Improvement Programme for England's Natura 2000 Sites (IPENS)

Planning for the Future

Site Improvement Plan

Oak Mere

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)

UK0012970 Oak Mere SAC

Site description

Oak Mere is a shallow lake and one of the West Midland meres. It has unusual water chemistry which has resulted in an outstanding range of aquatic plants and invertebrates. The lake is surrounded by a mosaic of wetland habitats, including boggy pools, basin mires and wet woodland.

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	H3110 Nutrient-poor shallow waters with aquatic vegetation on sandy plains, H7140 Very wet mires often identified by an unstable `quaking` surface	Implementation of Oak Mere Diffuse Water Pollution Plan	Environment Agency, Natural England
2 Invasive species	Pressure/ Threat	H3110 Nutrient-poor shallow waters with aquatic vegetation on sandy plains, H7140 Very wet mires often identified by an unstable `quaking` surface	Production and implementation of Invasive Species Control Programme	Natural England
3 Hydrological changes	Pressure/ Threat	H3110 Nutrient-poor shallow waters with aquatic vegetation on sandy plains, H7140 Very wet mires often identified by an unstable `quaking` surface	Hydrological investigation to increase understanding of water levels	Natural England
4 Air Pollution: impact of atmospheric nitrogen deposition	Pressure/ Threat	H7140 Very wet mires often identified by an unstable `quaking` surface	Production and implementation of Site Nitrogen Action Plan	Not yet determined

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

Concentrations of nutrients (principally nitrogen and phosphorus) in the mere are in exceedance of target levels, reducing the diversity of species found in Oak Mere itself and the associated wetlands. Oak Mere was classified as an oligotrophic lake but is currently eutrophic, with a loss of characteristic species.

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
1A	Implementation of the Oak Mere Diffuse Water Pollution Plan, in particular ensuring resources are available for continued groundwater and surface water monitoring, agri-environment agreements, and further actions as understanding of nutrient pathways increases.	£100,000	2015-20	Diffuse Water Pollution Plan	Environment Agency, Natural England, Rural Development Programme (RDPE), Water Framework Directive (WFD)	Natural England	Environment Agency

2 Invasive species

Crassula is present at high frequencies in both the open water and marginal zones of the mere, and appears to be competing with the native plant species. It has not yet been found in the transition mires but has the potential to migrate here also.

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
2A	Monitoring and control of Crassula population within Oak Mere, and prevention of spread into transition mires.	£60,000	2015-20	Invasive Control Plan: Invasive Species Control Programme	Environment Agency, Natural England, Rural Development Programme (RDPE), Water Framework Directive (WFD)	Natural England	n/a

3 Hydrological changes

An investigation is required to add to the current understanding of the site's hydrology. Historic victorian era records suggest water levels at Oakmere were significantly higher. Several factors may may be implicated in level being lower subsequently including an overflow pipe at the north end which limits water levels. Tha adjacent Fourways Quarry could have implications for the water levels in the SAC in terms of the height of the water levels mainatined in the quarry and via the effect of such a large void on the gradient of the groundwater.

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
3A	Investigation to add to current understanding of the site's hydrology, and the effect of adjacent quarry on water levels within Oak Mere.	£20,000	2015	Investigation / Research / Monitoring	Natural England, Water Framework Directive (WFD)	Natural England	n/a

4 Air Pollution: impact of atmospheric nitrogen deposition

Nitrogen deposition exceeds the site relevant critical loads. Potential local sources of aerial nutrient enrichment include from local poultry, dairy, pig units and industrial sources.

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
4A	Control, reduce and ameliorate atmospheric impacts.	Not yet determined	2014-20	Site Nitrogen Action Plan	Not yet determined	Not yet determined	Not yet determined

Site details

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

Qualifying features

#UK Special responsibility

Oak Mere SAC	H7140 Transition mires and quaking bogs
	H3110 Oligotrophic waters containing very few minerals of sandy plains *(Littorelletalia uniflorae)*

Site location and links

Oak Mere SAC

Area (ha) **68.82** *Grid reference* **SJ573679** Map link

Local Authorities	Cheshire
Site Conservation Objectives	European Site Conservation Objectives for Oak Mere 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 (RMBP) 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

Oak Mere SAC

River basin	North West	North West RBMP
WFD Management catchment	Weaver/Gowy	
WFD Waterbody ID (Cycle 2 draft)	GB31233474, n/a	
Locally revised Conservation Objectives		
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

Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)	
Oak Mere SAC	Oak Mere SSSI

National Nature Reserve (NNR)	
Oak Mere SAC	n/a

Ramsar	
Oak Mere SAC	Midland Meres & Mosses Phase 2

Special Areas of Conservation (SAC) and Special Protection Areas (SPA)	
Oak Mere SAC	n/a

Version	*Date*	*Comment*
0.1	08/10/2014	