

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: 22 March 1999 / updated 12 May 2005

3. Country:

UK (Scotland)

4. Name of the Ramsar site:

Cromarty Firth

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):

57 41 00 N 04 12 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.

Nearest town/city: Inverness

Cromarty Firth lies on the east coast of Scotland, 20 km north of Inverness, in Easter Ross.

Administrative region: Highland

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

Min. -3
Max. 2
Mean 0

9. Area (hectares): 3746.95
(2005 area calculation, no change of the boundary)

10. Overview:

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

The Cromarty Firth Ramsar site contains extensive intertidal mudflats and shingle bordered locally by areas of saltmarsh. The mouth of the River Conon also supports these ecological features.

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, 5, 6

Secretariat comment: The RIS provides information requiring the application of Criteria 2 and 4. These need 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 1

The site contains extensive, undisturbed intertidal flats with eelgrass *Zostera* spp. beds.

Ramsar criterion 5

Assemblages of international importance:

Species with peak counts in winter:

30200 waterfowl (5 year peak mean 1998/99-2002/2003)

See also 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 winter:

Greylag goose , <i>Anser anser anser</i> , Iceland (br), UK, Ireland (w)	1508 individuals, representing an average of 1.5% of the flyway population (5 year peak mean for 1995/6-1999/2000)
Bar-tailed godwit , <i>Limosa lapponica lapponica</i> , Coastal W Europe & NW Africa (w)	1753 individuals, representing an average of 1.5% of the flyway population (5 year peak mean 1998/9-2002/3)

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, alluvium, sandstone, gravel
Geomorphology and landscape	lowland, shingle bar, intertidal sediments (including sandflat/mudflat), enclosed coast (including embayment), estuary, intertidal rock
Nutrient status	no information
pH	circumneutral
Salinity	brackish / mixosaline, fresh, saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Kinloss, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/kinloss.html) Max. daily temperature: 12.2° C Min. daily temperature: 5.1° C Days of air frost: 53.5 Rainfall: 624.4 mm Hrs. of sunshine: 1261.4

General description of the Physical Features:

Cromarty Firth is one of the major firths on the Moray Firth. It contains a range of high-quality coastal habitats including extensive intertidal mudflats and shingle bordered locally by areas of saltmarsh, as well as reedbeds around Dingwall.

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).

Cromarty Firth is one of the major firths on the Moray Firth. It contains a range of high-quality coastal habitats including extensive intertidal mudflats and shingle bordered locally by areas of saltmarsh, as well as reedbeds around Dingwall.

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, Sediment trapping, Other

17. Wetland types

Marine/coastal wetland

Code	Name	% Area
B	Marine beds (e.g. sea grass beds)	46.2
E	Sand / shingle shores (including dune systems)	0.2
F	Estuarine waters	0.6
G	Tidal flats	46.1
H	Salt marshes	5.5
J	Coastal brackish / saline lagoons	0.1
U	Peatlands (including peat bogs swamps, fens)	0.3
Other	Other	0.8
Xf	Freshwater, tree-dominated wetlands	0.2

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 Cromarty Firth supports the full range of estuarine habitats. Of particular importance are the extensive intertidal mudflats which support sizeable beds of eelgrass *Zostera* spp. The tidal flats are bordered locally by saltmarsh which grades into alluvial woodland at the mouth of the River Conon.

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.*

Nationally important species occurring on the site.

Zostera angustifolia, Z. noltei.

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:**

Osprey , <i>Pandion haliaetus</i> , Europe	>2 pairs, representing an average of 1.5% of the GB population (5 year mean 1992-1996)
Common tern , <i>Sterna hirundo hirundo</i> , N & E Europe	413 apparently occupied nests, representing an average of 4% of the GB population (Seabird 2000 Census)

Species with peak counts in spring/autumn:

Eurasian wigeon , <i>Anas penelope</i> , NW Europe	10662 individuals, representing an average of 2.6% of the GB population (5 year peak mean 1998/9-2002/3)
Common redshank , <i>Tringa totanus totanus</i> ,	1643 individuals, representing an average of 1.4% 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	20 individuals, representing an average of 2.7% of the GB population (5 year peak mean 1998/9-2002/3)
Greater scaup , <i>Aythya marila marila</i> , W Europe	225 individuals, representing an average of 2.9% of the GB population (5 year peak mean 1998/9-2002/3)
Red knot , <i>Calidris canutus islandica</i> , W & Southern Africa (wintering)	3327 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)

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
- Livestock grazing

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

22. Land tenure/ownership:

Ownership category	On-site	Off-site
Non-governmental organisation (NGO)	+	
National/Crown Estate	+	
Private	+	
Other	+	

23. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	
Tourism	+	
Recreation	+	
Current scientific research	+	
Fishing: recreational/sport		+
Marine/saltwater aquaculture	+	
Gathering of shellfish	+	
Bait collection	+	
Arable agriculture (unspecified)		+
Grazing (unspecified)	+	+
Permanent pastoral agriculture		+
Hunting: recreational/sport	+	
Hydro-electricity/ water-power		+
Industry		+
Sewage treatment/disposal	+	+
Harbour/port		+
Transport route		+
Urban development		+
Non-urbanised settlements		+
Military activities		+
Other		+

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	+	
Site management statement/plan implemented	+	
Other	+	
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.

Fauna.

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

There have been a large number of surveys undertaken in the Cromarty Firth area covering a number of topics including:

Intertidal invertebrates in Nigg and Udale Bays (Anderson 1971)

Habitat.

Habitat survey undertaken by Currie (1978).

28. Current conservation education:

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

The RSPB have a public hide at both Udale and Nigg Bays which are open all year. A number of fixed interpretation panels are located around the firth.

29. Current recreation and tourism:

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

Terrestrial & intertidal based recreation:

Walking is concentrated on Alness Point. Birdwatchers go to places where there is easy public access to the shore. All year activity. Local cruises operate from Cromarty to view the population of bottlenose dolphins resident in the Sutors area with occasional trips to the wider Moray Firth. These trips operate except during the winter months in contrast to terrestrial forms of recreation which are all year round

Water-based recreation:

Power-boating, water-skiing and wind-surfing are undertaken occasionally. There is a sailing club in the Firth. These operate mainly from April to September and in deep water.

Wildfowling:

Most of this activity occurs in Nigg and Udale Bays.

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

- Anderson, SS (1971) *Nigg and Udale Bays: a survey of intertidal invertebrates*. (Contractor: Coastal Ecology Research Station, Norwich.) Unpublished report to Nature Conservancy Council, North-West (Scotland) Region, Inverness (Internal report)
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- Batten, LA, Bibby, CJ, Clement, P, Elliot, GD & Porter, RF (1990) *Red Data Birds in Britain. Action for rare, threatened and important species*. Poyser, London, for Nature Conservancy Council and Royal Society for the Protection of Birds
- Bennett, TL & McLeod, CR (1998) Chapter 4. East Scotland (Duncansby Head to Dunbar) (MNCR Sector 4). In: *Benthic marine ecosystems of Great Britain and the north-east Atlantic*, ed. by K. Hiscock, 123-154. Joint Nature Conservation Committee, Peterborough. (Coasts and Seas of the United Kingdom. MNCR series)
- Buck, AL (ed.) (1993) *An inventory of UK estuaries. Volume 4. North and east Scotland*. Joint Nature Conservation Committee, Peterborough
- Burd, F (1989) *The saltmarsh survey of Great Britain. An inventory of British saltmarshes*. Nature Conservancy Council, Peterborough (Research & Survey in Nature Conservation, No. 17)
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- McLeod, CR, Yeo, M, Brown, AE, Burn, AJ, Hopkins, JJ & Way, SF (eds.) (2004) *The Habitats Directive: selection of Special Areas of Conservation in the UK*. 2nd edn. Joint Nature Conservation Committee, Peterborough.
www.jncc.gov.uk/SACselection
- 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
- Ralph, R (ed.) (1986) *The marine environment of the Moray Firth. Proceedings of the Royal Society of Edinburgh. Series B: Biological Sciences*, **91**
- Ramsay, DL & Brampton, AH (2000) Coastal cells in Scotland: Cell 3 – Cairnbulg Point to Duncansby Head. *Scottish Natural Heritage Research Survey and Monitoring Report*, No. **145**
- Ratcliffe, DA (ed.) (1977) *A Nature Conservation Review. The selection of biological sites of national importance to nature conservation in Britain*. Cambridge University Press (for the Natural Environment Research Council and the Nature Conservancy Council), Cambridge (2 vols.)
- Stroud, DA, Chambers, D, Cook, S, Buxton, N, Fraser, B, Clement, P, Lewis, P, McLean, I, Baker, H & Whitehead, S (eds.) (2001) *The UK SPA network: its scope and content*. Joint Nature Conservation Committee, Peterborough (3 vols.)
www.jncc.gov.uk/UKSPA/default.htm

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