

# 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:

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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: 28 September 1992

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## 3. Country:

UK (Wales)

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## 4. Name of the Ramsar site:

Cors Caron

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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):**

52 15 35 N                      03 55 00 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: Tregaron

Cors Caron lies in the Teifi Valley, immediately to the north of the town of Tregaron, 24 km south-west of Aberystwyth.

**Administrative region:** Ceredigion

**10. Elevation** (average and/or max. & min.) (metres):    **11. Area** (hectares): 865.56

Min.      159

Max.      169

Mean     164

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

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

Cors Caron (also known as Tregaron Bog) is an extensive complex of raised mires which lie alongside the Afon Teifi, developed over a late-glacial lake. Three distinct raised bog domes lying along the river valley, display a full sequence of zones from the central mire expanse, through the mire margin, to the surrounding lagg fen. The largest of the mires was the first true raised mire to be described in detail from Britain by Godwin & Conway (1939), and is thus regarded as a classic site where the development sequence from aquatic conditions, through flood plain fen, to an ombrotrophic mire surface is well demonstrated. The vegetation and surface features of the mire expanse display a fine range of variation, typical of natural mire formed within this climatic zone. The site supports a diverse flora and is important for its bird and invertebrate fauna.

**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).

**2, 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 2

The site supports an important population of the butterfly *Coenonympha tullia*, occurring at the southern limit of its range in Britain. *Coenophila subrosea* (rosy marsh moth); *Lutra lutra* (otter) (Habitats Directive Annex II feature (S1355)); *Arvicola terrestris* (water vole).

Ramsar criterion 3

Supports a rich vegetation assemblage and possesses a surface pattern characteristic of this mire habitat type.

*Sphagnum pulchrum*, *S. subsecundum*, *Atrichum tenellum* - nationally scarce

*Riccia huebeneriana*, *Scapania paludicola* - nationally rare

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

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

**Species with peak counts in winter:**

Whooper swan , <i>Cygnus cygnus</i> , Iceland/UK/Ireland	9 individuals, representing an average of 0.1% of the GB population (5 year peak mean 1998/9-2002/3)
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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):

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, clay, alluvium, peat, sedimentary
Geomorphology and landscape	lowland
Nutrient status	oligotrophic
pH	strongly acidic
Salinity	fresh
Soil	mainly organic
Water permanence	usually permanent

Summary of main climatic features	Annual averages (Trawscoed, 1971–2000) ( <a href="http://www.metoffice.com/climate/uk/averages/19712000/sites/trawscoed.html">www.metoffice.com/climate/uk/averages/19712000/sites/trawscoed.html</a> ) Max. daily temperature: 13.5° C Min. daily temperature: 5.9° C Days of air frost: 48.2 Rainfall: 1213.9 mm Days of rainfall $\geq$ 1 mm: 169.2
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**General description of the Physical Features:**

12,000 years ago mid-Wales was in the grip of the last Ice Age. As the climate warmed, the glaciers receded and a large shallow lake occupied this valley.

A huge reed bed and woodland developed, but the climate became cooler and wetter, allowing *Sphagnum* bog-mosses to invade and begin the process of building three raised bogs.

For centuries, peat was cut by local people and burnt as fuel. Today, Cors Caron is one of the finest raised bog systems in Britain.

**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).

This sequence of peat domes developed on the floodplain of the Afon (River) Teifi in mid-Wales now represents the most intact surviving example in the UK of a raised bog landscape (macrotope). The three main extant domes are hydrologically isolated by the River Teifi and associated surface drainage features, and all three have suffered extensive damage as a consequence of past drainage and peat-cutting. The river terraces associated with the component bog mesotopes are regularly flooded. Substantial areas of the surface of each of the three component bogs still retain good quality active raised bog vegetation. Extensive areas with a high cover of heather *Calluna vulgaris* and deergrass *Trichophorum cespitosum* are also present. Areas of degraded raised bog occur peripherally. The vegetation cover here is predominantly composed of species-poor rank swards of purple moor-grass *Molinia caerulea* developed over surfaces grossly modified by drainage and peat-cutting. Many of the most modified sections are subject to an extensive programme of hydrological rehabilitation aimed at elevating and stabilising water levels adjacent to the core surviving raised bog interest.

**18. 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

**19. Wetland types:**

Inland wetland

Code	Name	% Area
U	Peatlands (including peat bogs swamps, fens)	76.6
Tp	Freshwater marshes / pools: permanent	16.7
Xf	Freshwater, tree-dominated wetlands	2.3
Other	Other	2
M	Rivers / streams / creeks: permanent	1.2
Xp	Forested peatland	1.2

**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.

This site is a sequence of peat domes in the Teifi valley in mid-Wales which now represents the most intact surviving example in the UK of a raised bog landscape unit. The domes are separated by the River Teifi itself and lagg streams that drain into it. The river terraces associated with these are regularly flooded and support vegetation that includes *Phalaris arundinacea*, *Juncus effusus* and *Molinia caerulea*. A substantial part of the raised domes themselves is also in a relatively natural condition, with a mosaic of vegetation types. These include *Sphagnum*-rich communities containing *Sphagnum papillosum*, *Sphagnum pulchrum* and white beak-sedge *Rhynchospora alba*. Drier areas are dominated by *Calluna vulgaris* and *Trichophorum cespitosum*. The site therefore provides the best opportunity to see the type of raised bog landscape that was previously an important feature of many parts of the UK.

The main habitat types of this site are: raised mire, swamp, marshy grassland, broad-leaved woodland.

The site supports a typical range of lowland raised mire communities with an M18 *Erica tetralix*-*Sphagnum papillosum* raised and blanket mire/M2 *Sphagnum cuspidatum/recurvum* bog pool community complex on the mire expanse. The land supports M15 *Scirpus cespitosus*-*Erica tetralix* wet heath and M25 *Molinia caerulea*-*Potentilla erecta* mire communities, and the lagg is a complex of lagg fen and carr communities.

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.**

*Elatine hexandra*, *Luronium natans*.

**Lower plants.**

*Riccia huebeneriana*, *Scapania paludicola*, *Sphagnum balticum*, *Sphagnum subsecundum*.

**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.**

*Coenophila subrosea*, *Coenonympha tullia*

**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
- Livestock grazing
- Non-consumptive recreation
- Scientific research
- Sport fishing
- Sport hunting
- Tourism
- Traditional cultural

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
Non-governmental organisation (NGO)		+
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)	+	
Permanent pastoral agriculture		+
Hunting: recreational/sport	+	
Domestic water supply		+

Non-urbanised settlements		+
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**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?

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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)	+	
Land owned by a non-governmental organisation for nature conservation		+
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.

**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.

**Environment.**

Long-term project to record and characterise fluctuations in the water table, and to assess the groundwater system subsequent to hydrological restoration work. Continuing studies of contemporary hydrological processes are of significance for raised mire conservation.

**Miscellaneous.**

The site is used on a regular basis for palaeo-ecological research and is one of the classic sites within the United Kingdom.

Continuing studies of Holocene climate change and palaeo-hydrology.

**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.

There is a boardwalk system and accompanying handbook for the south-east bog (CCW 1994).

Colleges undertake vegetation surveys and peat core sampling within specified areas. The site is used significantly for university research and teaching because it demonstrates a classic mire habitat type.

**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.**

Most visitors follow the railway walk on the eastern side of the site.

There is a riverside walk with access by permit only.

**32. Jurisdiction:**

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Countryside Division, Welsh Assembly Government, Cathays Park, Cardiff, CF1 3NQ

**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.

Site Safeguard Officer, International Designations, Countryside Council for Wales, Maes-y-Ffynnon, Penrhosgarnedd, Bangor, Gwynedd, LL57 2DW

**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**

Averis, ABG (2001) *Vegetation survey of Cors Caron, Ceredigion, Wales 1998–2000*. Countryside Council for Wales, Bangor

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Countryside Council for Wales (1994) *Cors Caron (Tregaron Bog) National Nature Reserve. An introduction to the vegetation of the south-east bog*. Countryside Council for Wales, Bangor

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- Gregory, KJ (ed.) (1997) *Fluvial geomorphology of Great Britain*. Chapman & Hall, London, for Joint Nature Conservation Committee, Peterborough (Geological Conservation Review Series, No. 13)
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- Jones, PS, Stevens, DP, Blackstock, TH, Burrows, CR & Howe, EA (eds.) (2003) *Priority habitats of Wales: a technical guide*. Countryside Council for Wales, Bangor
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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.)
- Turner, J (1964) The anthropogenic factor in vegetational history. I. Tregaron and Whixall Mosses. *New Phytologist*, **63**(1), 73-89

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