

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:**Joint Nature Conservation Committee**

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 30 October 2001; updated 12 May 2005

3. Country:

UK (Scotland)

4. Name of the Ramsar site:

Firth of Forth

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):

56 01 00 N

02 53 00 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 site is on the east coast of Scotland

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

8. Elevation (average and/or max. & min.) (metres): **9. Area** (hectares): 6313.68

Min. -2

Max. 4

Mean 0

10. Overview:

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.

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).

5, 6

Secretariat comment: The RIS provides information requiring the application of Criterion 4. This needs to be included in the next update.

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).

Ramsar criterion 5

Assemblages of international importance:

Species with peak counts in winter:

72281 waterfowl (5 year peak mean 1998/99-2002/2003)
See criterion 6 and section 20

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 (br), Iceland/UK (w)	7863 individuals, representing an average of 3.2% of the flyway population (5 year peak mean 1998/9-2002/3)
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Common redshank, <i>Tringa totanus totanus</i> , E Atlantic (non br)	5151 individuals, representing an average of 2% of the flyway population (5 year peak mean 1998/9-2002/3)
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Species with peak counts in winter:

Slavonian grebe, <i>Podiceps auritus</i> , Northwest Europe (br)	68 individuals, representing an average of 2% of the population (5 year peak mean 1998/9-2002/3)
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Red knot, <i>Calidris canutus islandica</i> , W & Southern Africa (w) (wintering)	7295 individuals, representing an average of 1.6% of the population (5 year peak mean 1998/9-2002/3)
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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)
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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 20

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:

Atlantic

b) biogeographic regionalisation scheme (include reference citation):

Council Directive 92/43/EEC

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	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.

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).

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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16. 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

17. Wetland types

Marine/coastal wetland

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

18. General ecological features:

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

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.

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.*

None reported

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.*

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)
Common shelduck , <i>Tadorna tadorna</i> , NW Europe (br)	3596 individuals, representing an average of 1.1% of the flyway population (5 year peak mean 1998/9-2002/3)
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)
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)
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:	
Common goldeneye , <i>Bucephala clangula clangula</i> , NW & C Europe (non br)	1789 individuals, representing an average of 7.1% of the GB population (5 year peak mean 1998/9-2002/3)

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/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 (br)	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 (non br)	191 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)
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Species Information

None reported

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.

- Aesthetic
- Archaeological/historical site
- Environmental education/ interpretation

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

22. Land tenure/ownership:

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

23. 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	+	+

24. Factors 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

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
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)		+

26. Conservation measures proposed but not yet implemented:

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

No information available

27. 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

28. Current conservation education:

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.

29. 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.

30. 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

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.

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

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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