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:

FOR OFFICE USE ONLY.

DD MM YY

Designation date | Site Reference Number

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

2. Date this sheet was completed/updated:

Designated: 02 February 1997

3. Country:

UK (England/Wales)

4. Name of the Ramsar site:

Midland Meres and Mosses Phase 2

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):

52 55 20 N 02 45 43 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: Chester, Shrewsbury, Stafford

The 18 units which make up the site are spread over the Wrexham / Shropshire / Cheshire and Staffordshire Plain. The majority of the units are in Cheshire and north Shropshire, with a small number of outlying sites in adjacent parts of Staffordshire and Wrexham.

Administrative region: Cheshire; Clwyd; Shropshire; Staffordshire; Wrecsam/ Wrexham

10. Elevation (average and/or max. & min.) (metres): 11. Area (hectares): 1588.24

Min. 63
Max. 94
Mean 83

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 Meres and Mosses form a geographically diverse series of lowland open water and peatland sites in the north-west Midlands of England and north-east Wales. These have developed in natural depressions in the glacial drift left by receding ice sheets which formerly covered the Cheshire/Shropshire Plain. The 18 component sites include open water bodies (meres), the majority of which are nutrient-rich with associated fringing habitats, reed swamp, fen, carr and damp pasture. Peat accumulation has resulted in the nutrient-poor peat bogs (mosses) forming in some sites on the fringes of the meres or completely infilling basins. In a few cases the result is a floating quaking bog or schwingmoor. The wide range of resulting habitats support nationally important flora and 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).

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

The site comprises a diverse range of habitats from open water to raised bog.

Ramsar criterion 2

Supports a number of rare species of plants associated with wetlands, including the nationally scarce cowbane *Cicuta virosa* and, elongated sedge *Carex elongata*. Also present are the nationally scarce bryophytes *Dicranum affine* and *Sphagnum pulchrum*.

Also supports an assemblage of invertebrates including several rare species. There are 16 species of British Red Data Book insect listed for this site including the following endangered species: the moth *Glyphipteryx lathamella*, the caddisfly *Hagenella clathrata* and the sawfly *Trichiosoma vitellinae*.

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, basic, neutral, sand, clay, alluvium, peat, nutrient-rich, nutrient-poor, sandstone, sandstone/mudstone, gravel
Geomorphology and landscape	lowland, hilly, floodplain, escarpment
Nutrient status	eutrophic, mesotrophic, oligotrophic
pH	acidic, circumneutral, strongly acidic
Salinity	fresh
Soil	mainly organic
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Shawbury, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/shawbury.html) Max. daily temperature: 13.4° C Min. daily temperature: 5.2° C Days of air frost: 61.8 Rainfall: 655.7 mm Hrs. of sunshine: 1398.1

General description of the Physical Features:

The Meres and Mosses of the north-west Midlands comprise a series of open water and peatland sites, most of which developed in natural depressions left by the retreating ice sheets at the end of the last Ice Age. There are over 60 open water sites, or 'meres', as well as a smaller number of peatland sites, known as 'mosses'.

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).

The Meres and Mosses of the north-west Midlands comprise a series of open water and peatland sites, most of which developed in natural depressions left by the retreating ice sheets at the end of the last Ice Age. There are over 60 open water sites, or 'meres', as well as a smaller number of peatland sites, known as 'mosses'.

18. Hydrological values:

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

Recharge and discharge of groundwater, Flood water storage / desynchronisation of flood peaks

19. Wetland types:

Inland wetland

Code	Name	% Area
U	Peatlands (including peat bogs swamps, fens)	66.1
O	Freshwater lakes: permanent	14.4
Other	Other	12.7
Xp	Forested peatland	4.7
W	Shrub-dominated wetlands	2.1

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.

The site's primary interest is its wide range of lowland wetland types and successional stages within a distinct biogeographical area. Waters are generally circumneutral or acidic depending on the component site's soil type, catchment size and usage. Substantial areas of open water remain in some sites, and in many cases this is fringed by extensive and varied swamp, fen and carr communities. Some basins have become peat-filled, leading in some circumstances to the development of ombrotrophic conditions; of particular importance are the quaking bogs or schwingmoors.

Fenns, Whixall, Bettisfield, Wem and Cadney Mosses are large raised bogs of exceptional importance.

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.

Calamagrostis stricta, Carex elongata, Cicuta virosa, Thelypteris palustris

Lower Plants.

Sphagnum pulchrum, Dicranum undulatum

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 with peak counts in spring/autumn:

Northern shoveler , *Anas clypeata*, NW & C Europe	171 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

Great cormorant , *Phalacrocorax carbo carbo*, NW Europe	323 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)
Great bittern , *Botaurus stellaris stellaris*, W Europe, NW Africa	1 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)
Water rail , *Rallus aquaticus*, Europe	7 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/9-2002/3)

Species Information

Nationally important species occurring on the site.

Invertebrates.

Limnophila heterogyna, Atylotus plebeius, Hagenella clathrata, Limnophila fasciata, Carorita limnaea, Glyphipteryx lathamella, Trichiosoma vitellinae, Eilema serica, Brachythops wusteneii, Pachinematus xanthocarpos, Sittcus floricola, Lampronia fuscatella, Hybomitra lurida.

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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
Archaeological/historical site
Environmental education/ interpretation
Livestock grazing
Non-consumptive recreation
Peat cutting (small-scale/subsistence)
Scientific research
Sport fishing

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)	+	
Local authority, municipality etc.	+	+
National/Crown Estate	+	+
Private	+	+

25. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	
Recreation	+	
Current scientific research	+	
Collection of non-timber natural products: (unspecified)	+	
Commercial forestry		+
Fishing: recreational/sport	+	
Arable agriculture (unspecified)		+
Grazing (unspecified)	+	+
Hunting: recreational/sport	+	+
Sewage treatment/disposal		+
Irrigation (incl. agricultural water supply)		+
Mineral exploration (excl. hydrocarbons)		+
Transport route		+
Urban development		+
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?
Eutrophication	1		+	+	+
Introduction/invasion of non-native plant species	1		+		+
Pollution – pesticides/agricultural runoff	1			+	+

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

Habitat.
Catchment management planning.
Peatland restoration & monitoring.
Fen rehabilitation.
Limnology.
Hydrology.

Environment.
Water chemistry.
Trophic status/nutrient budgets.
Peat paleo-ecology.
Impacts of fish.

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.

Areas owned by the Local Authority and National Nature Reserves are used by schools and universities for site-based projects and individual dissertations.
National Nature Reserves are used as management-practice and machinery demonstration sites.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

Activities.
Angling; boating.

Facilities provided.
There is a network of public footpaths.

Seasonality.
Increased use in summer.

32. Jurisdiction:

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

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs, European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB
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 Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK / 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

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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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