

# RAMSAR INFORMATION SHEET

## FOR WETLANDS OF INTERNATIONAL IMPORTANCE

Date of designation: 02/02/97

Site reference number 7UK108  
1 **Compilation date** Feb 1999  
2 **Country** UK (England/Wales)  
3 **Name of wetland** Midland Meres and Mosses Phase 2  
4 **Site centre location:** Latitude: 52 55 20 N Longitude: 02 45 43 W  
5 **Altitude** Not being submitted  
6 **Area (ha)** 1588.24

### 7 Overview

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.

8 **Wetland type** Inland wetland

Code	Name	% Area
O	Freshwater lakes: permanent	14.4
U	Peatlands (including peat bogs swamps, fens)	66.1
W	Shrub-dominated wetlands	2.1
X <sup>XP</sup>	Tree-dominated wetlands	4.7
Other	Other	12.7

9 **Ramsar Criteria** 2a  
10 **Map of the site** ✓  
11 **Compiler** Joint Nature Conservation Committee  
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### 12 Justification of criteria

#### Ramsar criterion 2a

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*.

### 13 General location

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:** Staffordshire, Cheshire, Clwyd, Shropshire

## 14 Physical Features

Soil & Geology	acidic, alluvium, basic, clay, gravel, neutral, nutrient-poor, nutrient-rich, peat, sand, sandstone, sandstone/mudstone
Geomorphology and Landscape	escarpment, floodplain, hilly, lowland
Nutrient status	eutrophic, mesotrophic, oligotrophic
pH	acidic, circumneutral, strongly acidic
Salinity	fresh
Soil	mainly organic
Water permanence	usually permanent
Summary of main climatic features	Rainy, temperate climate with a mild winter and periodic frost. Mean minimum temperature approximately 7.0°C. Mean maximum temperature approximately 14.2°C. Mean annual precipitation approximately 765.1mm, with a winter maximum.

## 15 Hydrological values

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

## 16 Ecological features

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 bog of exceptional importance.

## 17 Noteworthy flora

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

### Higher Plants.

*Calamagrostis stricta*, *Carex elongata*, *Cicuta virosa*, *Thelypteris thelypteroides (palustris)*

### Lower Plants.

*Sphagnum pulchrum*, *Dicranum undulatum*.

## 18 Noteworthy fauna

### Birds

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

**Over winter the area regularly supports:**

Cormorant, *Phalacrocorax carbo*  
(Northwestern Europe)

288 individuals, representing an average of 2.2% of the GB population (5 year peak mean 1991/92-1995/96)

Gadwall, *Anas strepera*  
(Northwestern Europe)

103 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1991/92-1995/96)

Pochard, *Aythya ferina*  
(Northwestern/Northeastern Europe)

879 individuals, representing an average of 2% of the GB population (5 year peak mean 1991/92-1995/96)

Shoveler. *Anas clypeata*  
(Northwestern/Central Europe)

152 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1991/92-1995/96)

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*, *Sitticus floricola*, *Lampronia fuscata*, *Hybomitra lurida*.

#### 19 Social and Cultural Values

Aesthetic  
Archaeological/historical site  
Conservation education  
Current scientific research  
Livestock grazing  
Non-consumptive recreation  
Peat cutting  
Sport fishing

#### 20 Land tenure/ownership

Ownership category	On-Site	Off-Site
Non-governmental organisation	+	
Local authority, municipality etc.	+	+
National/Crown estate	+	+
Private	+	+

#### 21 Current land use

Activity	On-Site	Off-Site	Scale
Nature conservation	+		Large-Scale
Recreation	+		Small-Scale
Research	+		Large-Scale
Collection of non-timber natural products: (unspecified)	+		Small-Scale
Commercial forestry		+	Small-Scale
Fishing: recreational/sport	+		Large-Scale
Arable agriculture (unspecified)		+	Large-Scale
Grazing (unspecified)	+	+	Small-Scale
Hunting: recreational/sport	+	+	Small-Scale
Sewage treatment/disposal		+	Large-Scale
Irrigation (inc agricultural water supply)		+	Large-Scale
Mineral exploration		+	Large-Scale
Transport route		+	Small-Scale
Urban development		+	Small-Scale
Non-urbanised settlements		+	Small-Scale

#### 22 Adverse factors affecting the ecological character of the site

Activity	On-Site	Off-Site	Scale
Vegetation succession	+		Large-Scale
Drainage/reclamation for agriculture		+	Large-Scale
Eutrophication	+	+	Large-Scale
Introduction/invasion of exotic	+		Large-Scale

animal species			
Introduction/invasion of exotic plant species	+		Large-Scale
Pollution - pesticides/agricultural runoff	+	+	Large-Scale

### 23 Conservation measures taken

Conservation measure	On-site	Off-site
SSSI	+	
NNR	+	
Candidate SAC	+	
Land owned by a NGO for nature conservation	+	
Management agreement	+	+
Site management statement/plan implemented	+	
Other	+	+

### 24 Conservation measures proposed but not yet implemented see below

#### Site vulnerability and management statement

The component wetlands (and surrounding catchments) are vulnerable to changes particularly in water levels and water quality.

Nutrient enrichment from agricultural, industrial, and domestic sources, lowering of water tables through drainage and nearby mineral extraction, and siltation of meres following ploughing in the catchment have been ongoing problems. Reduction of these anthropogenic threats is being achieved through Water Level Management Plans or Catchment Management Strategies. The restoration of water levels and prevention of vegetation succession is being achieved through implementation of Site Management Statements and management agreements.

Introduced species of plants and animals have also caused problems; fish stocking can modify the entire aquatic ecosystem and grazing by Canada geese causes a threat to reed fringes. Invasive introduced plant species include *Crassula helmsii* New Zealand pygmyweed, *Rhododendron* and self-seeded pines from nearby afforested areas. Appropriate control programmes are being continually refined and implemented.

### 25 Current scientific research/survey/monitoring and facilities

#### Habitat.

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

#### Environment.

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

### 26 Current conservation education

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.

### 27 Current recreation and tourism

#### Activities.

Angling; boating.

**Facilities provided.**

There is a network of public footpaths.

**Seasonality.**

Increased use in summer.

**28 Functional jurisdiction**

Department of the Environment, Transport and the Regions  
Scottish Office, Agriculture, Environment and Fisheries Department

**29 Management authority**

English Nature/ Countryside Council for Wales

**30 Bibliography**

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