

# 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.

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**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](mailto:RIS@JNCC.gov.uk)

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Designation date

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Site Reference Number

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

9 March 2006

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**3. Country:**

UK (Scotland)

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**4. Name of the Ramsar site:**

Loch an Duin

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**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

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**6. Geographical coordinates** (latitude/longitude):

57 38 30 N

07 08 50 W

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**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: Stornoway

Loch an Duin occupies the north-east coast of the island of North Uist, which lies south of Harris in the Outer Hebrides.

**Administrative region:** Western Isles / Na h-Eileanan an Iar

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- |  |  |
|--|--|
| <b>8. Elevation</b> (average and/or max. & min.) (metres): | <b>9. Area</b> (hectares): 2621.13         |
| Min. -1  | (new calculation 2005, no boundary change) |
| Max. 50  |  |
| Mean 8   |  |
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### 10. Overview:

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

This site is important in the British Isles for its complex system of freshwater, brackish and sea lochs, and tidal channels. It includes part of the north-east coastland of North Uist and some of the adjacent islands and skerries. The comprehensive range of salinities, from freshwater to brackish and saltwater, is reflected in the associated plant and animal communities, which include the northern forms of some seaweeds. The habitat types of the coastland and islands range from moorland to maritime grassland. The site is also important for its geomorphology, as it is one of the best fjardic loch systems in Great 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).

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### 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 largest fjardic loch system in Britain, featuring a complex system of freshwater, brackish and sea lochs, and tidal channels.

### 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, basic, shingle, sand, mud, peat, nutrient-poor, igneous, metamorphic, basalt, gravel, cobble, boulder
Geomorphology and landscape	lowland, coastal, subtidal rock (including rocky reefs), subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), open coast (including bay), enclosed coast (including embayment), islands, lagoon, ob (fjard), basic
Nutrient status	no information
pH	no information
Salinity	brackish / mixosaline, fresh, saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent

Summary of main climatic features	Annual averages (Stornoway, 1971–2000) ( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/stornoway.html">www.metoffice.com/climate/uk/averages/19712000/sites/stornoway.html</a> ) Max. daily temperature: 11.0° C Min. daily temperature: 5.6° C Days of air frost: 30.7 Rainfall: 1231.7 mm Hrs. of sunshine: 1216.8
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**General description of the Physical Features:**

No information available

**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).

No information available

**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, Marine/coastal wetland

Code	Name	% Area
D	Rocky shores	29
E	Sand / shingle shores (including dune systems)	5
G	Tidal flats	5
H	Salt marshes	2
J	Coastal brackish / saline lagoons	12
O	Freshwater lakes: permanent	10
Q	Saline / brackish lakes: permanent	5
Tp	Freshwater marshes / pools: permanent	12
U	Peatlands (including peat bogs swamps, fens)	20

**18. General ecological features:**

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

Loch an Duin contains a wide range of habitats. The open water habitats can be split into three sections based on salinity. The areas of freshwater and low salinity contain a mixture of both fresh and brackish water communities featuring *Myriophyllum alterniflorum*, *Potamogeton pectinatus* and *Chara* sp. amongst the flora and the shrimps *Gammarus duebeni* and *Neomysis integer* amongst the fauna. In the strongly brackish area *Ruppia maritima*, *Zostera marina* and *Fucus vesiculosus* are abundant. A range of other seaweeds is present, as well as *Cerastoderma glaucum*, which has a limited distribution in Great Britain. The more marine areas have a typical marine community with *Fucus serratus* and *Laminaria saccharina*, though still with brackish communities in places.

Similarly the terrestrial habitats of the coastal system feature a wide range of habitats, with acidic moorland dominant on the mainland, whilst on the small islands within the site maritime grassland prevails. Additionally there are small intertidal areas and some fragmented saltmarsh development.

### 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.

The site is internationally important because it contains the following Habitats Directive Annex I features:

- H1140 Mudflats and sandflats not covered by seawater at low tide
- H1150 Coastal lagoons
- H1160 Large shallow inlets and bays

### Nationally important species occurring on the site.

#### Higher Plants.

*Zostera marina*

#### Lower Plants.

*Lamprothamnium papulosum*, *Chara* spp.

### 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:

Common tern, *Sterna hirundo hirundo*, N & E Europe 145 apparently occupied nests, representing an average of 1.4% of the GB population (Seabird 2000 Census)

#### Species Information

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

#### Mammals.

S1355 *Lutra lutra* Otter (Habitats Directive Annex II species)

### Nationally important species occurring on the site.

#### Mollusca

*Cerastoderma glaucum*

### 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
- Aquatic vegetation (e.g. reeds, willows, seaweed)
- Fisheries production
- Livestock grazing
- Non-consumptive recreation
- Peat cutting (small-scale/subsistence)
- Sport fishing
- Sport hunting
- Tourism

**22. Land tenure/ownership:**

Ownership category	On-site	Off-site
Private	+	+
Public/communal	+	+
Other	+	

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

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Cutting of vegetation (small-scale/subsistence)	+	+
Fishing: (unspecified)	+	+
Fishing: commercial	+	+
Fishing: recreational/sport	+	+
Marine/saltwater aquaculture		+
Gathering of shellfish	+	+
Grazing (unspecified)	+	+
Rough or shifting grazing	+	+
Permanent pastoral agriculture		+
Hunting: commercial	+	+
Hunting: recreational/sport	+	+
Sewage treatment/disposal	+	+
Harbour/port		+
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
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**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)	+	
Site management statement/plan implemented	+	
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.**

No current scientific research/survey/monitoring is taking place.

**Completed.****Flora and Fauna.**

**Marine:** The flora and fauna of the part of the site which is within the Loch nam Madadh catchment was surveyed in 1996.

Additionally, several lagoons and bays outside this area have also been surveyed. Lagoons surveyed 2004 by SNH Maritime Group for Site Condition Monitoring and also in recent years for a PhD project on charophytes (Martin 2001).

**Fauna.**

**Invertebrates:** The benthic invertebrate communities of the open water habitats have been surveyed in detail in parts of the site.

**Birds:** The islands in the site have been surveyed for Seabird 2000; the Hebridean Mink Project and the British Trust for Ornithology Heron Census. Breeding Birds surveyed in 2003 for SNH Site Condition Monitoring.

**28. Current conservation education:**

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

None reported

**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.**

**Land-based recreation:**

Walking, including dog walking, birdwatching and mammal watching occur, at a low level, due to the remoteness of much of the site, mostly during April-September.

**Water Recreation:** Angling occurs at a low level, from both shore and boat. Again this mainly occurs from April-September. Some yachting probably also occurs, again in April-September.

**Wildfowling and hunting:** These practices occur at a low level across the site. Season 1 September to 20 February inclusive.

**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

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### 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 & Buck, AL (eds.) (1997) *Coasts and seas of the United Kingdom. Regions 15 & 16. North-west Scotland: the Western Isles and west Highland*. Joint Nature Conservation Committee, Peterborough. (Coastal Directories Series.)
- Beaver, R & Dipper, FA (2002) *Marine Nature Conservation Review Sector 14. Sealochs in the Outer Hebrides: area summaries*. Peterborough, Joint Nature Conservation Committee (Coasts and seas of the United Kingdom. MNCR series)
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- Howson, CM (1991) *Marine Nature Conservation Review. Survey of Scottish sealochs: Volume 1 The sealochs of North and South Uist and Benbecula*. (Contractor: University Marine Biological Station, Millport) Report to Joint Nature Conservation Committee, Peterborough
- Hudson, G *et al.* (1982) *Soil Survey of Scotland*. Macaulay Institute for Soil Research, Aberdeen.
- MacTaggart, F (1997) *Loch an Duin SSSI, Loch nam Madadh SSSI (incorporating the Loch Maddy-Sound of Harris GCR site)*. Scottish Natural Heritage, Edinburgh (Earth Science Site Documentation Series, Nos. 307, 308, 309)
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- Martin, A (2001) *The ecology and palaeoecology of the charophyte Lamprothamnium papulosum in UK coastal lagoons*. Unpublished PhD thesis, University College London
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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.)
- Stewart, NF (2004) *Important stonewort areas. An assessment of the best areas for stoneworts in the United Kingdom*. Plantlife International, Salisbury
- Thorpe, K, Dalkin, MJ, Fortune, F & Nichols, DM (1998) *Marine Nature Conservation Review Sector 14. Lagoons in the Outer Hebrides: area summaries*. Joint Nature Conservation Committee, Peterborough (Coasts and seas of the United Kingdom. MNCR series)
- Weighell, AJ, Donnelly, AP & Calder, K (eds.) (2000) *Directory of the Celtic coasts and seas*. Joint Nature Conservation Committee, Peterborough

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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](mailto:ramsar@ramsar.org)