

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:

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 19 September 1994

3. Country:

UK (Scotland)

4. Name of the Ramsar site:

Loch Maree

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):

57 41 10 N 05 28 15 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: 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

10. Elevation (average and/or max. & min.) (metres): **11. Area** (hectares): 3173.67

Min.	16
Max.	19
Mean	18

12. General overview of the site:

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.

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

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

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.

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	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

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.

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).

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

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

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.

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*.

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.

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

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-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

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.

- Aesthetic
- Archaeological/historical site
- Environmental education/ interpretation
- Non-consumptive recreation
- Scientific research
- Sport fishing
- Tourism
- Traditional cultural
- Transportation/navigation

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
National/Crown Estate	+	+
Private	+	+

25. Current land (including water) use:

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

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)	+	+
National Nature Reserve (NNR)	+	+
Special Protection Area (SPA)	+	
Management agreement	+	
Site management statement/plan implemented	+	
Other		+
Special Area of Conservation (SAC)	+	

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.

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.

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.

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

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.

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.

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

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

Morris (1990)

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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