

Site Improvement Plan

West Midlands Mosses

Site Improvement Plans (SIPs) have been developed for each Natura 2000 site in England as part of the Improvement Programme for England's Natura 2000 sites (IPENS). Natura 2000 sites is the combined term for sites designated as Special Areas of Conservation (SAC) and Special Protected Areas (SPA). This work has been financially supported by LIFE, a financial instrument of the European Community.

The plan provides a high level overview of the issues (both current and predicted) affecting the condition of the Natura 2000 features on the site(s) and outlines the priority measures required to improve the condition of the features. It does not cover issues where remedial actions are already in place or ongoing management activities which are required for maintenance.

The SIP consists of three parts: a Summary table, which sets out the priority Issues and Measures; a detailed Actions table, which sets out who needs to do what, when and how much it is estimated to cost; and a set of tables containing contextual information and links.

Once this current programme ends, it is anticipated that Natural England and others, working with landowners and managers, will all play a role in delivering the priority measures to improve the condition of the features on these sites.

The SIPs are based on Natural England's current evidence and knowledge. The SIPs are not legal documents, they are live documents that will be updated to reflect changes in our evidence/knowledge and as actions get underway. The information in the SIPs will be used to update England's contribution to the UK's Prioritised Action Framework (PAF).

The SIPs are not formal consultation documents, but if you have any comments about the SIP or would like more information please email us at IPENSLIFEProject@naturalengland.org.uk, or contact Natural England's Responsible Officer for the site via our enquiry service 0300 060 3900, or enquiries@naturalengland.org.uk

This Site Improvement Plan covers the following Natura 2000 site(s)

UK0013595 West Midlands Mosses SAC

Site description

The West Midlands Mosses comprises four sites: Clarepool Moss, Abbots Moss, Chartley Moss and Wybunbury Moss.

These support large basin mires which have developed as quaking bogs, known as Schwingmoors, together with a variety of associated hollows and pools showing various types and stages of mire development. This complexity of habitats gives rise to a diverse assemblage of associated plants and invertebrates of national significance.

Plan Summary

This table shows the prioritised issues for the site(s), the features they affect, the proposed measures to address the issues and the delivery bodies whose involvement is required to deliver the measures. The list of delivery bodies will include those who have agreed to the actions as well as those where discussions over their role in delivering the actions is on-going.

Priority & Issue	Pressure or Threat	Feature(s) affected	Measure	Delivery Bodies
1 Water Pollution	Pressure	H3160 Acid peat-stained lakes and ponds, H7140 Very wet mires often identified by an unstable `quaking` surface	Establish effective buffer areas and increase the area of low input land use in the catchments	Environment Agency, Forest Enterprise, Natural England
2 Hydrological changes	Pressure	H3160 Acid peat-stained lakes and ponds, H7140 Very wet mires often identified by an unstable `quaking` surface	Mitigate the impact of historic site drainage networks through improved water management structures allowing naturalised water levels	Environment Agency, Natural England
3 Air Pollution: impact of atmospheric nitrogen deposition	Pressure	H3160 Acid peat-stained lakes and ponds, H7140 Very wet mires often identified by an unstable `quaking` surface	Reduce the impact of nitrogen deposition	Not yet determined
4 Inappropriate scrub control	Pressure	H3160 Acid peat-stained lakes and ponds, H7140 Very wet mires often identified by an unstable `quaking` surface	Additional clearance of scrub and trees from peatland areas	Natural England
5 Game management: pheasant rearing	Threat	H3160 Acid peat-stained lakes and ponds, H7140 Very wet mires often identified by an unstable `quaking` surface	Ensure pheasant rearing management is sustainable	Natural England
6 Forestry and woodland management	Threat	H3160 Acid peat-stained lakes and ponds, H7140 Very wet mires often identified by an unstable `quaking` surface	Establish a suitable open buffer area around mire habitat at Abbots Moss	Forest Enterprise

7	Habitat fragmentation	Threat	H3160 Acid peat-stained lakes and ponds, H7140 Very wet mires often identified by an unstable `quaking` surface	Work in partnership to secure buffer and catchment improvements	Cheshire Wildlife Trust, Forest Enterprise, Meres and Mosses NIA, Natural England, Shropshire Wildlife Trust, Staffordshire Wildlife Trust
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Issues and Actions

This table outlines the prioritised issues that are currently impacting or threatening the condition of the features, and the outstanding actions required to address them. It also shows, where possible, the estimated cost of the action and the delivery bodies whose involvement will be required to implement the action. Lead delivery bodies will be responsible for coordinating the implementation of the action, but not necessarily funding it. Delivery partners will need to support the lead delivery body in implementing the action. In the process of developing the SIPs Natural England has approached the delivery bodies to seek agreement on the actions and their roles in delivering them, although in some cases these discussions have not yet been concluded. Other interested parties, including landowners and managers, will be involved as the detailed actions are agreed and delivered. Funding options are indicated as potential (but not necessarily agreed or secured) sources to fund the actions.

1 Water Pollution

On each of the component sites (i.e. Clarepool Moss, Wybunbury Moss, Abbots Moss, and Chartley Moss) the features have been historically impacted by, and remain vulnerable to, changes in water quality and nutrient enrichment from their surrounding catchment. Dystrophic pools at Abbots Moss currently fail to meet their water quality objectives whilst those at Clarepool Moss require testing. The evidence suggests that activities within the small catchments (agriculture, forest nursery, residential etc) are the sources of excess nutrients.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1A	Implement the Diffuse Water Pollution plans for Wybunbury Moss and Abbots Moss.	£15,000	2014-20	Diffuse Water Pollution Plan	Environment Agency, Natural England, Water Framework Directive (WFD), Catchment Sensitive Farming (CSF)	Natural England	Environment Agency
1B	Investigate amending the boundary of Clarepool Moss and Wybunbury Moss SSSI to ensure adequate hydrological protection for the SAC features.	£10,000	2015-16	Designation strategy: Notification Amendment	Natural England	Natural England	n/a

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
1C	Reduce diffuse pollution through advice and available capital grants. A high proportion of each of the four catchments is under high nutrient input land use including adjoining buffer land e.g. maize/arable fields adjacent to Clarepool Moss and Wybunbury Moss.	£20,000	2015-20	England Catchment Sensitive Farming (CSF)	Rural Development Programme (RDPE)	Natural England	n/a
<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
1D	Reduce the high proportion of each of the four catchments under high nutrient input land use including by targeting the promotion of agri-environment agreements at all adjoining buffer land e.g. maize /arable fields adjacent to Clarepool Moss and Wybunbury Moss.	£40,000	2015-20	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	Rural Development Programme (RDPE)	Natural England	n/a
<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
1E	Identify existing septic tanks contributing excess nutrients to Clarepool Moss and Wybunbury Moss and seek to improve these discharges.	£7,000	2015-16	Diffuse Water Pollution Plan	Environment Agency, Natural England, Water Framework Directive (WFD)	Not yet determined	Environment Agency, Natural England

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
1F	Reduce eutrophication affecting Abbots Moss SSSI (including Gull Pool) by reviewing and revising the land drainage system and fertiliser/nutrient management on the adjacent Delamere Nursery.	£15,000	2014-15	Non-Natural England funded site management plan	Natural England, Water Framework Directive (WFD), Forest Enterprise	Local partnership	Forest Enterprise, Natural England
<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
1G	Improve the understanding of the eutrophication of shallow groundwater, at and around, Abbots Moss by continuing to monitor and analyse borehole data.	£5,000	2014-15	Investigation / Research / Monitoring	Environment Agency, Natural England, Water Framework Directive (WFD)	Environment Agency	Natural England

2 Hydrological changes

All of the component areas of transition mire are impacted by historic drainage. At Clarepool, Chartley and Wybunbury Mosses some of this damage has been partially repaired but further measures to restore a naturalised hydrology are needed in all locations. As well as surface water, ground water is also an important water supply mechanism to the mosses. Hence the SAC is vulnerable to groundwater abstractions and artificial flooding as well as catchment drainage.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
2A	Negotiate to secure required water levels by installing/enhancing existing long-term water control structures. Clarepool Moss may require an enhanced and more robust water control structure.	Not yet determined	2016-18	Advice: Negotiation	Natural England	Natural England	Environment Agency

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
2B	Install new and enhance existing long-term water control structures to secure required water levels. At Chartley Moss a review of the existing water control network to consider the potential for enhancement is proposed.	£20,000	2016-18	National Nature Reserve (NNR) management plan	Natural England	Natural England	n/a

3 Air Pollution: impact of atmospheric nitrogen deposition

Nitrogen deposition exceeds site relevant critical loads.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
3A	Control, reduce and ameliorate atmospheric nitrogen impacts.	Not yet determined	2014-20	Site Nitrogen Action Plan	Not yet determined	Not yet determined	Not yet determined

4 Inappropriate scrub control

The transition mire habitat at each of the component sites experiences continual re-colonisation by scrub, typically birch and pine as a consequence of past hydrological change e.g. historical drainage and cumulative nutrient enrichment together with readily available seed sources. The presence of excessive amounts of scrub and trees affects the mire habitat by increasing the rate of drying out and by the addition of nutrients.

<i>Action</i>	<i>Action description</i>	<i>Cost estimate</i>	<i>Timescale</i>	<i>Mechanism</i>	<i>Funding option</i>	<i>Delivery lead body</i>	<i>Delivery partner(s)</i>
4A	Manage regrowth on recently felled areas and further reduce the extent of mature tree cover on pre-drainage former transition mire habitat at Chartley Moss and Wynbunbury Moss.	£65,000	2015-17	National Nature Reserve (NNR) management plan	Natural England	Natural England	n/a

5 Game management: pheasant rearing

Nutrient enrichment in the areas of pheasant pens and disturbance to ground flora from game birds are a local issue at Clarepool and Chartley Mosses. Erosion may be caused by shoot activities and access restrictions due to shooting can restrict rewetting and conservation management activities.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
5A	Review pheasant rearing practices and where they affect SAC features negotiate and agree improvements.	Not yet determined	2015	Advice: Other	Natural England	Natural England	n/a

6 Forestry and woodland management

Inappropriate woodland management, for example the restocking of land in close proximity to Abbots Moss could cause shade, nutrient enrichment and enhanced evapo-transpiration and serve as an undesirable seed source for scrub (e.g. Pine) encroachment.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
6A	Establish an improved open buffer zone around Abbots Moss free of tree planting necessary to improve the lagg zone, reduce evapo-transpiration losses, minimise tree seeding risk, and reduce shading.	Not yet determined	2014	Advice	Forest Enterprise	Forest Enterprise	n/a

7 Habitat fragmentation

The sites are small and geographically isolated from each other. The threat of localised species extinction is greater and so the chances of recolonisation by lost species is very low. An example of this is provided by the extinction from Abbots Moss and Wybunbury Moss in recent decades of the white-faced darter dragonfly, a species dependent on dystrophic pools. The nearest donor population is more than 20 miles away.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
7A	Adopt a landscape partnership approach in seeking improvements to buffer and catchment land and species and habitat stepping stone peatland sites eg Delamere Lost Mosses Partnership for Abbots Moss and the Meres and Mosses NIA with respect to Clarepool Moss and Wybunbury Moss.	£150,000	2015-24	Partnership agreement: Other	Rural Development Programme (RDPE), Heritage Lottery Fund (HLF), Landfill tax	Meres and Mosses NIA	Cheshire Wildlife Trust, Forest Enterprise, Natural England, Shropshire Wildlife Trust, Staffordshire Wildlife Trust

Site details

The tables in this section contain site-relevant contextual information and links

Qualifying features

#UK Special responsibility

West Midlands Mosses SAC	H3160 Natural dystrophic lakes and ponds
	H7140 Transition mires and quaking bogs

Site location and links

West Midlands Mosses SAC

Area (ha) 184.18	Grid reference SK026282	Map link
Local Authorities	Cheshire; Shropshire; Staffordshire	
Site Conservation Objectives	European Site Conservation Objectives for West Midlands Mosses SAC	
European Marine Site conservation advice	n/a	
Regulation 33/35 Package	n/a	
Marine Management Organisation site plan	n/a	

Water Framework Directive (WFD)

The Water Framework Directive (WFD) provides the main framework for managing the water environment throughout Europe. Under the WFD a management plan must be developed for each river basin district. The River Basin Management Plans (RBMP) include a summary of the measures needed for water dependent Natura 2000 sites to meet their conservation objectives. For the second round of RBMPs, SIPs are being used to capture the priorities and new measures required for water dependent habitats on Natura 2000 sites. SIP actions for non-water dependent sites/habitats do not form part of the RBMPs and associated consultation.

Additional information is provided on targets for flow and some water quality parameters, in order to meet the conservation objectives for certain Natura 2000 sites. The relevant targets are identified in the revised conservation objectives document (see link to PDF below).

These targets have been revised for a number of Natura 2000 rivers and lakes, following a review by the conservation agencies of Common Standards Monitoring Guidance. For rivers, this is done through local discussions between Natural England and Environment Agency staff. For lake sites, the only parameter where alignment of standards was reviewed was phosphorus and so this work was undertaken jointly at a national level.

The linked PDF documents include the proposed target values, and also set out an 'interim progress goal', that will need to be achieved by 2021. Where sufficient information is available the document also identifies a timescale for achievement of the longer-term target. For any sites where it has not been possible to agree specific targets, usually because further technical work is required, these will be indicated in the documents by an asterisk. For further information please see Part 2 of the River Basin Plan

West Midlands Mosses SAC

River basin	Humber RBMP
WFD Management catchment	Trent Valley Staffordshire
WFD Waterbody ID (Cycle 2 draft)	n/a
Locally revised Conservation Objectives	n/a
Additional information on locally revised Conservation Objectives	n/a
EA/ NE agreed RBMP lake SAC targets	Proposed total phosphorus targets for Lake Natura 2000 Protected Area Special Areas of Conservation for the updated river basin management plan consultation

River Restoration Plan

Source of information on river restoration plans for SAC rivers where these are in place or planned, with links to documentation where this is available.

Webpage link: Restoring Designated Rivers	n/a
River Restoration Plan document	n/a
River basin	North West RBMP
WFD Management catchment	Weaver/Gowy

<i>WFD Waterbody ID (Cycle 2 draft)</i>	n/a
<i>Locally revised Conservation Objectives</i>	n/a
<i>Additional information on locally revised Conservation Objectives</i>	n/a
<i>EA/ NE agreed RBMP lake SAC targets</i>	n/a

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Source of information on river restoration plans for SAC rivers where these are in place or planned, with links to documentation where this is available.

<i>Webpage link: Restoring Designated Rivers</i>	n/a
<i>River Restoration Plan document</i>	n/a

River basin [Severn RBMP](#)

WFD Management catchment Shropshire Middle Severn

<i>WFD Waterbody ID (Cycle 2 draft)</i>	n/a
<i>Locally revised Conservation Objectives</i>	n/a
<i>Additional information on locally revised Conservation Objectives</i>	n/a
<i>EA/ NE agreed RBMP lake SAC targets</i>	n/a

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<i>Webpage link: Restoring Designated Rivers</i>	n/a
<i>River Restoration Plan document</i>	n/a

Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)	
West Midlands Mosses SAC	Clarepool Moss SSSI Chartley Moss SSSI Abbots Moss SSSI Wybunbury Moss SSSI
National Nature Reserve (NNR)	
West Midlands Mosses SAC	Chartley Moss NNR Wybunbury Moss NNR
Ramsar	
West Midlands Mosses SAC	Midland Meres & Mosses Phase 1 Midland Meres & Mosses Phase 2
Special Areas of Conservation (SAC) and Special Protection Areas (SPA)	
West Midlands Mosses SAC	n/a

<i>Version</i>	<i>Date</i>	<i>Comment</i>
1.0	10/10/2014	

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