basalt flows and pyroclastic deposits that gently dip towards the northeast.

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.

Cliffs rise sheer from sea level round most of the coastline, to 300 m at South Hill. The inland plateau comprises three principal drainage systems, with numerous additional ravines and 'gulches', a shallow central basin and a few small, conical hills. Narrow boulder beaches are present at the base of most cliffs, but are wider at Salt Beach and Waterfall Beach, in the northeast. Landslide material at West Point forms the only extensive, relatively flat land area at sea level. A recent bog, about 400 years old, incorporates the only area of open standing freshwater on the island. Pyramid Rock, 18 m in height, lies 440 m to the southwest of South Hill. The vegetation comprises three main types. The lower slopes are blanketed with dense, uniform *Spartina* tussock grassland, up to 2.5 m high. The western part of the plateau comprises largely *Blechnum* tree ferns, interspersed with stunted thickets (about 1 m) of *Phylica* trees. Dense stands of taller *Phylica* (3 m or more) occur in the lower, eastern part of the plateau and at sea level at Skua Bog in the west. Scattered *Phylica* occurs elsewhere over much of the island, particularly in sheltered 'gulches'. Up to 22 species of alien flowering plants have been recorded, largely at the landing sites at Salt Beach and Blenden Hall, but seven alien species have been found on the plateau. There are no introduced mammals; pigs and goats were brought to the island in the 19th Century, but no longer occur while Inaccessible has remained free of rats and cats. Offshore, there are a number of stacks, of which the largest is Cave Rock on the southeast coast, reaching *c*.150 m and well vegetated. Encircling the island is a sublittoral zone of *Macrocystis* kelp.

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.*

At least 212 plant taxa have been recorded in the Tristan Group , including 35 native ferns and 58 native flowering plants. Of these, 20 fern and 34 flowering plant taxa are considered to be endemic.

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.*

Eleven bird species of global conservation concern occur in the Territory, six of which are endemic and of restricted-range, whose distributions define two Endemic Bird Areas. These are *Atlantisia rogersi* (Vu), *Nesocichla eremita* (NT), *Nesospiza acunhae* (Vu) and *N. wilkinsi* (Vu), all confined to the Tristan group and comprising the Tristan Islands EBA (079). *Nesiotis comeri* (Vu) and *Rowettia goughensis* (Vu) occur only on Gough Island (EBA 080). The remaining five species are breeding seabirds, *Diomedea exulans* (Vu), *Pheobetria fusca* (NT), *Pterodroma incerta* (Vu), Diomedea chlororhynchos (En) and Eudyptes chrysocome (Vu).

The Tristan group is exceptional in having three endemic bird genera – *Atlantisia*, *Nesocichla* and *Nesospiza*. The *Nesospiza* buntings are of particular interest because, as with the famous Darwin's finches (*Geospiza* spp.) of the Galapagos Islands, they have undergone remarkable speciation, with the two species (*N. acunhae* and *N. wilkinsi*) differing markedly in size and, on Nightingale Island, co-occur without interbreeding. On Inaccessible Island, where they also co-occur, there are two altitudinally segregated colour morphs of *N. acunhae*, as well as a hybrid complex involving *N. acunhae* and *N. wilkinsi*. Distinct subspecies of the thrush *Nesocichla eremita* are recognised from each of the three main islands.

On Inaccessible and Nightingale Islands, habitat destruction (by fire and the possible introduction of livestock) is a threat, but a far greater one is the accidental introduction of alien species, especially predatory mammals. *Atlantisia rogersi* is arguably the most vulnerable, being flightless (indeed, the world's smallest flightless bird), even though it occurs at high density (probably at carrying capacity) and numbers an estimated 8,400 birds.

All of the Tristan group's restricted-range species are found in a wide variety of habitats, but are more abundant in some than in others (e.g. *Atlantisia rogersi* is most common in coastal tussock grassland away from the cliffs). On Inaccessible Island all the extant species occur, and *A. rogersi* is confined to the island.

Several seabird taxa are largely confined to the Territory when breeding. Both the Tristan da Cunha group and Gough are internationally important for their breeding populations of some twenty species. They include *Diomedea exulans dabbenena* (at its northernmost breeding locality on Inaccessible, only a few pairs, and on Gough, about 1,000 pairs per season), *Procellaria aequinoctialis conspicillata* (Inaccessible only), *Puffinus gravis* (almost confined to the Territory) and *Pterodroma incerta* (some hundreds of pairs on Tristan, some thousands of pairs on Gough). Note that the taxonomy and threat status used here follow Collar *et al*. (1994).

At least 33 bird taxa are known. Sixteen species of breeding seabirds and four of native landbirds occur. The seabirds include *Eudyptes chyrsocome moseleyi*, *Diomedea exulans dabbenena*, *D. chlororhynchos*, *Phoebetria fusca*, *Pterodroma brevirostris*, *P. mollis*, *Pachyptila vittata*, *Procellaria a. conspicillata*, *Puffinus gravis*, *P. assimilis*, *Pelagodroma marina*, *Fregetta grallaria*, *Pelecanoides urinatrix*, *Catharacta antarctica*, *Sterna vittata* and *Anous stolidus*. It is possible that the three Tristan Island winter breeders, *Pterodroma macroptera*, *P. incerta* and *Procellaria cinerea*, also breed here.

Procellaria aequinoctialis conspicillata is entirely restricted to Inaccessible Island when breeding; estimates in 1999 put the population as between 2,500 – 10,000 inviduals and declining.

The landbirds include *Atlantisia rogersi*, *Nesocichla eremita gordoni* (850 pairs, 1990 estimate) *Nesospiza acunhae acunhae* (2,500 pairs, 1983 estimate) and *N. wilkinsi dunnei* (200 pairs, 1983 estimate).

Non-breeding visitors include *Diomedea melanophris, Macronectes giganteus, M. halli, Fulmarus glacialoides, Daption capense, Pachyptila desolata, Puffinus griseus, Oceanites oceanicus, Porphyrula martinica, Calidris fuscicollis, Larus dominicanus, Sterna paradisaea* and *Hirundo rustica*.

Species of global conservation concern

Diomedea exulans dabbenena
D. chlororhynchos
Eudyptes chrysocome
Phoebetria fusca
Atlantisia rogersi
Nesocichla eremita
Nesospiza acunhae
Nesospiza wilkinsi

Range-restricted species – Tristan Islands Endemic Bird Area: all 4 species of this EBA occur at this site.

Breeding populations

Species	Range (pairs)	Year
Atlantisia rogersi	2,500 – 5,000	1989
Sterna vittata	>86	1983

Species	Range (pairs)	Year
Eudyptes chrysocome	17,000 – 27,000	1990
Diomedea chlororhynchos	1,100	1983
Phoebetria fusca	200	1987
Pterodroma mollis	5,000 – 50,000	1987
Pachyptila vittata	50,000 – 500,000	1987
Puffinus gravis	1,500,000 – 2,000,000	1987
Puffinus assimilis	5,000 – 50,000	1987
Pelagodroma marina	5,000 – 50,000	1987
Fregetta grallaria	5,000 – 50,000	1987

Other threatened / endemic wildlife

The only breeding native mammal is *Arctocephalus tropicalis*. At least 39 species of native terrestrial invertebrates are known. The island is particularly rich in the listroderine weevils, endemic to the Tristan group as a whole.

There are no reptiles, amphibians, or freshwater fish, and there are no records, other than poultry, of introduced birds. An invertebrate fauna includes weevils and snails of particular interest, but with a relatively low number of native species. The only native breeding mammals are seals, which have been exploited in the past. Two whales, *Eubalaena glacialis australis* and *Physeter macrocephalus*, occur relatively frequently, and various species of dolphin, including *Lagenorhynchus obscurus*, are common.

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.

22. Land tenure/ownership:

Ownership category	On-site	Off-site
Crown	+	

23. Current land (including water) use:

Activity	On-site	Off-site	Scale
Fishery			
Nature Reserve & World Heritage Site			

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

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
Inaccessible Island was declared a nature reserve under Tristan da Cunha Conservation Ordinance (Amendment) of 1997, including the surrounding waters up to 12 nautical miles. Under this legislation, although Tristan islanders still retain the right to collect driftwood and guano, other access is restricted and all living resources are protected.		
Management Plan in place		
World Heritage Site status 2004		

26. Conservation measures proposed but not yet implemented:

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

The greatest and most immediate threats are the introduction of alien predators, most notably rats, and the accidental firing of the tussock.

27. Current scientific research and facilities:

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

A project to eradicate *Phormium tenax* is planned for September 2004.

A census of the breeding Procellaria aequinoctialis conspicillata is planned for November-December 2004.

28. Current conservation education:

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

There are no trails and and no information booklets at present. There have been a small number of school visits from St Mary's School, Tristan da Cunha.

29. Current recreation and tourism:

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

A small number of tourists (less than 200) visit from cruise ships each year, accompanied by government-appointed guides from Tristan da Cunha.

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30. Jurisdiction:

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

Administrator, Tristan da Cunha

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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.

No information available

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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

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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 1JY
UK
Email: pienkowski@cix.co.uk

FOR OFFICE USE ONLY.

DD MM YY

Designation date | Site Reference Number

2. Date this sheet was completed/updated:
11 November 2004

3. Country:
UK (Tristan da Cunha)

4. Name of the Ramsar site:
Nightingale Group

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): Yes

6. Geographical coordinates (latitude/longitude)**:**
37°24'S 12°29'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.

The five islands of the Tristan group lie within 40 km of each other in the mid South Atlantic Ocean, on similar latitudes 2,782 km from South Africa (Cape Town) and 3,947 km from South America (Mar del Plata). Nightingale Island lies 38 km southwest of Tristan and 22 km southeast of Inaccessible Island. The site includes all islands in group plus in-shore marine area.

Administrative region: Tristan da Cunha

8. Elevation (average and/or max. & min.) (metres)**:**

Min. 0
Max. 337
Mean No information available

9. Area (hectares)**:** ca 390 [+ marine area]

10. Overview:

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

There are no streams or 'gulches', but in the centre are four marshy areas known as 'The Ponds', in two of which are pools of open water. The predominant vegetation is dense *Spartina* tussock

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grassland, forming almost pure stands 2 – 3 m in height, usually on hard fibrous peat. There are some 20 ha of *Phylica*, in small groves, which have few epiphytes, other than lichens, and a sparse understorey. Around the central swamps, and on some of adjoining gently sloping ground, meadows of hummock-forming *Scirpus bicolor* replace the *Spartina*. Kelp extends offshore in the east but there is less to the south and west. There are no introduced mammals. The area is of great importance for bird populations.

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, 5, 6, 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 Important ecosystems include:
four marshy areas known as 'The Ponds', in two of which are pools of open water;
dense *Spartina* tussock grassland, forming almost pure stands 2 – 3 m in height, usually on hard fibrous peat;
around the central swamps, and on some of adjoining gently sloping ground, meadows of hummock-forming *Scirpus bicolor*;
[other relevant ecosystems?]
kelp extending offshore, including on submerged platform;
smaller islands and stacks;
cliffs;
brackish water temporary pools.

2 **Species of global conservation concern:**
Phoebetria fusca
Nesocichla eremita
Nesospiza acunhae
Nesospiza wilkinsi
Diomedea chlororhynchos
Eudyptes chrysocome

3 The terrestrial species include endemic *Nesocichla eremita procax*, *Nesospiza acunhae questi* and *N. wilkinsi wilkinsi*.
At least 31 species of native terrestrial invertebrates are known. These include five endemic listroderine weevils and seven of endemic drosophilid *Scaptomyza*.

5 More than 10,000 pairs of waterbirds occur regularly at this site.

6 **Breeding populations**

Common name	Species	Range (pairs)	% of population
	Sterna vittata	100 – 400	
	Eudyptes chrysocome	*c*.125,000	
	Diomedea chlororhynchos	*c*.5,000	
	Phoebetria fusca	125 – 250	

Pterodroma mollis	100 – 1,000	
Pachyptila vittata	>10,000	
Puffinus gravis	*c*.3,000,000	The largest known breeding population and the highest density, in the world, with an estimated one million pairs per km².
Pelagodroma marina	>10,000	
Fregetta grallaria	100 – 1,000	
Catharacta antarctica	100 – 510	

8 [Add info on lobster fishery etc]

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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:

South Atlantic Islands

b) biogeographic regionalisation scheme (include reference citation):

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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 islands are of volcanic origin, of varying geological age and stage of erosion, the oldest rocks dating back 18 million years. However, the three largest islands all show evidence of recent activity, and therefore cannot be regarded as volcanically extinct.
Geomorphology and landscape	Lying somewhat east of the crest of the mid-Atlantic Ridge, near its junction with the aseismic Walvis Ridge, the islands rise from a sea depth of about 3,500 m.
Nutrient status	
pH	
Salinity	

Soil	
Water permanence	
Summary of main climatic features	The climate of the Territory is cool temperate oceanic, but can vary locally from island to island. Lying on the edge of the west wind belt, the islands are under the influence of both maritime tropical (mT) and maritime polar (mP) air masses from the western South Atlantic. The pattern is dominated by the passage of often severe cyclonic storms, generated by outbursts of mP air on the Polar Front. The prevailing winds are northwesterly to southwesterly, occasionally from the north and south and only rarely from the east. Since the mP air is cooler than the ocean, and many fronts are occluded by the time they arrive, the weather is mostly cloudy with frontal rain. The islands also induce much orographic rainfall. In summer (October to March), the Tristan group may be influenced by the subtropical high pressure cell bringing mT air with orographic cloud, fewer storms and less rain than in the winter (April to September), though summer droughts seldom exceed a few weeks. The mean annual temperature at the Tristan settlement is 14.5ºC. Tristan (settlement) has a recorded mean annual rainfall of 1,676 mm, with rain on 250 days of the year. Rainfall on the uplands may be at least twice as heavy as that at sea level. Frosts at sea level are almost unknown. Nightingale island is usually cloud-free, being warmer and drier than Tristan. At all the islands cloud occasionally descends virtually to sea-level. The islands lie within the West Wind Drift, where the prevailing winds in the Southern Ocean impart an easterly set to the surface waters of some 13 km per day. The Subtropical Convergence usually lies between the Tristan group and Gough, but occasionally south of Gough. The area is therefore affected by both subantarctic and cold temperate mixed water types. Mean sea temperatures are around 18ºC in summer and 13ºC in winter.

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).

Lying somewhat east of the crest of the mid-Atlantic Ridge, near its junction with the aseismic Walvis Ridge, the islands rise from a sea depth of about 3,500 m.

Nightingale Island
There are no streams or 'gulches', but in the centre are four marshy areas known as 'The Ponds', in two of which are pools of open water. The predominant vegetation is dense *Spartina* tussock grassland, forming almost pure stands 2 – 3 m in height, usually on hard fibrous peat. There are some 20 ha of *Phylica*, in small groves, which have few epiphytes, other than lichens, and a sparse understorey. Around the central swamps, and on some of adjoining gently sloping ground, meadows of hummock-forming *Scirpus bicolor* replace the *Spartina*. Kelp extends offshore in the east but there is less to the south and west. There are no introduced mammals.

Middle Island
The island is covered in *Spartina* tussock and has a few boggy areas. Pin Rock, 9 m high, lies off the northwestern extremity.

Stoltenhoff Island
On its westerly (windward) side, low cliffs give way to bare rock where brackish water collects. The island is otherwise covered with short *Spartina* tussock below 1 m in height, through which many rocky outcrops protrude. Only one stunted tree (*Phylica*) has been recorded. To the east, separated

from the island and each other by narrow chasms, are a high narrow pinnacle and a large, vegetated stack.

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.

At least 212 plant taxa have been recorded in the Territory, including 35 native ferns and 58 native flowering plants. Of these, 20 fern and 34 flowering plant taxa are considered to be endemic. There are no reptiles, amphibians, or freshwater fish, and there are no records, other than poultry, of introduced birds. An invertebrate fauna includes weevils and snails of particular interest, but with a relatively low number of native species. The only native breeding mammals are seals, which have been exploited in the past. Two whales, *Eubalaena glacialis australis* and *Physeter macrocephalus*, occur relatively frequently, and various species of dolphin, including *Lagenorhynchus obscurus*, are common.

Nightingale Island

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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.*

The flora of the site is poor in species, due to the small size and narrow range of environments. Nineteen species of vascular plants and 15 pteridophytes are native, and by 1968 only six alien vascular plants had been recorded.

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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.*

Eleven bird species of global conservation concern occur in the Territory, six of which are endemic and of restricted-range, whose distributions define two Endemic Bird Areas. These are *Atlantisia rogersi* (Vu), *Nesocichla eremita* (NT), *Nesospiza acunhae* (Vu) and *N. wilkinsi* (Vu), all confined to the Tristan group and comprising the Tristan Islands EBA (079). *Nesiotis comeri* (Vu) and *Rowettia goughensis* (Vu) occur only on Gough Island (EBA 080). The remaining five species are breeding seabirds, *Diomedea exulans* (Vu), *Pheobetria fusca* (NT), *Pterodroma incerta* (Vu), Diomedea chlororhynchos (En) and Eudyptes chrysocome (Vu).

The Tristan group is exceptional in having three endemic genera – *Atlantisia*, *Nesocichla* and *Nesospiza*. The *Nesospiza* buntings are of particular interest because, as with the famous Darwin's finches (*Geospiza* spp.) of the Galapagos Islands, they have undergone remarkable speciation, with the two species (*N. acunhae* and *N. wilkinsi*) differing markedly in size and, on Nightingale Island, co-occur without interbreeding. On Inaccessible Island, where they also co-occur, there are two altitudinally segregated colour morphs of *N. acunhae*, as well as a hybrid complex involving *N. acunhae* and *N. wilkinsi*. Distinct subspecies of the thrush *Nesocichla eremita* are recognised from each of the three main islands.

On Inaccessible and Nightingale Islands, habitat destruction (by fire and the possible introduction of livestock) is a threat, but a far greater one is the accidental introduction of alien species, especially predatory mammals.

All of the Tristan group's restricted-range species are found in a wide variety of habitats, but are more abundant in some than in others.

Several seabird taxa are largely confined to the Territory when breeding. Both the Tristan da Cunha group and Gough are internationally important for their breeding populations of some twenty species. They include *Diomedea exulans dabbenena* (at its northernmost breeding locality on Inaccessible, only a few pairs, and on Gough, about 1,000 pairs per season), *Procellaria aequinoctialis conspicillata* (Inaccessible only), *Puffinus gravis* (almost confined to the Territory) and *Pterodroma incerta* (some hundreds of pairs on Tristan, some thousands of pairs on Gough). Note that the taxonomy and threat status used here follow Collar *et al*. (1994).

At least 30 bird taxa are known. Thirteen species of breeding seabird and three of the native landbirds occur. The seabirds comprise *Eudyptes chrysocome moseleyi*, *Diomedea chlororhynchos*, *Phoebetria fusca*, *Pterodroma mollis*, *Pachyptila vittata*, *Puffinus gravis*, *P. assimilis*, *Pelagodroma marina*, *Fregetta grallaria*, *Pelecanoides urinatrix* (>20,000 pairs), *Catharacta antarctica*, *Sterna vittata* and *Anous stolidus*. The breeding population of P. gravis is largest known, and at the highest density, in the world, with an estimated one million pairs per km². *Pterodroma brevirostris* may also breed. The terrestrial species include *Nesocichla eremita procax* (330 – 560 pairs, 1974 estimate), *Nesospiza acunhae questi* (560 – 1,120 pairs, 1974 estimate) and *N. wilkinsi wilkinsi* (30 pairs, 1974 estimate).

Non-breeding visitors include *Diomedea melanophris*, *Macronectes giganteus*, *M. halli*, *Fulmarus glacialoides*, *Daption capense*, *Procellaria a. aequinoctialis*, *P. a. conspicillata* and *Larus dominicanus*.

Species of global conservation concern:

Phoebetria fusca
Nesocichla eremita
Nesospiza acunhae
Nesospiza wilkinsi
Diomedea chlororhynchos
Eudyptes chrysocome moseleyi

Restricted range species

Tristan Islands Endemic Bird Areas: 3 of the 4 species of this EBA occur at this site.

Breeding populations

Species	Range (pairs)	Year
Sterna vittata	100 – 400	1974

Species	Numbers (pairs)	Year
Eudyptes chrysocome	*c*.125,000	1974
Diomedea chlororhynchos	*c*.5,000	1974
Phoebetria fusca	125 – 250	1974
Pterodroma mollis	100 – 1,000	1974
Pachyptila vittata	>10,000	1974
Puffinus gravis	*c*.3,000,000	1990
Pelagodroma marina	>10,000	1974
Fregetta grallaria	100 – 1,000	1974
Catharacta antarctica	100 – 510	1974

Other threatened / endemic wildlife

The only breeding native mammal is *Arctocephalus tropicalis*. At least 31 species of native terrestrial invertebrates are known. These include five endemic listroderine weevils and seven of endemic drosophilid *Scaptomyza*.

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.

There are traditional longboat trips from the settlement on Tristan to Nightingale Island to collect penguin and shearwater eggs, shearwater chicks and guano. About 30 wooden huts and shacks, and pathways, have been constructed on Nightingale for this purpose.

22. Land tenure/ownership:

Ownership category	On-site	Off-site
Crown		

23. Current land (including water) use:

Activity	On-site	Off-site	Scale
Fishery			
Traditional small, sustainable take of penguin and shearwater eggs, shearwater chicks and guano			

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

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

26. Conservation measures proposed but not yet implemented:

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

The site has been less affected by alien animals than the other sites, and no alien vertebrates have become established. Besides the annual harvest by Tristan islanders of eggs of *Eudyptes chrysocome moseleyi* and eggs and chicks of *Puffinus gravis*, of which the annual toll is not high, the remaining seabirds are little affected. The introduction of mammalian predators and tussock fires are the principal threats, while the recent die back of trees, possibly caused by an introduced fungal pathogen is being investigated but is, potentially, serious for *N. wilkinsi*.

27. Current scientific research and facilities:

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

The Tristan Darwin Initiative project (2003 – 2006) has produced a habitat map for Nightingale and aims to carry out a seabird census in 2005/6.

A conservation management project will start in September 2004 with the aims of controlling invasive plant species, establishing land bird and seabird monitoring programmes and improving access paths around Nightingale both for research scientists and tourists.

28. Current conservation education:

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

There is a path from the landing site used by tourists to the nearest pond where *Diomedea chlororyhnchos* can be seen. An information booklet will be prepared in 2005.

29. Current recreation and tourism:

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

A small number of tourists (less than 300) visit Nightingale each year accompanied by Tristan da Cunha government guides.

Nightingale is a holiday destination for the inhabitants of Tristan da Cunha, and several families visit their huts there annually.

30. Jurisdiction:

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

Administrator, Tristan da Cunha

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.

No information available

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

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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 1JY
UK
Email: pienkowski@cix.co.uk

FOR OFFICE USE ONLY.

DD MM YY

Designation date | Site Reference Number

2. Date this sheet was completed/updated:

11 November 2004

3. Country:

UK (Tristan da Cunha)

4. Name of the Ramsar site:

Tristan Island

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): Yes

6. Geographical coordinates (latitude/longitude)**:**

37°06'S 12°18'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.

The five islands of the Tristan group lie within 40 km of each other in the mid South Atlantic Ocean, on similar latitudes 2,782 km from South Africa (Cape Town) and 3,947 km from South America (Mar del Plata). The site includes the island and the surrounding waters, but excludes the settlement and road area.

Administrative region: Tristan da Cunha

8. Elevation (average and/or max. & min.) (metres)**:**

Min. 0
Max. 2060
Mean No information available

9. Area (hectares)**:** 9600 [+ marine area]

10. Overview:

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

Roughly circular, 96 km², with an average diameter of some 12 km, Tristan is a strato-volcano made up of interbedded lavas (mainly basaltic) and pyroclastic deposits, with a central cone, the Peak, rising to 2,060 m. At the summit it is an unbreached crater, containing a shallow lake that is frozen in winter. The flanks are steepest near the summit, and gradients slacken to a more gently inclined area known as the Base plateau, lying between 600 m and 900 m. To seaward, the Base is truncated by precipices and cliffs, but there are discontinuous lowlands between the cliffs and the sea, the three most prominent being the Settlement Plain (8 km by 1 km) in the northwest, Sandy Point in the east and Stony Hill and Cave Point in the south. The last eruption was that of October 1961, at the eastern end of the Settlement Plain, when about 0.5 km² of land, mostly as lava flows, was added. Seaward erosion of both the main flows and the coastal strips has produced a precipitous cliffed coastline fringed by narrow boulder beaches and rocky headlands. Permanent running water is found only on the Settlement Plain, although small water bodies, including three crater lakes, exist just above 600 m.

There are five native vegetation types, clearly zoned according to altitude and topography. On the coast and up to 600 m the vegetation consists of grassland. *Blechnum palmiforme* and *P. arborea* dominate the zone above, between 600 m and 750 m. Above 750 m, to about 900 m, around the lower part of the Peak, the ground is generally boggy, the tree ferns giving way to mats of *Blechnum penna-marina* and the aliens *Rumex acetosella* and *Holcus lanatus*. Above 900 m lies a wet heath comprising extensive mats of *Empetrum rubrum* and *Rhacomitrium lanuginosum*, together with *Acaena stangii* and scattered sedges, followed by moor and feldmark vegetation (an assemblage of dwarf, cushion-forming and crevice plants) on higher slopes. Above 1,500 m, on loose cinders, is an alpine tundra of very sparse vegetation. However, *Empetrum* and bryophytes can be found in the main crater at some 2,000 m. Encircling the island is a sublittoral zone of *Macrocystis* kelp.

At least 212 plant taxa have been recorded in the Territory, including 35 native ferns and 58 native flowering plants. Of these, 20 fern and 34 flowering plant taxa are considered to be endemic. Amongst seabirds, Tristan is the only known breeding site within the group of *Pterodroma incerta* and of *Puffinus griseus*, while numbers of *Diomedea chlororhynchos* are the highest for any island in the Territory. Of 62 native terrestrial invertebrates recorded, four are endemic.

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, 5, 6, 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 Important ecosystems include:

at the summit an unbreached crater, containing a shallow lake that is frozen in winter;

a precipitous cliffed coastline fringed by narrow boulder beaches and rocky headlands;

stacks;

a youthful drainage system, with radially arranged flat-bottomed gorges, or ‘gulches’, deeply incised into the main sequence of lava flows on the Base plateau;

permanent running water, found only on the Settlement Plain;

small water bodies, including three crater lakes, just above 600 m;

on the coast and up to 600 m the vegetation consists of grassland (remnants of native *Spartina arundinacea* tussock and dominant imported pasture grasses);

Above 750 m, to about 900 m, around the lower part of the Peak, the ground is generally boggy,

the tree ferns giving way to mats of *Blechnum penna-marina* and the aliens *Rumex acetosella* and *Holcus lanatus*;

Above 900 m lies a wet heath comprising extensive mats of *Empetrum rubrum* and *Rhacomitrium lanuginosum*, together with *Acaena stangii* and scattered sedges;

Encircling the island, a sublittoral zone of *Macrocystis* kelp.

2 **Species of global conservation concern**
Phoebetria fusca
Diomedea chlororhynchos
Eudyptes chrysocome
Pterodroma incerta
Nesocichla eremite (*Nesocichla e. eremita*, confined to this island and numbering 40 – 60 pairs in 1974)

3 At least 212 plant taxa have been recorded in the Territory, including 35 native ferns and 58 native flowering plants. Of these, 20 fern and 34 flowering plant taxa are considered to be endemic.

The terrestrial bird species include the restricted-range *Gallinula comeri*, introduced from Gough Island in 1956 (3,000 pairs, 1993 estimate), and *Nesocichla e. eremita*, confined to this island and numbering 40 – 60 pairs in 1974.

Amongst seabirds, Tristan is the only known breeding site within the group of *Pterodroma incerta* and of *Puffinus griseus* while numbers of *Diomedea chlororhynchos* are the highest for any island in the Territory. *Pterodroma macroptera*, *P. incerta* and *Procellaria cinerea* have not been proven to breed elsewhere in the Tristan group, possibly because they are winter breeders.

Of 62 native terrestrial invertebrates recorded, four are endemic.

5 More than 10,000 pairs of waterbirds occur regularly at this site.

6 **Breeding populations**

Common name	Species	Range (pairs)	% of population
	Gallinula comeri	3,000	
	Sterna vittata	50 – 70	
	Diomedea chlororhynchos	16,000 – 30,000	highest numbers for any island in the Territory
	Phoebetria fusca	2,000 – 3,000	
	Pterodroma macroptera	1,000 – 3,000	
	Pterodroma incerta	100 – 200	the only known breeding site within the group
	Pterodroma mollis	100 – 500	

	Pachyptila vittata	1,000 – 10,000	

8 [Add info on lobster fishery etc]

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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:

South Atlantic Islands

b) biogeographic regionalisation scheme (include reference citation):

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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 islands are of volcanic origin, of varying geological age and stage of erosion, the oldest rocks dating back 18 million years. However, the three largest islands all show evidence of recent activity, and therefore cannot be regarded as volcanically extinct.
Geomorphology and landscape	Lying somewhat east of the crest of the mid-Atlantic Ridge, near its junction with the aseismic Walvis Ridge, the islands rise from a sea depth of about 3,500 m.
Nutrient status	
pH	
Salinity	
Soil	
Water permanence	

Summary of main climatic features	The climate of the Territory is cool temperate oceanic, but can vary locally from island to island. Lying on the edge of the west wind belt, the islands are under the influence of both maritime tropical (mT) and maritime polar (mP) air masses from the western South Atlantic. The pattern is dominated by the passage of often severe cyclonic storms, generated by outbursts of mP air on the Polar Front. At Tristan, the prevailing winds are northwesterly to southwesterly, occasionally from the north and south and only rarely from the east. Since the mP air is cooler than the ocean, and many fronts are occluded by the time they arrive, the weather is mostly cloudy with frontal rain. The islands also induce much orographic rainfall. In summer (October to March), the Tristan group may be influenced by the subtropical high pressure cell bringing mT air with orographic cloud, fewer storms and less rain than in the winter (April to September), though summer droughts seldom exceed a few weeks. The mean annual temperature at the Tristan settlement is 14.5º. Tristan (settlement) has a recorded mean annual rainfall of 1,676 mm, with rain on 250 days of the year. Rainfall on the uplands may be at least twice as heavy as that at sea level. Snow lies intermittently during the winter above about 600 m on Tristan, but frosts at sea level are almost unknown. The cloud base at Tristan lies usually above 600 m, but frequently descends below the Base plateau. At all the islands it occasionally descends virtually to sea-level. The islands lie within the West Wind Drift, where the prevailing winds in the Southern Ocean impart an easterly set to the surface waters of some 13 km per day. The Subtropical Convergence usually lies between the Tristan group and Gough, but occasionally south of Gough. The Territory is therefore affected by both subantarctic and cold temperate mixed water types. Mean sea temperatures are around 18ºC in summer and 13ºC in winter at Tristan and Gough Island, respectively.

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).

Roughly circular, 96 km², with an average diameter of some 12 km, Tristan is a strato-volcano made up of interbedded lavas (mainly basaltic) and pyroclastic deposits, with a central cone, the Peak, rising to 2,060 m. It is geologically the youngest in the group, *c*.500,000 years old. At the summit it is an unbreached crater, containing a shallow lake that is frozen in winter. The flanks are steepest near the summit, and gradients slacken to a more gently inclined area known as the Base plateau, lying between 600 m and 900 m. To seaward, the Base is truncated by precipices and cliffs, but there are discontinuous lowlands between the cliffs and the sea, the three most prominent being the Settlement Plain (8 km by 1 km) in the northwest, Sandy Point in the east and Stony Hill and Cave Point in the south. Numerous parasitic cones, resulting from secondary eruptions, protrude from the flanks of the Peak, the Base plateau and coastal strips. At least eight on the Base plateau are considered less than 25,000 years old. The last eruption was that of October 1961, at the eastern end of the Settlement Plain, when about 0.5 km² of land, mostly as lava flows, was added. Seaward erosion of both the main flows and the coastal strips has produced a precipitous cliffed coastline fringed by narrow boulder beaches and rocky headlands. Two stacks, The Hardies, the higher 37 m, lie about 3 km southwest of Herald Point in the northwest. The island retains a youthful drainage system, with radially arranged flat-bottomed gorges, or ‘gulches’, deeply incised into the main sequence of lava flows on the Base plateau. Permanent running water is found only on the Settlement Plain, although small water bodies, including three crater lakes, exist just above 600 m.

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.

At least 212 plant taxa have been recorded in the Territory, including 35 native ferns and 58 native flowering plants. Of these, 20 fern and 34 flowering plant taxa are considered to be endemic. There are no reptiles, amphibians, or freshwater fish, and there are no records, other than poultry, of introduced birds. An invertebrate fauna includes weevils and snails of particular interest, but with a relatively low number of native species. The only native breeding mammals are seals, which have been exploited in the past. Two whales, *Eubalaena glacialis australis* and *Physeter macrocephalus*, occur relatively frequently, and various species of dolphin, including *Lagenorhynchus obscurus*, are common.

On Tristan itself, there are five native vegetation types, clearly zoned according to altitude and topography. On the coast and up to 600 m the vegetation consists of grassland (remnants of native *Spartina arundinacea* tussock and dominant imported pasture grasses), with fern-bush (including tree ferns *Blechnum palmiforme*) and scattered thickets of island trees *Phylica arborea*. The latter species is recovering on cliffs above the Settlement Plain, following an Island Council ban on cutting. *Blechnum palmiforme* and *P. arborea* dominate the zone above, between 600 m and 750 m. Above 750 m, to about 900 m, around the lower part of the Peak, the ground is generally boggy, the tree ferns giving way to mats of *Blechnum penna-marina* and the aliens *Rumex acetosella* and *Holcus lanatus*. Above 900 m lies a wet heath comprising extensive mats of *Empetrum rubrum* and *Rhacomitrium lanuginosum*, together with *Acaena stangii* and scattered sedges, followed by moor and feldmark vegetation (an assemblage of dwarf, cushion-forming and crevice plants) on higher slopes. Above 1,500 m, on loose cinders, is an alpine tundra of very sparse vegetation. However, *Empetrum* and bryophytes can be found in the main crater at some 2,000 m. Encircling the island is a sublittoral zone of *Macrocystis* kelp.

The Settlement Plain has been overgrazed by sheep and cattle, the original cover virtually replaced by the imported pastures. Stony Beach is badly eroded by feral cattle, likewise Sandy Point where there is also an orchard and a conifer plantation. However, goats, pigs and possibly rabbits did not build up large, destructive feral populations, as on St Helena, the reasons for which remain obscure. Introduced rats and mice are present but feral cats have been extirpated.

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.*

At least 212 plant taxa have been recorded in the Territory, including 35 native ferns and 58 native flowering plants. Of these, 20 fern and 34 flowering plant taxa are considered to be endemic.

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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.*

Eleven bird species of global conservation concern occur in the Territory, six of which are endemic and of restricted-range, whose distributions define two Endemic Bird Areas. These are *Atlantisia rogersi* (Vu), *Nesocichla eremita* (NT), *Nesospiza acunhae* (Vu) and *N. wilkinsi* (Vu), all confined to the Tristan group and comprising the Tristan Islands EBA (079). *Nesiotis comeri* (Vu) and *Rowettia goughensis* (Vu) occur only on Gough Island (EBA 080). The remaining five species are breeding seabirds, *Diomedea exulans* (Vu), *Pheobetria fusca* (NT) and *Pterodroma incerta* (Vu), Diomedea chlororhynchos (En) and Eudyptes chrysocome (Vu).

The Tristan group is exceptional in having three endemic genera – *Atlantisia*, *Nesocichla* and *Nesospiza*. The *Nesospiza* buntings are of particular interest because, as with the famous Darwin's finches (*Geospiza* spp.) of the Galapagos Islands, they have undergone remarkable speciation, with the two species (*N. acunhae* and *N. wilkinsi*) differing markedly in size and, on Nightingale Island, co-occur without interbreeding. On Inaccessible Island, where they also co-occur, there are two altitudinally segregated colour morphs of *N. acunhae*, as well as a hybrid complex involving *N. acunhae* and *N. wilkinsi*. Distinct subspecies of the thrush *Nesocichla eremita* are recognised from each of the three main islands.

On Tristan Island, the modification of vegetation by grazing livestock may have contributed to the extinction of the Tristan Moorhen *Gallinula nesiotis* (Ex) and, locally, of *N. acunhae*, although introduced predators (cats and rats) are expected to have had a more significant role. *N. eremita* is the only native landbird surviving on the island, although the population has decreased markedly since the arrival of man and his commensals. *Gallinula comeri* has been introduced to Tristan from Gough – see site account.

All of the Tristan group's restricted-range species are found in a wide variety of habitats, but are more abundant in some than in others.

Several seabird taxa are largely confined to the Territory when breeding. Both the Tristan da Cunha group and Gough are internationally important for their breeding populations of some twenty species. They include *Diomedea exulans dabbenena* (at its northernmost breeding locality on Inaccessible, only a few pairs, and on Gough, about 1,000 pairs per season), *Procellaria aequinoctialis conspicillata* (Inaccessible only), *Puffinus gravis* (almost confined to the Territory) and *Pterodroma incerta* (some hundreds of pairs on Tristan, some thousands of pairs on Gough). Note that the taxonomy and threat status used here follow Collar *et al*. (1994).

Although as many as 56 bird taxa have been recorded, there are now only 13 known species of breeding seabirds and two species of resident landbirds. The seabirds include *Eudyptes chrysocome moseleyi*, *Diomedea chlororhynchos*, *Phoebetria fusca*, *Pterodroma macroptera*, *P. mollis*, *P. incerta*, *Pachyptila vittata*, *Procellaria cinerea*, *Puffinus gravis*, *P. griseus*, *Catharacta antarctica*, *Sterna vittata* and *Anous stolidus*. Tristan is the only known breeding site within the group of *Pterodroma*

incerta and of *Puffinus griseus* while numbers of *Diomedea chlororhynchos* are the highest for any island in the Territory. *Pterodroma macroptera*, *P. incerta* and *Procellaria cinerea* have not been proven to breed elsewhere in the Tristan group, possibly because they are winter breeders. There are currently an estimated 40,000 breeding pairs of seabirds, most known from the southeastern quadrant, which has suffered least from human disturbance. The estimated breeding density is only 500 pairs per km².

The terrestrial species include the restricted-range *Gallinula comeri*, introduced from Gough Island in 1956 (3,000 pairs, 1993 estimate), and *Nesocichla e. eremita*, confined to this island and numbering 40 – 60 pairs in 1974.

There are more records of non-breeding visitors and vagrants on Tristan than from the other islands of the group. This is probably due to the island's larger size and permanent human presence. Most records are from the settlement area. Seabirds include *Diomedea exulans*, *D. melanophris*, *Macronectes giganteus*, *M. halli*, *Fulmarus glacialoides*, *Daption capense*, *Procellaria a. aequinoctialis*, *P. a. conspicillata*, *Puffinus gravis*, *Oceanites oceanicus*, *Pelagodroma marina* and *Larus dominicanus*. Shorebirds and landbirds include *Casmerodius albus*, *Egretta thula*, *Bubulcus ibis*, *Porphyrula martinica*, *Calidris fuscicollis* and *Hirundo rustica*. The strong westerlies create favourable conditions for a crossing from South America, and this would explain the presence of gallinules and other non-breeding landbirds that have reached Tristan from that continent. The site requires much further field study, especially the southern side.

Species of global conservation concern

Phoebetria fusca
Pterodroma incerta
Nesocichla eremita
Diomedea chlororhynchos
Eudyptes chrysocome

Restricted range species

Tristan Islands Endemic Bird Area: 1 of the 4 species of this EBA occur at this site.

Breeding populations

Species	Range (pairs)	Year
Gallinula comeri	3,000	1993
Sterna vittata	50 – 70	1974

Species	Range (pairs)	Year
Diomedea chlororhynchos	16,000 – 30,000	1974
Phoebetria fusca	2,000 – 3,000	1974
Pterodroma macroptera	1,000 – 3,000	1974
Pterodroma incerta	100 – 200	1974
Pterodroma mollis	100 – 500	1974
Pachyptila vittata	1,000 – 10,000	1974

Other threatened / endemic wildlife

There are no endemic mammals. The only breeding native mammal is the fur seal *Arctocephalus tropicalis*, of which there is a small colony at Cave Point on the south side of the island. Elephant seals *Mirounga leonina* haul out regularly on Tristan beaches and breed sporadically. *Eubalaena glacialis* (En) occurs in offshore waters between September and November, but in very low numbers. Of 62 native terrestrial invertebrates recorded, only four are endemic.

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.

One of the most isolated communities in the world, the human population in 1993 was just over 300 (eight family names), all on the largest and main island of Tristan but for the six non-resident members of a South African meteorological team on Gough. The Tristan settlement, Edinburgh, in the northwest, has some 75 homes (100 families). There is no air link. None is on any regular shipping lane, but there is a shipping link with Cape Town. The community is self-sufficient in food due to the surrounding seas and to the management of the grasslands around the village and the Potato Patches (about 3 km southwest) where the staple potato crop is grown. The economy is buoyant, based on crayfish *Jasus tristani* (the frozen product is exported), philately (worldwide sales) and handicrafts (mainly woollen goods). The other islands are uninhabited, but there are traditional longboat trips to Nightingale Island to collect penguin and shearwater eggs, shearwater chicks and guano. About 30 wooden huts and shacks, and pathways, have been constructed on Nightingale for this purpose. Inaccessible Island has, at least in recent times, been less often visited.

22. Land tenure/ownership:

Ownership category	On-site	Off-site
?Crown	+	
?Private		?+

23. Current land (including water) use:

Activity	On-site	Off-site	Scale
Fishery	+	+	
Crop-growing		?+	
Livestock-grazing	?	+	
[insert others]			

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

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

26. Conservation measures proposed but not yet implemented:

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

Protection of the birds of the Tristan group is provided for by the Tristan da Cunha Conservation ordinance of 1976 (amended 1984 and 1986). Tristan itself, as the only inhabited island, has incurred the greatest effects of human activity. These include clearance of native vegatation for grazing, tree felling, fire and, in particular, predation by introduced mammals.

Before the arrival of man, the island may have supported 19 seabird species and four landbird species. *Diomedea exulans dabbenena* became extinct as a breeder between 1880 and 1907 due to excessive culling, and *Macronectes* (probably *M. giganteus*) became similarly extinct around 1870 due to disturbance and a decrease in its food supply, and is now only a non-breeding visitor to the Tristan group. *Nesospiza acunhae* became extinct on Tristan between 1852 and 1873, probably due to the destruction of the low-lying tussock. *Gallinula nesiotis* was thought to have become extinct between 1873 and 1906.

The southeastern sector, which remains the largest refuge for *Nesocichla* and seabirds, and is rarely visited, should remain a wilderness area, a yardstick against which to assess the human impact on the avifauna elsewhere on Tristan.

On Tristan, *Nesocichla eremita* has decreased markedly, due to overgrazing, introductions of alien plants, predation by cats and nest predation by rats. The current population is restricted largely to 'gulches' on the Base plateau. There are no accurate data on population trends, but a decrease is suggested by reports that the species no longer inhabits 'gulches' near the Hillpiece (Settlement Plain), nor visits the settlement itself, even though in the last 25 years birds have been seen in *Phylica* above the new volcano. The genetic identity of the population is threatened by introgression from birds (other subspecies) brought over from Inaccessible and Nightingale Islands.

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27. Current scientific research and facilities:

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

A project funded by the UK Darwin Initiative is in progress (June 03 – May 06) to draw up the Biodiversity Action Plan for Tristan. This project will also establish seabird monitoring plots and habitat surveys on Tristan.

The Tristan Natural Resources Department is equipped for scientific research and staff members are in the process of being trained in monitoring techniques.

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28. Current conservation education:

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

There are two access routes to the mountain used by tourists.

Parties of school children are also taken on these routes when visiting the mountain plateau. School visits are also made to the recent volcano near the settlement.

A field guide to the wildlife of Tristan is planned for publication in 2006.

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29. Current recreation and tourism:

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

Approximately 1200 tourists visit Tristan annually, although less than 200 venture beyond the settlement and onto the mountain.

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30. Jurisdiction:

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

Administrator, Tristan da Cunha

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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.

No information available

32. Bibliographical references:

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

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