

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:

9 March 2006

3. Country:

UK (Scotland)

4. Name of the Ramsar site:

Inner Moray 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):

56 50 25 N

04 21 15 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

Inner Moray Firth Ramsar site lies to the north of Inverness in eastern Scotland, and comprises the Beauy Firth and part of the Inverness Firth which together form the south-eastern estuarine component of the Moray Basin system.

Administrative region: Highland

8. Elevation (average and/or max. & min.) (metres): **9. Area** (hectares): 2339.23

Min. -2

Max. 2

Mean 0

10. Overview:

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

The Inner Moray Firth Ramsar site supports extensive intertidal flats and smaller areas of saltmarsh. These intertidal areas are especially important for the populations of wintering waterfowl which feed and roost here each year.

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 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 1

The site supports a variety of important wetland habitats including intertidal flats with eelgrass *Zostera* beds, saltmarsh, and a sand and shingle spit.

Ramsar criterion 5

Assemblages of international importance:

Species with peak counts in winter:

25740 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 winter:

Greylag goose , *Anser anser anser*, Iceland/UK, 2651 individuals, representing an average of 2.9% of the population (5 year peak mean, 1992/3-1996/7)
Ireland

Common redshank , *Tringa totanus totanus*, 2069 individuals, representing an average of 1.7% of the biogeographic 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, sedimentary, metamorphic, gravel
Geomorphology and landscape	lowland, coastal, shingle bar, intertidal sediments (including sandflat/mudflat), open coast (including bay), enclosed coast (including embayment), estuary, basins, intertidal rock
Nutrient status	
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:

The Inner Moray Firth is one of the major arms of the Moray Firth. It comprises the Beaully Firth and Inverness Firth (including Munloch Bay) which together form the easternmost estuarine component of the Moray Basin system. The site contains extensive intertidal flats and smaller areas of saltmarsh.

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 Inner Moray Firth is one of the major arms of the Moray Firth. It comprises the Beaully Firth and Inverness Firth (including Munloch Bay) which together form the easternmost estuarine component of the Moray Basin system. The site contains extensive intertidal flats and smaller areas of saltmarsh.

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

17. Wetland types

Marine/coastal wetland

Code	Name	% Area
B	Marine beds (e.g. sea grass beds)	37.4
E	Sand / shingle shores (including dune systems)	11.3
F	Estuarine waters	0.9
G	Tidal flats	37.4
H	Salt marshes	6.6

Typ	Freshwater marshes / pools: permanent	1.3
Other	Other	5.1

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 Inner Moray Firth supports the full range of estuarine habitats. Of particular importance are the extensive beds of eelgrass *Zostera* spp. The tidal flats are bordered locally by saltmarsh and there is a good example of a shingle spit at Whiteness Point.

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.

Higher Plants.

Zostera angustifolia, *Z. noltei* and *Carex recta*.

Lower Plants.

Cladonia uncialis uncialis.

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 with peak counts in spring/autumn:

Eurasian wigeon , <i>Anas penelope</i> , NW Europe	6073 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian oystercatcher , <i>Haematopus ostralegus ostralegus</i> , Europe & NW Africa -wintering	3457 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

Red-breasted merganser , <i>Mergus serrator</i> , NW & C Europe	135 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)
Bar-tailed godwit , <i>Limosa lapponica lapponica</i> , W Palearctic	755 individuals, representing an average of 1.2% of the GB population (5 year peak mean 1998/9-2002/3)
Slavonian grebe , <i>Podiceps auritus</i> , Northwest Europe	10 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)
Eurasian teal , <i>Anas crecca</i> , NW Europe	2019 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)
Greater scaup , <i>Aythya marila marila</i> , W Europe	405 individuals, representing an average of 5.3% of the GB population (5 year peak mean 1998/9-2002/3)
Long-tailed duck , <i>Clangula hyemalis</i> , W Siberia/N Europe	169 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)

Common goldeneye , *Bucephala clangula clangula*, NW & C Europe

665 individuals, representing an average of 2.6% 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
Forestry production
Livestock grazing
Non-consumptive recreation
Scientific research
Sport fishing
Sport hunting
Subsistence fishing
Tourism

22. Land tenure/ownership:

Ownership category	On-site	Off-site
National/Crown Estate	+	
Private	+	+
Other	+	

23. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	
Tourism	+	
Recreation	+	
Current scientific research	+	
Commercial forestry		+
Fishing: (unspecified)	+	
Fishing: recreational/sport	+	
Marine/saltwater aquaculture	+	
Gathering of shellfish	+	
Bait collection	+	
Permanent arable agriculture		+
Grazing (unspecified)	+	
Hunting: recreational/sport	+	
Industry	+	
Sewage treatment/disposal		+
Harbour/port		+
Transport route		+
Urban development		+
Non-urbanised settlements		+
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)	+	
Management agreement	+	
Site management statement/plan implemented	+	

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.

28. Current conservation education:

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

The RSPB have a hide adjacent to Longman Bay which is open all year by arrangement. There is a public hide overlooking Munloch Bay. A number of fixed interpretation panels are located around the site.

29. Current recreation and tourism:

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

Land-based recreation:

Birdwatching occurs where there is easy public access or the site can be viewed from the road. All-year activity. Local cruises to view the population of bottlenose dolphins *Tursiops truncatus* resident in the Moray Firth area operate except during winter months. Walkers tend to use recognised paths including one track which runs along the south side of Munloch Bay.

Water-based recreation:

Power boating, water-skiing, wind-surfing, canoeing and jet-skiing are undertaken occasionally. Mainly April to September and in deep water.

Wildfowling:

Most wildfowling occurs in the Beaulay Firth, Munloch Bay area and Longman and Castle Stuart Bays. Shooting by the owners/occupiers on site is not problematic. Geese are scared off adjacent agricultural fields at Munloch and this activity requires a licence out of season.

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

- Barne, JH, Robson, CF, Kaznowska, SS, Doody, JP & Davidson, NC (eds.) (1996) *Coasts and Seas of the United Kingdom. Region 3. North-east Scotland: Cape Wrath to St Cyrus*. Joint Nature Conservation Committee, Peterborough (Coastal Directories Series)
- 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)
- Cleator, B (1993) The status of the genus *Zostera* in Scottish waters. *SNH Review*, No. 22
- Covey, R, Fortune, F, Nichols, DM & Thorpe, K (1998) *Marine Nature Conservation Review Sectors 3, 4, 13 & 15. Lagoons in mainland Scotland and the Inner Hebrides: area summaries*. Joint Nature Conservation Committee, Peterborough (Coasts and Seas of the United Kingdom. MNCR series)
- Cranswick, PA, Waters, RJ, Musgrove, AJ & Pollitt, MS (1997) *The Wetland Bird Survey 1995-96: wildfowl and wader counts*. British Trust for Ornithology, Wildfowl and Wetlands Trust, Royal Society for the Protection of Birds & Joint Nature Conservation Committee, Slimbridge
- 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
- Dean, BJ, Webb, A, McSorley, CA & Reid, JB (2004) Surveillance of wintering seaduck, divers and grebes in UK inshore areas: aerial surveys 2002/03. *JNCC Report*, No. 345

- Dean, BJ, Webb, A, McSorley, CA, Schofield, RA & Reid, JB (2004) Surveillance of wintering seaducks, divers and grebes in UK inshore areas: aerial surveys and shore-based counts 2003/04. *JNCC Report*, No. 357
- Doody, JP, Johnston, C & Smith, B (1993) *Directory of the North Sea coastal margin*. Joint Nature Conservation Committee, Peterborough
- Fox, AD, Yost, L & Gilbert, G (1986). *A preliminary appraisal of the intertidal sea-grass resource in the Moray Firth*. Nature Conservancy Council
- Gordon, JE & Sutherland, DG (eds.) (1993) *Quaternary of Scotland*. Chapman & Hall, London, for Joint Nature Conservation Committee, Peterborough (Geological Conservation Review Series, No. 6)
- Harding-Hill, R (1993) *The Moray Firth review*. Scottish Natural Heritage, North-West Region, Inverness
- May, VJ & Hansom, JD (eds.) (2003) *Coastal geomorphology of Great Britain*. Joint Nature Conservation Committee, Peterborough (Geological Conservation Review Series, No. 28)
- 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, Langston, RHW, Baker, H & Ward, RM (eds.) (2003) *Estuarine waterbirds at low tide. The WeBS Low Tide Counts 1992–93 to 1998–99*. WSG/BTO/WWT/RSPB/JNCC, Thetford (International Wader Studies, No. 16)
- 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.)
- Scottish Wildlife Trust (1995) *Phase 1 Habitat survey 1992–1995*. Scottish Wildlife Trust Inverness District Branch
- 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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