

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:

Loch Maree

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 10 N

05 28 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: Ullapool

Loch Maree Ramsar site lies 2 km north-west of Kinlochewe, extending to within 5 km of Poolewe in Wester Ross.

Administrative region: Highland

8. Elevation (average and/or max. & min.) (metres): **9. Area** (hectares): 3173.67

Min. 16

Max. 19

Mean 18

10. Overview:

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

Loch Maree is a large oligotrophic loch in north-west Scotland, with a mean depth of 38 m and a volume of 1091 million cubic metres. Loch Maree supports five nationally scarce wetland and aquatic plant species (brown beak-sedge *Rhynchospora fusca*, bog hair grass *Deschampsia setacea*, marsh clubmoss *Lycopodiella inundata*, waterwort *Elatine hexandra* & spring quillwort *Isoetes echinospora*). The site also supports a nationally outstanding assemblage of dragonflies (12 species), including the British Red Data Book species northern emerald *Somatochlora arctica*, and two nationally scarce species (azure hawkler *Aeshna caerulea* & whitefaced dragonfly *Leucorrhinia dubia*); and a population of char *Salvelinus alpinus*, which may belong to a genetically-distinct 'race'. Loch Maree is the single most important breeding site for black-throated diver *Gavia arctica* in Britain.

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, 2

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

Loch Maree is a particularly good example of a large oligotrophic freshwater loch characteristic of upland north-west Europe.

Ramsar criterion 2

Loch Maree supports outstanding assemblages of wetland plants and animals including five nationally scarce aquatic plants, a nationally rare dragonfly and is the single most important breeding population of black-throated diver *Gavia arctica* in Britain.

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	acidic, sand, peat, sedimentary, metamorphic, sandstone
Geomorphology and landscape	island, valley
Nutrient status	oligotrophic
pH	acidic
Salinity	fresh
Soil	mainly mineral
Water permanence	usually permanent

Summary of main climatic features	Annual averages (Kinlochewe, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/kinlochewe.html) Max. daily temperature: 12.2° C Min. daily temperature: 4.9° C Days of air frost: 59.6 Rainfall: 2277.8 mm Hrs. of sunshine: 894.3
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General description of the Physical Features:

Loch Maree is a large oligotrophic freshwater loch with a mean depth of 38 m and a number of wooded islands.

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).

Adjacent catchments support a range of habitats, including freshwater lochs, upland heath, native pinewood, broad-leaved woodland and montane vegetation.

16. Hydrological values:

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

No special values known

17. Wetland types

Inland wetland

Code	Name	% Area
O	Freshwater lakes: permanent	83.8
U	Peatlands (including peat bogs swamps, fens)	6.8
Other	Other	9.4

18. General ecological features:

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

Many parts of the shoreline are unsuitable for plant growth due to strong wave action and steep rocky outcrops below water level. Most of the vegetation present is limited to the more sheltered areas at the east and west ends and around the islands. Dense beds of alternate-flowered water milfoil *Myriophyllum alterniflorum* and stoneworts *Nitella* sp. occur at the eastern end of the loch. On the predominantly sand and silt substrate around the islands, water lobelia *Lobelia dortmanna*, bulbous rush *Juncus bulbosus* and quillwort *Isoetes lacustris* are common. The small lochans on Eileann Subhainn, the largest island, contain the nationally scarce six-stamened waterwort *Elatine hexandra* and spring quillwort *Isoetes echinospora*. The main loch shore supports several nationally scarce species, including marsh clubmoss *Lycopodiella inundata* and bog hair-grass *Deschampsia setacea*.

The islands in Loch Maree, particularly the three largest, support one of the least-disturbed remnants of native Scots pine woodland in Scotland. In the wettest areas within the forest there are small-scale examples of Scandinavian type 'bog woodland'. Alder woodland also fringes Loch Maree in places, notably at the south-east end. The mire areas are dominated by a typical acid ground flora, although a number of uncommon plants are present including the nationally scarce brown-beaked sedge *Rhynchospora fusca*.

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.*

Assemblage

This site is intentionally important because it supports:

Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or of the *Isoëto-Nanojuncetea*, Bog woodland, Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion alvae*)

Nationally important species occurring on the site.**Higher Plants.**

Deschampsia setacea, *Elatine hexandra*, *Isoetes echinospora*, *Rhynchospora fusca*, *Lycopodiella inundata*

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.*

Species currently occurring at levels of national importance:**Species regularly supported during the breeding season:**

Black-throated diver, *Gavia arctica arctica*, N 10 pairs, representing an average of 6.4% of the Europe & W Siberia GB population (1995-2004)

Species Information**Assemblage.****Nationally important species occurring on the site.**

This site supports a diverse assemblage of invertebrates including:
Somatochlora arctica, *Aeshna caerulea*, *Leucorrhina dubia*.

Mammals

Lutra lutra

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

Tourism

Traditional cultural

Transportation/navigation

22. Land tenure/ownership:

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

23. Current land (including water) use:

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

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)	+	+
National Nature Reserve (NNR)	+	+
Special Protection Area (SPA)	+	
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.

Contemporary.

Fauna.

There is annual monitoring of site integrity, black-throated divers, public use, fishing and rare species. There is intermittent monitoring of water quality.

Completed.

Flora.

Fresh-water macrophytes have been surveyed (Bell 1990). NVC habitat survey.

Environment.

Water Survey of Loch Maree (Morris 1990); NCC unpublished report.

28. Current conservation education:

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

Limited use made of the islands by local primary school and specialist groups. Potential to be developed with local schools.

29. 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.

Water based recreation:

Wind-surfing and canoeing are only occasional uses but recently pressure has increased from these activities. Angling is mainly by estates and has remained constant historically. The loch is fished most intensively during August and September.

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

Bell (1990)

Gordon, JE & Sutherland, DG (eds.) (1993) *Quaternary of Scotland*. Chapman & Hall, London, for Joint Nature Conservation Committee, Peterborough (Geological Conservation Review Series, No. 6)

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

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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 Natural Heritage (1993) *Ramsar citation (Montreux Criteria, 1990) – Loch Maree, Highland Region (153A)*. Scottish Natural Heritage

Scottish Natural Heritage (1995) *Loch Maree Islands National Nature Reserve Ten Year Management Plan 1995–2005*. Scottish Natural Heritage

Shirt, DB (ed.) (1987) *British Red Data Books: 2. Insects*. Nature Conservancy Council, Peterborough

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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