

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th Conference of the Contracting Parties (2005).

Notes 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. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

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

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 02 February 1999

3. Country:

UK (Scotland)

4. Name of the Ramsar site:

Loch of Inch and Torrs Warren

5. Designation of new Ramsar site or update of existing site:

This RIS is for: Updated information on an existing Ramsar site

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area:

** Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

7. Map of site included:

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

a) A map of the site, with clearly delineated boundaries, is included as:

- i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* ;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) *Yes*
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* ;

b) **Describe briefly the type of boundary delineation applied:**

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

8. Geographical coordinates (latitude/longitude):

54 50 30 N 04 52 30 W

9. General location:

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

Nearest town/city: Wigtown.

Loch of Inch is 2.5 km east of Stranraer; Torrs Warren is approx. 7 km south-east of Stranraer.

Administrative region: Dumfries and Galloway

10. Elevation (average and/or max. & min.) (metres): 11. Area (hectares): 2111.39

Min.	-2
Max.	13
Mean	3

12. General overview of the site:

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

The Ramsar site is comprised of two separate sites: a large eutrophic freshwater loch (Loch of Inch) and an area of foreshore and sand dunes (Torrs Warren). The latter system contains several sand dune habitats of international importance and nationally important examples of dune slacks. Both components of the site support, in winter, internationally important numbers of Greenland white-fronted geese and a nationally important number of hen harrier; the overall assemblage of wintering waterfowl is also of interest.

13. 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, 6

14. Justification for the application of each Criterion listed in 13 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).

Ramsar criterion 1

There are outstanding examples of sand dune and dune slack habitats in the dune system at Torrs Warren.

Ramsar criterion 6 – species/populations occurring at levels of international importance.

Qualifying Species/populations (as identified at designation):

Species with peak counts in winter:

Greenland white-fronted goose, <i>Anser albifrons flavirostris</i> , Greenland	641 individuals, representing an average of 2.3% of the population (5 year peak mean for 1996/7-2000/01)
Hen harrier, <i>Circus cyaneus</i> , Europe	8 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1991/92-1995/96)

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See www.bto.org/survey/webs/webs-alerts-index.htm.

15. 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:

Atlantic

b) biogeographic regionalisation scheme (include reference citation):

Council Directive 92/43/EEC

16. 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	acidic, sand, mud, alluvium, nutrient-poor, sedimentary
Geomorphology and landscape	lowland, coastal, floodplain, intertidal sediments (including sandflat/mudflat), enclosed coast (including embayment), estuary
Nutrient status	mesotrophic
pH	acidic
Salinity	brackish / mixosaline, fresh, saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Aspatria, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/aspatria.html) Max. daily temperature: 12.5° C Min. daily temperature: 5.6° C Days of air frost: 49.4 Rainfall: 1002.5 mm Hrs. of sunshine: 1499.4

General description of the Physical Features:

The site comprises two separate areas: a large eutrophic freshwater loch (Loch of Inch) and an area of foreshore and sand dunes (Torrs Warren). The latter system contains important examples of dune slacks.

17. 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).

The site comprises two separate areas: a large eutrophic freshwater loch (Loch of Inch) and an area of foreshore and sand dunes (Torrs Warren). The latter system contains important examples of dune slacks.

18. Hydrological values:

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

No special values known

19. Wetland types:

Marine/coastal wetland

Code	Name	% Area
E	Sand / shingle shores (including dune systems)	68
F	Estuarine waters	13.6
Ts	Freshwater marshes / pools: seasonal / intermittent	10.7
H	Salt marshes	4.9
O	Freshwater lakes: permanent	2.8

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

Loch of Inch: shallow freshwater lake; eastern shore is fringed by well developed fen communities; aquatic plants grow down to a depth of about 2 metres. Uncommon plant species present include the nationally scarce six-stamened waterwort *Elatine hexandra*.

Torrs Warren: acidic sand dune system with highly varied dune morphology; includes areas of accretion and erosion and well developed pools or slacks. Important habitats are the Annex I types: Embryonic shifting dunes; Shifting dunes along the shoreline with *Ammophila arenaria* ("white dunes"); Fixed dunes with herbaceous vegetation ("grey dunes"); Atlantic decalcified fixed dunes (*Calluno-Ulicetea*). The dunes support a large variety of flowering plants including nationally scarce cowbane *Cicuta virosa*, sea radish *Raphanus maritimus*, lesser tussock-sedge *Carex diandra* and coralroot orchid *Corallorhiza trifida*.

Ecosystem services

21. 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.*

Assemblage.

The site is internationally important because it contains the following Habitats Directive Annex I features:

H2110 Embryonic shifting dunes

- H2120 Shifting dunes along the shoreline with *Ammophila arenaria* (“white dunes”)
 H2130 Fixed dunes with herbaceous vegetation (“grey dunes”)
 H2150 Atlantic decalcified fixed dunes (*Calluno-Ulicetea*)

Nationally important species occurring on the site.

Higher Plants.

Elatine hexandra, *Cicuta virosa*, *Corallorhiza trifida*

22. 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.*

Birds

Species currently occurring at levels of national importance:

Species with peak counts in winter:

Hen harrier, <i>Circus cyaneus</i> , Europe	8 individuals, representing an average of 1% of the GB population (5 year peak mean 1991/92-1995/96)
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Species Information

Nationally important species occurring on the site.

Amphibians

S1166 *Triturus cristatus* Great crested newt (Habitats Directive Annex II species)

Invertebrates.

Hydroporus brevis (British Red data book species) recorded from the site in 1943; looked for in 1999 but not found.

23. Social and cultural values:

Describe if the site has any general social and/or 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.

Aesthetic

Archaeological/historical site

Scientific research

Sport hunting

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? **No**

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:

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

24. Land tenure/ownership:

Ownership category	On-site	Off-site
Local authority, municipality etc.		+
National/Crown Estate	+	
Private	+	

25. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	
Tourism		+
Recreation	+	+
Current scientific research	+	
Commercial forestry		+
Fishing: recreational/sport		+
Bait collection	+	+
Permanent arable agriculture		+
Permanent pastoral agriculture	+	+
Hunting: recreational/sport		+
Sewage treatment/disposal		+
Mineral exploration (excl. hydrocarbons)		+
Transport route		+
Urban development		+
Non-urbanised settlements		+
Military activities	+	

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

Explanation of reporting category:

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)			
			On-Site	Off-Site	Major Impact?
No factors reported	NA				

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?

Is the site subject to adverse ecological change? NO

27. 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
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	
Special Protection Area (SPA)	+	
Management agreement	+	
Site management statement/plan implemented	+	
Special Area of Conservation (SAC)	+	

b) Describe any other current management practices:

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

28. Conservation measures proposed but not yet implemented:

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

No information available

29. Current scientific research and facilities:

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

Geomorphological studies - Glasgow University and SNH.

Fixed point photography - conservation liaison group.

Lichen surveys & monitoring - conservation liaison group.

Goose and hen harrier roost monitoring - local ornithologists.

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

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

None reported

31. Current recreation and tourism:

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

Activities:

There are a number of caravan sites in the vicinity of the site, and the area is popular in the summer due to the easy access to good quality beaches. However, because of MoD activities/restrictions, people are restricted to the beach area and therefore do not affect the dune habitats. The beach is used by geese for roosting but at different times from the majority of visitors to the beach, so these recreational activities have no adverse affect on the interest of the site. There is limited sport shooting (wildfowl) in the area, but this tends to be on farmland and away from the Ramsar site. There has been some disturbance in these areas in the past to the Greenland white-fronted geese but this does not appear to be a problem currently.

There are formal paths around the Loch of Inch, but the gardens are only open during the summer months and again, there is no effect on the bird interest.

Facilities provided:

Caravan sites

Seasonality:

Mainly during the summer months. Wildfowling over winter.

32. Jurisdiction:

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

Scottish Executive, Environment and Rural Affairs Department

33. 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.

Scottish Natural Heritage, 2 Anderson Place, Edinburgh, EH6 5NP

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Site-relevant references

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- Musgrove, AJ, Pollitt, MS, Hall, C, Hearn, RD, Holloway, SJ, Marshall, PE, Robinson, JA & Cranswick, PA (2001) *The Wetland Bird Survey 1999–2000: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge. www.wwt.org.uk/publications/default.asp?PubID=14
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- Weighell, AJ, Donnelly, AP & Calder, K (eds.) (2000) *Directory of the Celtic coasts and seas*. Joint Nature Conservation Committee, Peterborough

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