

Site Improvement Plan

Ox Close

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)

UK0030234 Ox Close SAC

Site description

Ox Close SAC and the streams which drain it, notably Eller Beck, comprise a site outstanding for its assemblage of plants indicative of metal-rich (metalliferous) soils. The site is found in the central Pennines and is unusual in that it encompasses the three main situations in which the Calaminarian grassland habitat occurs in the UK. It includes localised near-natural forms on cliffs and scars, more extensive remnant spoil-heaps from past lead-mining activity (more generally associated with this particular habitat), and some metal-enriched river alluvium along the banks of Eller Beck (outwash). Ox Close supports a rich metallophyte flora with significant populations of five species of higher plant metallophytes. It should be noted that Ox Close SAC is also of importance for the upland mixed broadleaved woodland and limestone grassland also present.

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 Overgrazing	Pressure/Threat	H6130 Grasslands on soils rich in heavy metals, H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites), H9180 Mixed woodland on base-rich soils associated with rocky slopes	Negotiate and implement rabbit control plan and appropriate stocking levels with landowners and tenants where necessary	Natural England, Yorkshire Dales National Park Authority
2 Hydrological changes	Pressure/Threat	H6130 Grasslands on soils rich in heavy metals	Consider and implement appropriate protection, as recommended in the agri-environment survey	Environment Agency, Natural England, Yorkshire Dales National Park Authority
3 Deer	Pressure/Threat	H9180 Mixed woodland on base-rich soils associated with rocky slopes	Undertake a general deer census for the site	Natural England
4 Forestry and woodland management	Pressure/Threat	H9180 Mixed woodland on base-rich soils associated with rocky slopes	Review trial coupes and consider extending coppice management	Forestry Commission, Natural England, Yorkshire Dales National Park Authority
5 Natural changes to site conditions	Threat	H6130 Grasslands on soils rich in heavy metals	Undertake a detailed habitat survey of site for the SAC features	Natural England
6 Disease	Threat	H9180 Mixed woodland on base-rich soils associated with rocky slopes	Produce a woodland management plan	Forestry Commission, Natural England, Yorkshire Dales National Park Authority

7 Air Pollution: impact of atmospheric nitrogen deposition

Pressure/
Threat

H6130 Grasslands on soils rich in heavy metals, H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites)

Establish a 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 Overgrazing

Previous surveys suggest that rabbit numbers on and in the vicinity of the SAC are too high to allow the SAC features to be restored/maintained. Other comments however suggest that a little burrowing into/scuffing of the spoil heaps by rabbits may be desirable and be having a positive effect... *"it is likely that disturbance of the spoil by these animals is probably the only driver maintaining the habitat and keeping up lead levels against the forces of leaching and soil build-up."* Rabbit control will need to play a fundamental role in future management on the site, however their inadvertent contribution to the maintenance of the calaminarian habitat i.e. scuffing of the material/keeping the sward open, should not be dismissed entirely.

Livestock grazing levels on some of the SAC appear to be on the high side (compared to the indicative carrying capacity for the types of habitat present), given the high rabbit numbers and lack of active management. Some of the reported overgrazing attributed to rabbits could also be due in part to higher than expected livestock numbers, particularly in the spring and summer months.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1A	Identify the landowners concerned and agree with them how the issue of overgrazing by rabbits can be resolved. The long-term resolution of rabbit complaints is best achieved by co-operation, otherwise problems are almost certain to recur. Any agreed action to control rabbits should also consider any adjoining land where rabbit numbers may also be an issue.	Not yet determined	2015-20	Advice: Negotiation	Staff time	Natural England	Yorkshire Dales National Park Authority

<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>
1B	Undertake an assessment of the impact of rabbits both from a negative impact aspect (e.g. excessively short swards, sward destruction, nutrient enrichment) and positive impacts on calaminarian grassland - in particular the suite of metallophytes and on the floristic composition of the calcareous grassland. This should take into account the impacts of rabbit grazing pressure in relation to livestock grazing density etc. The recommendations from such a piece of work could then inform discussions with the landowners in relation to control measures etc. (see Action 1A)	£2,000	2015-20	Investigation / Research / Monitoring	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	Renegotiate current livestock grazing levels on areas of the site where stocking is understood to be affecting site feature conditions.	No funding required	2014	Rural Development Programme for England (RDPE): Environmental Stewardship Higher Level Scheme (HLS)	Rural Development Programme (RDPE)	Natural England	n/a

2 Hydrological changes

Due to the failure of a dam above Disher Force, the lead mining remains/mine spoil at Disher Force Level are suffering serious damage through water erosion. The incremental loss of the spoil during times of peak flow has accelerated the loss of material and poses a significant risk to the associated calaminarian habitat. There are also implications for increasing sediment input as well as accelerating the chemical leaching into the Eller Beck watercourse. The outwash at Ballowfields will also be impacted to some degree. On one hand any erosion downstream of the eroding spoil is not necessarily all bad for the Calaminarian habitat (without exposure of relatively fresh contaminated soils the vegetation here will quickly develop into more typical calcareous, neutral grassland and even riparian trees/woodland), however increased flow velocity could also accelerate the removal of the contaminated material that the metaliferous plants rely on.

<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	Consider and implement proposals put forward following the historic environment survey (underway in 2014/15 as part of two Environmental Stewardship agreements) that will help slow the rate of erosion and keep the mine spoil in place for a longer period of time.	Not yet determined	2015-18	Habitat creation / restoration strategy: Habitat restoration	Not yet determined	Natural England	Environment Agency, Yorkshire Dales National Park Authority

3 Deer

Deer are present but impacts are currently unknown. Deer browsing has only been mentioned in one of the more recent monitoring surveys. Their presence will have some effect on the woodland understory and further investigation is necessary to assess how much is due to deer browsing.

<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	Investigate and monitor deer populations by undertaking a general census, as well as an impact assessment on the site features.	£3,736	2015-20	Investigation / Research / Monitoring	Natural England, SSSI funding	Natural England	n/a
3B	Depending upon the findings of the general census and impact assessment, consider and implement any proposals that are put forward.	£51,740	2016-20	Habitat creation / restoration strategy: Habitat restoration	Natural England, SSSI funding	Natural England	n/a

4 Forestry and woodland management

There is no active management within the woodland. As the majority of the wood at Ox Close SAC comprises old and currently abandoned hazel coppice with very little/sparse canopy cover, a lack of management could result in the neglected stools developing substantial stems and becoming unstable. Such stools are likely to have significantly shorter lifespans compared with those in a managed wood.

<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	Assess the trial reintroduction of coppice management to be undertaken between 2014 - 2017 in Haw Bank wood as part of the proposed Higher Level Stewardship agreement management. The review should consider the requirement for a further, more detailed woodland management plan to extend management to the remainder of the old hazel coppice.	Not yet determined	2018-20	Investigation / Research / Monitoring	Not yet determined	Forestry Commission	Yorkshire Dales National Park Authority

5 Natural changes to site conditions

The majority of the calaminarian grassland feature is present on lead mine spoil. No active mining will mean that lead and zinc will be lost from the spoil through natural processes, which in turn will reduce the toxicity of the spoil that the metaliferous plants rely on.

<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>
5A	Undertake a detailed habitat survey of the site to establish where the calaminarian habitat is present on mine spoil and where it also occurs under more natural conditions. The survey should also record the location/s and extent of woodland and limestone grassland.	£4,000	2015-17	Investigation / Research / Monitoring	Natural England	Natural England	n/a

6 Disease

Ash dieback *Chalara fraxinea* has the potential to cause significant damage to the SAC's very limited ash population. Ash only occurs at a low frequency within the woodland and any outbreak in the locality could rapidly impact the ash standards present. The majority of the wood comprises hazel coppice.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
6A	Produce a woodland management plan to outline the implications for the site should <i>Chalara fraxinea</i> 'take out' the limited ash population present. The plan should also make recommendations as to alternative species that could be planted/ should be encouraged/ protected where natural regeneration occurs, to help offset some of the biodiversity loss that would be inevitable should ash be lost to this site.	£1,200	2018-20	Habitat creation / restoration strategy: Other	Natural England, Forestry Commission	Forestry Commission	Natural England, Yorkshire Dales National Park Authority
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
6B	Undertake any supplemental planting of tree species identified in the Woodland Management Plan.	£4,500	2018-20	Habitat creation / restoration strategy: Other	Natural England, Forestry Commission	Forestry Commission	Natural England, Yorkshire Dales National Park Authority

7 Air Pollution: impact of atmospheric nitrogen deposition

Nitrogen critical loads are exceeded for all of the SAC features at Ox Close. All habitats are sensitive to nitrogen and critical loads are exceeded for all three interest features, however the woodland is currently assessed as Favourable. An increase in nitrogen could lead to a change in community composition, a decline in diversity, increased mineralization, N leaching and surface acidification. (Source: www.apis.ac.uk)

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
7A	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

Site details

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

Qualifying features

#UK Special responsibility

Ox Close SAC

H6130 Calaminarian grasslands of the *Violetalia calaminariae*

H6210# Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)

H9180# *Tilio-Acerion* forests of slopes, screes and ravines

Site location and links

Ox Close SAC

Area (ha) **141.25** Grid reference **SD984903** [Map link](#)

Local Authorities North Yorkshire

Site Conservation Objectives [European Site Conservation Objectives for Ox Close 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.

Ox Close SAC

River basin	Humber	Humber RBMP
WFD Management catchment	Swale, Ure, Nidd & Upper Ouse	
WFD Waterbody ID (Cycle 2 draft)	n/a	

Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)	
Ox Close SAC	Ox Close SSSI

National Nature Reserve (NNR)	
Ox Close SAC	n/a

Ramsar	
Ox Close SAC	n/a

Special Areas of Conservation (SAC) and Special Protection Areas (SPA)	
Ox Close SAC	n/a

<i>Version</i>	<i>Date</i>	<i>Comment</i>
1.0	15/10/2014	

www.naturalengland.org.uk/ipens2000

