

# 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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|  |  |  |
|--|--|--|

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 Ken and River Dee Marshes

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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):

54 59 28 N

04 01 00 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: Kirkcudbright

The Loch Ken and River Dee Marshes are located between New Galloway and Castle Douglas in south-west Scotland. The site extends from Kenmure Holms SSSI south of New Galloway to Threave Castle north of Castle Douglas.

**Administrative region:** Dumfries and Galloway

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**8. Elevation** (average and/or max. & min.) (metres): **9. Area** (hectares): 769.11

Min. 44

Max. 49

Mean 48

## 10. Overview:

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

The Loch Ken and River Dee Marshes is a long linear loch and river system which is the southernmost of its type in Scotland. It contains areas of swamp, fen, grassland and carr woodland and is a good example of a semi-natural freshwater system in north-west Europe. The site supports internationally important roosting numbers of Greenland white-fronted geese *Anser albifrons flavirostris* and Icelandic greylag geese *Anser anser*. There are four nationally important aquatic plants and three nationally important aquatic invertebrates found within the wetland complex. The site is a diverse and complex water system with opportunities for environmental education and research.

## 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).

**2, 6**

**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 2

Supports an assemblage of at least four nationally scarce species of aquatic plant and an assemblage of at least three British Red Data Book aquatic 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, <i>Anser albifrons flavirostris</i> , Greenland | 353 individuals, representing an average of 1.3% of the population (5 year peak mean for 1996/7-2000/01)  |
| Greylag goose, <i>Anser anser anser</i> , Iceland/UK, Ireland                  | 1307 individuals, representing an average of 1.4% of the 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).

**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, mud, alluvium, igneous, basalt, granite   |
| Geomorphology and landscape       | floodplain  |
| Nutrient status                   | oligotrophic  |
| pH                                | acidic, circumneutral   |
| Salinity                          | fresh   |
| Soil                              | mainly organic  |
| Water permanence                  | usually permanent   |
| Summary of main climatic features | Annual averages (Eskdalemuir, 1971–2000)<br>( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/eskdalemuir.html">www.metoffice.com/climate/uk/averages/19712000/sites/eskdalemuir.html</a> )<br>Max. daily temperature: 11.0° C<br>Min. daily temperature: 3.6° C<br>Days of air frost: 87.3<br>Rainfall: 1634.6 mm<br>Hrs. of sunshine: 1174.7 |

**General description of the Physical Features:**

The site takes the form of a long linear loch and river system that is the southernmost of its type in Scotland. Loch Ken was dammed in the 1930s, and the raising of water levels resulted in the re-formation of marshes along its banks. It contains areas of swamp (reed and sedge beds), adjoining fen, wet grassland and carr woodland.

**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).

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**16. Hydrological values:**

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

Flood water storage / desynchronisation of flood peaks

**17. Wetland types**

Inland wetland

| Code  | Name   | % Area |
|-------|--|--------|
| M     | Rivers / streams / creeks: permanent         | 41.7   |
| Tp    | Freshwater marshes / pools: permanent        | 20.3   |
| U     | Peatlands (including peat bogs swamps, fens) | 14.6   |
| W     | Shrub-dominated wetlands                     | 4.4    |
| 4     | Seasonally flooded agricultural land         | 9.4    |
| Other | Other  | 7.5    |
| Xf    | Freshwater, tree-dominated wetlands          | 2.1    |

## 18. General ecological features:

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

The site consists of a linear reservoir and river course with an indented shoreline and associated swamp, fen, mire, marshy grassland, alder-willow carr and some oak woodland communities. Of particular note are the unusual mire, fen and herb-rich meadow communities, the best example of this habitat in Dumfries and Galloway. Kenmure Holms is a herb-rich fen meadow and swamp with sedge and reed vegetation. Farther downstream, River Dee and Threave and Carlingwark SSSIs support grassland and mire habitats which are species-rich in places.

## 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.*

### Nationally important species occurring on the site.

#### Higher Plants.

*Pilularia globulifera, Limosella aquatica, Elatine hexandra, Carex elongata*

## 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.*

#### Birds

#### Species currently occurring at levels of national importance:

#### Species with peak counts in winter:

Whooper swan, *Cygnus cygnus*,  
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

### Nationally important species occurring on the site.

#### Invertebrates.

*Sitticus floricola, Hydroporus rufifrons and Bidessus minutissimus.*

## 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)
- Environmental education/ interpretation
- Livestock grazing
- Non-consumptive recreation
- Scientific research
- Sport fishing
- Sport hunting
- Subsistence hunting
- Tourism
- Traditional cultural
- Transportation/navigation

## 22. Land tenure/ownership:

| Ownership category                  | On-site | Off-site |
|-------------------------------------|---------|----------|
| Non-governmental organisation (NGO) | +       | +        |

|                                    |   |   |
|------------------------------------|---|---|
| Local authority, municipality etc. | + | + |
| National/Crown Estate              | + | + |
| Private                            | + | + |
| Public/communal                    | + | + |

**23. 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: (unspecified)                          | +       |          |
| Fishing: commercial                             | +       | +        |
| Fishing: recreational/sport                     | +       | +        |
| Fishing: subsistence                            | +       | +        |
| Arable agriculture (unspecified)                |         | +        |
| Livestock watering hole/pond                    | +       | +        |
| Grazing (unspecified)                           | +       | +        |
| Rough or shifting grazing                       | +       | +        |
| Permanent pastoral agriculture                  | +       | +        |
| Hunting: recreational/sport                     | +       | +        |
| Hydro-electricity/ water-power                  | +       | +        |
| Sewage treatment/disposal                       | +       | +        |
| Transport route                                 | +       | +        |

**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)                 | +       | +        |
| Special Protection Area (SPA)   | +       |          |
| Land owned by a non-governmental organisation for nature conservation | +       | +        |
| Management agreement  | +       |          |
| Site management statement/plan implemented                            | +       |          |

**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.

**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.

**Flora.**

Monitoring of key plants, RDB, NS and regionally important species.

**Fauna.**

Monitoring of mire habitat for RDB species *Sitticus floricola* and water beetles.  
Monitoring of bird species and populations.

**Environment.**

Water level and quality monitoring.  
Monitoring recreation and other human activities.

**28. Current conservation education:**

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

The RSPB and the Dumfries and Galloway Ranger Service carry out a series of educational activities, including guided walks, talks, and environmental projects within the area. The local community are also involved with a number of local environmental initiatives in the area. There are a number of hides for birdwatching and a reserve leaflet provides information on the site. Local school groups are encouraged to use the reserve for environmental education.

Red kites have been reintroduced nearby and can be viewed from an observation hide.

**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.**

Recreation and tourism activities are mostly seasonal with the main recreational activity in the summer months. A caravan site at Parton on the eastern shore of Loch Ken accommodates many of the visitors. There is water-skiing on Loch Ken with restrictions on the timing of use, and sanctuary zones to prevent disturbance to birds. These are continually monitored by the RSPB warden and the Council Ranger Service. Wildfowling also occurs on the site in winter and is monitored to ensure compliance

with legal and other restrictions. All other recreational activities are monitored by the ranger service and RSPB in consultation with SNH and landowners.

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**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

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**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**

- Coxon, P (1977) *The breeding birds of Loch Ken/River Dee, Kircudbrightshire*. Royal Society for the Protection of Birds
- Coxon, P (1977/78) *The wintering birds of Loch Ken/River Dee, Kircudbrightshire*. Royal Society for the Protection of Birds
- Greenland White-fronted Goose Study (1990) Greenland white-fronted geese in Britain: 1987/88–1989/90. Greenland White-fronted Goose Study research report, No 7. *Nature Conservancy Council, CSD Report*, No. 1137.
- 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](http://www.wwt.org.uk/publications/default.asp?PubID=14)
- 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.)
- Stroud, D.A. 1984 Status of Greenland white-fronted geese in Britain, 1982/83 *Bird Study*, 31, 111-116.
- 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. Volume 3: Site accounts*. Joint Nature Conservation Committee, Peterborough [www.jncc.gov.uk/UKSPA/default.htm](http://www.jncc.gov.uk/UKSPA/default.htm)
- Stroud, DA, Mudge, GP & Pienkowski, MW (eds.) (1990) *Protecting internationally important bird sites: a review of the EEC Special Protection Area Network in Great Britain*. Nature Conservancy Council, Peterborough
- Stubbs, HJ (1976) *A summary of wetland vegetation, River Dee (Dumfries and Galloway)*. Nature Conservancy Council South West Region (Scotland), Dumfries

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