

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:

Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

UK

Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: RIS@JNCC.gov.uk

FOR OFFICE USE ONLY.

DD MM YY

--	--	--

Designation date

--	--	--	--	--	--

Site Reference Number

2. Date this sheet was completed/updated:

Designated: 29 March 1994

3. Country:

UK (Scotland)

4. Name of the Ramsar site:

Loch of Kinnordy

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 40 30 N 03 02 40 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: Dundee

The site is a lowland loch situated in a mainly arable agricultural catchment, in eastern Scotland.

Administrative region: Angus

10. Elevation (average and/or max. & min.) (metres): **11. Area (hectares):** 85.09

Min.	143
Max.	143
Mean	143

12. General overview of the site:

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

A eutrophic loch with associated wetland communities, notably basin mire, swamp and fen. Submerged aquatic plant communities are absent and the grassland and woodland fringe is incomplete.

The loch was formerly much larger in extent, but a series of drainage attempts were made, initially to facilitate marl removal. However it has been increasing in extent in recent years due to the silting of the loch's current outflow stream.

Many fen communities have been identified including those dominated by common reed *Phragmites australis* and yellow iris *Iris pseudacorus* in places. A stand of bogbean *Menyanthes trifoliata* is found in the main lochan. Scarce plant species present include cowbane *Cicuta virosa*, water sedge *Carex aquatilis*, lesser tussock-sedge *Carex diandra* and swamp meadow-grass *Poa palustris*.

Carr woodlands include willow, alder and birch communities, which are thought to be natural. The remainder of the woodland is planted.

A range of grassland types are also present, including species-rich damp *Molinia*-dominated areas. Northern brown argus and pearl-bordered fritillary butterflies have been recorded at this site. Mammalian interests include otters and red squirrel. The loch is also a roost for internationally important numbers of geese.

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, 2, 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

The site supports particularly good examples rich swamp, fen, grassland and carr communities, which are increasingly rare nationally.

Ramsar criterion 2

Supports a number of rare species of wetland plants and an assemblage of rare breeding migratory waterfowl.

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 , *Anser brachyrhynchus*, 50 individuals, representing an average of 0% of the GB population (5 year peak mean 1998/9-2002/3)
Greenland, Iceland/UK

Species with peak counts in winter:

Greylag goose , *Anser anser anser*, Iceland/UK, 1000 individuals, representing an average of 1.1% of the population (Winter peak mean)
Ireland

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	peat, sedimentary, limestone, sandstone
Geomorphology and landscape	lowland
Nutrient status	eutrophic
pH	no information

Salinity	fresh
Soil	mainly organic
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Braemar, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/braemar.html) Max. daily temperature: 10.5° C Min. daily temperature: 2.8° C Days of air frost: 103.3 Rainfall: 912.7 mm Hrs. of sunshine: 1210.3

General description of the Physical Features:

Loch of Kinnordy is a 22 ha eutrophic loch (that was formerly much larger in extent) with associated wetland communities, notably basin mire, swamp and fen.

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).

Loch of Kinnordy is a 22 ha eutrophic loch (that was formerly much larger in extent) with associated wetland communities, notably basin mire, swamp and fen.

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:

Inland wetland

Code	Name	% Area
U	Peatlands (including peat bogs swamps, fens)	35
O	Freshwater lakes: permanent	30.4
Xf	Freshwater, tree-dominated wetlands	18.6
Other	Other	10.4
Tp	Freshwater marshes / pools: permanent	5.6

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 main habitats and plant species of the site are:

- Open water/lochans, where bogbean *Menyanthes trifoliata* is abundant.
- Swamp/fen/mire communities, characterised by reed *Phragmites australis*, yellow iris *Iris pseudacorus*, water horsetail *Equisetum fluviatile*, bottle sedge *Carex rostrata*, reed canary-grass *Phalaris arundinacea*, marsh cinquefoil *Potentilla palustris*, meadowsweet *Filipendula ulmaria* and angelica *Angelica sylvestris*.
- Carr woodland/scrub, with mainly willow *Salix cinerea*, alder *Alnus glutinosa* and birch *Betula* spp.

- Grasslands, characterised by purple moor-grass *Molinia caerulea*, false oat-grass *Arrhenatherum elatius*, sheep's fescue *Festuca ovina*, common bent *Agrostis capillaris* and heath bedstraw *Galium saxatile*.

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.*

Nationally important species occurring on the site.

Higher Plants.

Limosella aquatica, *Cicuta virosa*

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:

Black-headed gull , <i>Larus ridibundus</i> , N & C Europe	2299 apparently occupied nests, representing an average of 1.7% of the GB population (Seabird 2000 Census)
---	--

Species with peak counts in spring/autumn:

Water rail , <i>Rallus aquaticus</i> , Europe	5 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
---	--

Species with peak counts in winter:

Whooper swan , <i>Cygnus cygnus</i> , Iceland/UK/Ireland	72 individuals, representing an average of 1.2% 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.

- Archaeological/historical site
- Environmental education/ interpretation
- Non-consumptive recreation
- Sport fishing
- 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
Private	+	+
Other	+	

25. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	
Recreation	+	
Current scientific research	+	
Fishing: recreational/sport	+	
Arable agriculture (unspecified)		+
Hunting: recreational/sport	+	

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	+	
Site management statement/plan implemented	+	
Other	+	

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.

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.

Environment.

Monitoring of water levels in the loch, to determine optimum design of weir for flood control. Water quality is also monitored, using data from the Scottish Environment Protection Agency, to assess any change in the loch's nutrient status.

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.

The RSPB occasionally take supervised school groups to the loch, and provide three bird watching hides.

31. Current recreation and tourism:

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

Activities, Facilities provided and Seasonality.

Angling occurs on the loch and is restricted to certain areas to limit disturbance to birds.

One landowner occasionally shoots wildfowl, but is restricted to ten days in any one season.

Birdwatching, from three hides provided, regularly occurs on site. The hides are accessed by screened footpaths and walkways.

Visits from the general public are managed by the RSPB warden and volunteers, and access is restricted when necessary.

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

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

Crouch, Hogg, Waterman (1994) *Loch of Kinnordy water level management proposals report*. Scottish Natural Heritage report

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

Ninnes, R (1995) *Loch of Kinnordy – water levels, rainfall and sluice management*. Scottish Natural Heritage report

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.)

Wood, D (1990) *A vegetation survey of Loch of Kinnordy RSPB reserve*. Royal Society for the Protection of Birds report

Please return to: **Ramsar Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**

Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • email: ramsar@ramsar.org