

# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8<sup>th</sup> Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9<sup>th</sup> 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.

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## 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

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## 2. Date this sheet was completed/updated:

Designated: 05 January 1976

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## 3. Country:

UK (Scotland)

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## 4. Name of the Ramsar site:

Loch Lomond

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## 5. Designation of new Ramsar site or update of existing site:

**This RIS is for:** Updated information on an existing Ramsar site

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## 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 03 45 N                      04 30 30 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: Glasgow

Loch Lomond lies approximately 25 km north-west of Glasgow.

**Administrative region:** Argyll and Bute; Stirling; West Dunbartonshire

**10. Elevation (average and/or max. & min.) (metres):** **11. Area (hectares):** 236.9

Min.	8
Max.	13
Mean	11

**12. General overview of the site:**

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

The site consists of the marshy hinterland around the lower reaches of the River Endrick where it flows into Loch Lomond, and four islands in the loch. The marshy loch shore portion of the site comprises low-lying regularly flooded wetlands, woodland fringes and rough pasture. The site supports several species of nationally scarce plants, and the slow-moving river and lagoons are especially rich in aquatic invertebrates. The area is noted for its wintering waterfowl and supports an internationally important population of Greenland white-fronted geese *Anser albifrons flavirostris*.

**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).

**3, 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 3

The site supports several scarce and one British Red Data Book wetland plants and also three rare species of invertebrates.

**Ramsar criterion 6 – species/populations occurring at levels of international importance.**

**Qualifying Species/populations (as identified at designation):**

**Species with peak counts in winter:**

Greenland white-fronted goose, *Anser albifrons flavirostris*, Greenland 242 individuals, representing an average of 1.1% of the GB population (5 year peak mean for 1996/7-2000/01)

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](http://www.bto.org/survey/webs/webs-alerts-index.htm). See Sections 21/22 for details of noteworthy species

**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):

**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, basic, neutral, mud, alluvium, sedimentary
Geomorphology and landscape	lowland, floodplain
Nutrient status	eutrophic, mesotrophic
pH	circumneutral
Salinity	fresh
Soil	mainly mineral
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Paisley, 1971–2000) ( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/paisley.html">www.metoffice.com/climate/uk/averages/19712000/sites/paisley.html</a> ) Max. daily temperature: 12.6° C Min. daily temperature: 6.1° C Days of air frost: 36.1 Rainfall: 1205.3 mm Hrs. of sunshine: 1239.6

**General description of the Physical Features:**

Loch Lomond is located across the Highland Boundary Fault. The site consists of the marshy hinterland around the lower reaches of the River Endrick where it flows into the south-east corner of the loch, and a group of four wooded islands in the loch. The marshy loch shore portion of the site comprises low-lying, regularly flooded wetlands, woodland fringes and rough pasture.

**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 Lomond lies on a north – south axis crossing the Highland Boundary Fault, and has a maximum total length of 36.4 km. The surface area is 71.1 km<sup>2</sup> – larger than any other standing water in Great Britain. The volume of Loch Lomond is 2.62 km<sup>3</sup>, the second-greatest in the UK. The maximum depth is 189.9 m (the third-deepest loch in Scotland) but the mean depth is only 37.0 m, because of the influence of the large shallow southern basin, which contains many islands. Loch Lomond's catchment covers 696 km<sup>2</sup>, and is characterized by a relatively low mean altitude and gentle slopes with a high percentage of arable ground and base-rich rocks. The extent of arable ground and base-rich rocks gives a good indication of the potential natural richness of the waters draining from them.

The Ramsar site consists of the marshy hinterland around the lower reaches of the River Endrick where it flows into the south-east corner of the loch, and a group of four wooded islands in the loch. The marshy loch shore portion of the site comprises low-lying, regularly flooded wetlands, woodland fringes and rough pasture.

**18. 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

**19. Wetland types:**

Inland wetland

Code	Name	% Area
Ts	Freshwater marshes / pools: seasonal / intermittent	66.4
Other	Other	30.2
Tp	Freshwater marshes / pools: permanent	2.1
M	Rivers / streams / creeks: permanent	1.3

**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.

There is a range of plant communities on the marshy hinterland south of the River Endrick. The Ring Bog is a tract of floodplain mire consisting mainly of eutrophic-mesotrophic swamp communities, dominated by reed-canary grass *Phalaris arundinacea* with sharp-flowered rush *Juncus acutiflorus*, bladder sedge *Carex vesicaria*, water sedge *C. aquatilis* and common sedge *C. nigra*. At least half of the marshy hinterland is rough pasture used as feeding areas by wintering wildfowl. There are species-rich areas of grassland cut as hay meadows. The shore zone of the islands, particularly Creinch and Clairinch, is species-rich and supports a good variety of plants including globeflower *Trollius europaeus*, columbine *Aquilegia vulgaris* and goldilocks buttercup *Ranunculus auricomus*.

The site is rich in invertebrates and supports one Red Data Book aquatic species; a rare moth, the bulrush wainscot *Nonagria typhae*, in stands of bulrush *Typha latifolia* on the mainland.

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.

*Rumex aquaticus, Lysimachia thyrsoiflora, Elatine hydropiper*

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## 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 Information

#### Nationally important species occurring on the site.

#### Invertebrates.

Bulrush wainscot moth *Nonagria typhae*

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## 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
- Environmental education/ interpretation
- Livestock grazing
- Non-consumptive recreation
- Scientific research
- Sport fishing
- Sport hunting
- Tourism
- 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
Private	+	+
Other	+	

**25. Current land (including water) use:**

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Current scientific research	+	+
Commercial forestry		+
Cutting of vegetation (small-scale/subsistence)	+	
Fishing: recreational/sport	+	+
Arable agriculture (unspecified)		+
Livestock watering hole/pond	+	+
Rough or shifting grazing	+	+
Permanent pastoral agriculture	+	+
Hay meadows		+
Hunting: recreational/sport	+	+
Industrial water supply	+	+
Sewage treatment/disposal	+	+
Domestic water supply	+	+
Non-urbanised settlements		+

**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
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**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	+	
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.**

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.**

'The effects of power boats on the aquatic environment of Loch Lomond'. The study aims to investigate adverse effects, if any, of power boat activity on the water quality of Loch Lomond. Ongoing research based at the University Field Station Rowardennan. Shore erosion studies.

**Fauna.**

'Breeding biology of pied flycatchers'. Ongoing research based at the University Field Station Rowardennan including studies on Inchcailloch.

**Miscellaneous.**

RSPB proposal to reintroduce ospreys to this site.

**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.

Loch Lomond Park Authority Rangers provide occasional guided walks. There is a general information leaflet for Inchcailloch.

Scottish Natural Heritage staff give occasional talks to public groups on general conservation projects around Loch Lomond. The summer warden on Inchcailloch acts as an information source for visitors.

**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.**

Land-based recreation:

Fishing and walking (on both mainland and islands), bird watching.

Wildfowl shooting is permitted under a Nature Reserve Agreement.

Water-based recreation:

Angling from boats, jet-skiing, canoeing, and windsurfing.

**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**

Anon. (ed.) (1974) *A natural history of Loch Lomond*. University of Glasgow Press, Glasgow

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Peterborough

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