

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: 30 October 2001

3. Country:

UK (Scotland)

4. Name of the Ramsar site:

Firth of Forth

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):

56 01 00 N 02 53 00 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.

The site is on the east coast of Scotland

Administrative region: City of Edinburgh; Clackmannanshire; East Lothian; Falkirk; Fife; Stirling; West Lothian

10. Elevation (average and/or max. & min.) (metres): 11. Area (hectares): 6313.68

Min.	-2
Max.	4
Mean	0

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 Firth of Forth is a large coastal area comprising a complex of estuaries, mudflats, rocky shorelines, beaches and saltmarshes. It stretches from Alloa Inches in the River Forth to Fife Ness and Dunbar in the east. It is considered to act as a single ecological unit. Several large urban areas, including Edinburgh, are adjacent to the site and these include several areas of heavy industry. Furthermore the Forth is one of the most important shipping areas in Scotland. The site is important for a large number of wintering waders and wildfowl, many in nationally and internationally important numbers.

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).

5, 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 5

Assemblages of international importance:

Species with peak counts in winter:

72281 waterfowl (5 year peak mean 1998/99-2002/2003)

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

Qualifying Species/populations (as identified at designation):

Species with peak counts in spring/autumn:

Pink-footed goose , <i>Anser brachyrhynchus</i> , Greenland, Iceland/UK	7863 individuals, representing an average of 3.2% of the population (5 year peak mean 1998/9-2002/3)
Common shelduck , <i>Tadorna tadorna</i> , NW Europe	3596 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)
Common redshank , <i>Tringa totanus totanus</i> ,	5151 individuals, representing an average of 2% of the population (5 year peak mean 1998/9-2002/3)
Ruddy turnstone , <i>Arenaria interpres interpres</i> , NE Canada, Greenland/W Europe & NW Africa	936 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

Slavonian grebe , <i>Podiceps auritus</i> , Northwest Europe	68 individuals, representing an average of 2% of the population (5 year peak mean 1998/9-2002/3)
Common goldeneye , <i>Bucephala clangula clangula</i> , NW & C Europe	1789 individuals, representing an average of 7.1% of the GB population (5 year peak mean 1998/9-2002/3)
Red knot , <i>Calidris canutus islandica</i> , W & Southern Africa (wintering)	7295 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3)
Bar-tailed godwit , <i>Limosa lapponica lapponica</i> , W Palearctic	1737 individuals, representing an average of 1.4% of the population (5 year peak mean 1998/9-2002/3)

Species/populations identified subsequent to designation for possible future consideration under criterion 6.

Species regularly supported during the breeding season:

Common tern , <i>Sterna hirundo hirundo</i> , N & E Europe	889 apparently occupied nests, representing an average of 1.4% of the breeding population (Seabird 2000 Census)
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Species with peak counts in spring/autumn:

Goosander , <i>Mergus merganser merganser</i> , NW & C Europe	191 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)
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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.

Details of bird species occurring at levels of National importance are given in Section 22

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	shingle, sand, mud
Geomorphology and landscape	lowland, coastal, intertidal sediments (including sandflat/mudflat), open coast (including bay), enclosed coast (including embayment), estuary, lagoon, intertidal rock
Nutrient status	
pH	no information
Salinity	brackish / mixosaline, saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Edinburgh, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/edinburgh.html) Max. daily temperature: 12.2° C Min. daily temperature: 5.1° C Days of air frost: 54.5 Rainfall: 676.2 mm Hrs. of sunshine: 1405.8

General description of the Physical Features:

The Firth of Forth is a complex estuarine site, stretching for over 100 km from the River Forth at Stirling eastwards past Edinburgh and along the coasts of Fife and East Lothian to a wide estuary mouth. A wide range of coastal and intertidal habitats is found within the site, including saltmarshes, dune systems, maritime grasslands, heath and fen, cliff slopes, shingle and brackish lagoons. Extensive mudflats occur particularly in the Inner Firth, notably at Kinneil Kerse and Skinflats on the south shore and Torry Bay on the north shore. Typically, the flats support a rich invertebrate fauna, with eelgrass *Zostera* spp. growing on the main mudflats. In the Outer Firth, the shoreline diversifies, with sandy shores, some rocky outcrops, mussel beds and some artificial sea-walls. The North Berwick coast includes cliffs and dune grassland, with extensive dune systems at Aberlady.

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 catchments of the River Forth and Firth of Forth Estuary cover a total area greater than 3600 km². The area can be split into two distinct sections; the River Forth drainage basin and those catchments that drain into the southern side of the Forth estuary.

The River Forth rises in the south-central Highlands. Glacial drift deposits are present in the middle and eastern parts of the catchment, and sands and gravels are found throughout the lowland valleys. The catchments along the southern side of the Forth Estuary include the major rivers Carron, Avon, Almond and Water of Leith. These areas are low-lying and are more urbanised and industrialised than the River Forth catchment itself. Consequently, dominant land uses are agriculture and built-up areas.

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18. Hydrological values:

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

Shoreline stabilisation and dissipation of erosive forces

19. Wetland types:

Marine/coastal wetland

Code	Name	% Area
G	Tidal flats	74
E	Sand / shingle shores (including dune systems)	11
D	Rocky shores	9.5
H	Salt marshes	4.5
J	Coastal brackish / saline lagoons	1

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.

The site is mostly invertebrate-rich intertidal mud and sandflats. Fairly extensive areas of saltmarsh exist primarily on the south coast while at Alloa Inches there is a small *Phragmites* reedbed.

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.*

None reported

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 regularly supported during the breeding season:

Great cormorant , <i>Phalacrocorax carbo carbo</i> , NW Europe	134 apparently occupied nests, representing an average of 1.6% of the GB population (Seabird 2000 Census)
Herring gull , <i>Larus argentatus argentatus</i> , NW Europe and Iceland/W Europe)	1777 apparently occupied nests, representing an average of 1.2% of the GB population (Seabird 2000 Census)
Roseate tern , <i>Sterna dougallii dougallii</i> , W Europe	11 apparently occupied nests, representing an average of 21.1% of the GB population (Seabird 2000 Census)

Species with peak counts in spring/autumn:

Black-throated diver , <i>Gavia arctica arctica</i> , N Europe & W Siberia	8 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3 - spring peak)
Great crested grebe , <i>Podiceps cristatus cristatus</i> , NW Europe	298 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)
Great cormorant , <i>Phalacrocorax carbo carbo</i> , NW Europe	745 individuals, representing an average of 3.2% of the GB population (5 year peak mean 1998/9-2002/3)
Common eider , <i>Somateria mollissima mollissima</i> , NW Europe	6918 individuals, representing an average of 9.4% of the GB population (5 year peak mean 1998/9-2002/3)
Red-breasted merganser , <i>Mergus serrator</i> , NW & C Europe	569 individuals, representing an average of 5.7% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian oystercatcher , <i>Haematopus ostralegus ostralegus</i> , Europe & NW Africa -wintering	8596 individuals, representing an average of 2.7% of the GB population (5 year peak mean 1998/9-2002/3)
Ringed plover , <i>Charadrius hiaticula</i> , Europe/Northwest Africa	604 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)
Ruff , <i>Philomachus pugnax</i> , Europe/W Africa	28 individuals, representing an average of 4% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian curlew , <i>Numenius arquata arquata</i> , N. a. arquata Europe (breeding)	4007 individuals, representing an average of 2.7% of the GB population (5 year peak mean 1998/9-2002/3)
Spotted redshank , <i>Tringa erythropus</i> , Europe/W Africa	2 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)
Common greenshank , <i>Tringa nebularia</i> , Europe/W Africa	27 individuals, representing an average of 4.5% of the GB population (5 year peak mean 1998/9-2002/3)
Species with peak counts in winter:	
Red-throated diver , <i>Gavia stellata</i> , NW Europe	104 individuals, representing an average of 2.1% of the GB population (5 year peak mean 1998/9-2002/3)
Whooper swan , <i>Cygnus cygnus</i> , Iceland/UK/Ireland	77 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)

Greater scaup , <i>Aythya marila marila</i> , W Europe	211 individuals, representing an average of 2.7% of the GB population (5 year peak mean 1998/9-2002/3)
Long-tailed duck , <i>Clangula hyemalis</i> , W Siberia/N Europe	541 individuals, representing an average of 3.3% of the GB population (5 year peak mean 1998/9-2002/3)
Black (common) scoter , <i>Melanitta nigra nigra</i> ,	2125 individuals, representing an average of 4.2% of the GB population (5 year peak mean 1998/9-2002/3)
Velvet scoter , <i>Melanitta fusca fusca</i> , Baltic/W Europe	804 individuals, representing an average of 26.8% of the GB population (5 year peak mean 1998/9-2002/3)
European golden plover , <i>Pluvialis apricaria apricaria</i> , P. a. altifrons Iceland & Faroes/E Atlantic	2521 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)
Grey plover , <i>Pluvialis squatarola</i> , E Atlantic/W Africa -wintering	773 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)
Sanderling , <i>Calidris alba</i> , Eastern Atlantic	258 individuals, representing an average of 1.2% of the GB population (5 year peak mean 1998/9-2002/3)
Dunlin , <i>Calidris alpina alpina</i> , W Siberia/W Europe	12617 individuals, representing an average of 2.2% of the GB population (5 year peak mean 1998/9-2002/3)
Black-tailed godwit , <i>Limosa limosa islandica</i> , Iceland/W Europe	202 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)

Species Information

None reported

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
- Environmental education/ interpretation
- Non-consumptive recreation
- Scientific research
- Sport fishing
- Sport hunting
- Tourism
- Transportation/navigation

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
Non-governmental organisation (NGO)	+	+
Local authority, municipality etc.	+	+
National/Crown Estate	+	
Private	+	+
Public/communal	+	+

25. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	
Tourism	+	+
Recreation	+	+
Current scientific research	+	
Commercial forestry		+
Fishing: commercial		+
Fishing: recreational/sport	+	
Gathering of shellfish	+	+
Bait collection	+	
Arable agriculture (unspecified)		+
Permanent arable agriculture		+
Hunting: recreational/sport	+	+
Industry		+
Sewage treatment/disposal	+	+
Harbour/port	+	+
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)	+	
Land owned by a non-governmental organisation for nature conservation	+	
Management agreement	+	
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.

WeBS counts are done between September and April each year.

An annual late summer bird count is also carried out.

Aberlady Bay is often used for undergraduate and postgraduate research projects

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.

Aberlady Bay and Torry Bay Local Nature Reserves and the John Muir Country Park all have full-time rangers/wardens who lead some guided walks and other educational activities.

31. Current recreation and tourism:

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

Many people use the areas adjoining the Firth for recreation. Walking, dog-walking, horse-riding and bathing are all common in many parts of the Forth. There is some evidence to suggest that the distribution of some bird species may be influenced by increased activity on the coast particularly in East Lothian. On the whole these activities are not considered detrimental to the site and visitor access is managed to minimise any negative effects. This includes specific locations and periods when public access may be restricted (e.g. the tern colony at Aberlady Bay).

The sea is also used for activities such as wind-surfing, canoeing and yachting. There is no evidence to suggest any of these are detrimental.

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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- Dean, BJ, Webb, A, McSorley, CA & Reid, JB (2003) Aerial surveys of UK inshore areas for wintering seaduck, divers and grebes: 2000/01 and 2001/02. *JNCC Report*, No. **333**. www.jncc.gov.uk/page-2346
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