

# Site Improvement Plan

## North York Moors

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](mailto: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](mailto:enquiries@naturalengland.org.uk)

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

**UK0030228     North York Moors SAC**

**UK9006161     North York Moors SPA**

## Site description

This site in north-east Yorkshire within the North York Moors National Park contains the largest continuous tract of upland heather moorland in England.

Dry heath covers over half the site and forms the main vegetation type on the western, southern and central moors where the soil is free-draining and has only a thin peat layer.

Wet heath is the second most extensive vegetation type on the site and is predominantly found on the eastern and northern moors where the soil is less free-draining. These habitats are the primary reason for qualifying for the SAC.

Blanket bog is also a qualifying feature occurring to a lesser extent along the watersheds of some of the high moors on relatively deep peat. These areas are mostly managed for grouse by rotational burning and with extensive sheep grazing. Bracken has become dominant over extensive areas that were formerly dominated by ericaceous species. There are boggy flushes with rushes and valley mires with Sphagnum mosses, sedges and other plants characteristic of fens and bogs. The moors are important for breeding upland birds, notably SPA species merlin and golden plover.

## 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 Climate change	Threat	A098(B) Merlin, A140(B) Golden Plover, H4010 Wet heathland with cross-leaved heath, H4030 European dry heaths, H7130 Blanket bogs	Monitor and review likely climate change impacts and identify adaptation actions	Defra, Natural England
2 Air Pollution: impact of atmospheric nitrogen deposition	Pressure	A140(B) Golden Plover, H4010 Wet heathland with cross-leaved heath, H4030 European dry heaths, H7130 Blanket bogs	Monitor, control, reduce and ameliorate atmospheric nitrogen impacts	Not yet determined
3 Disease	Pressure/Threat	H4010 Wet heathland with cross-leaved heath, H4030 European dry heaths, H7130 Blanket bogs	Monitor vegetation for disease damage	Centre for Ecology and Hydrology (CEH), Natural England, North York Moors National Park Authority, Food and Environment Research Agency (FERA)

4 Invasive species	Pressure/ Threat	A098(B) Merlin, A140(B) Golden Plover, H4010 Wet heathland with cross-leaved heath, H4030 European dry heaths, H7130 Blanket bogs	Collaborate to find alternatives for bracken control	Defra, Natural England, North York Moors National Park Authority, Contractor: aerial spraying
5 Managed rotational burning	Pressure	A098(B) Merlin, A140(B) Golden Plover, H4010 Wet heathland with cross-leaved heath, H4030 European dry heaths, H7130 Blanket bogs	Implement appropriate management and proper monitoring	Defra, Natural England, Landowner/occupier
6 Planning Permission: other mineral and waste	Threat	A098(B) Merlin, A140(B) Golden Plover, H4010 Wet heathland with cross-leaved heath, H4030 European dry heaths, H7130 Blanket bogs	Ensure compliance with Habitats Regulations for new applications	Defra, Natural England, North York Moors National Park Authority, Contractor: aerial spraying
7 Game management: grouse moors	Pressure/ Threat	A098(B) Merlin, A140(B) Golden Plover, H4010 Wet heathland with cross-leaved heath, H4030 European dry heaths, H7130 Blanket bogs	Assess aspects of grit use and game bird releases	Defra, Natural England, North York Moors National Park Authority, Contractor: aerial spraying
8 Changes in species distributions	Pressure/ Threat	A098(B) Merlin	Investigate Merlin and Golden Plover populations and effects of changes in land management	Defra, Natural England, North York Moors National Park Authority, Contractor: aerial spraying
9 Agriculture: other	Pressure/ Threat	A098(B) Merlin, A140(B) Golden Plover, H4010 Wet heathland with cross-leaved heath, H4030 European dry heaths, H7130 Blanket bogs	Establish permanent monitoring plots and investigate socio-economic means of supporting sustainable management	Defra, Natural England, North York Moors National Park Authority, Yorkshire Commoners Federation
10 Energy production	Threat	A098(B) Merlin, A140(B) Golden Plover	Study effects of wind turbines on SPA interest features	Defra, Natural England, North York Moors National Park Authority, Contractor: aerial spraying
11 Wildfire/ arson	Threat	A098(B) Merlin, A140(B) Golden Plover, H4010 Wet heathland with cross-leaved heath, H4030 European dry heaths, H7130 Blanket bogs	Establish wildfire risk plans, and implement management options to increase resilience to fire	Natural England, North York Moors National Park Authority

# 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 Climate change

Regional climate change predictions of increased temperatures, wetter winters and drier summers are likely to impact the condition of interest features of the North York Moors SAC and SPA, particularly as the site is at a relatively low altitude for some interest features.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1A	Collect data to inform any reviews to the Heather & Grass Burning Code to reflect regional changes to earlier nesting in moorland breeding birds.	Not yet determined	2014	Advice	Not yet determined	Defra	Natural England

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1B	Review likely climate change impacts and identify appropriate adaptation actions as recommended by the IPENS Climate Change Theme Plan.	Not yet determined	2015-21	Mechanism not identified / develop mechanism	Not yet determined	Natural England	n/a

## 2 Air Pollution: impact of atmospheric nitrogen deposition

Nitrogen deposition exceeds site relevant critical loads.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
2A	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

### 3 Disease

*Phytophthora*, blight damage to dwarf shrubs, could become worse with climate change.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
3A	Monitor local vegetation for presence and frequency of <i>Phytophthora</i> disease damage. Concentrate on problem areas, including areas with Rhododendron (western moors).	£25,000	2015-25	Bio-security plan: Other	Not yet determined	Natural England	Centre for Ecology and Hydrology (CEH), North York Moors National Park Authority, Food and Environment Research Agency (FERA)

### 4 Invasive species

Bracken is extensive particularly on edges of the moor and encroaches onto heath vegetation where not controlled. Potential loss of preferred herbicide for bracken control may exacerbate the situation.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
4A	Continue to help in the joint project to find an alternative for bracken control to stop loss of habitat and Ancient Monuments.	£40,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	Defra, Contractor: aerial spraying
4B	Apply 'lessons learnt' from long-term existing bracken spraying trials (eg - at Barmoors), to inform future bracken control for the protection of dry heath, including through agri-environment agreements	£20,000	2015-20	Advice	Not yet determined	Natural England	Defra, North York Moors National Park Authority

## 5 Managed rotational burning

There is strong evidence that managed rotational burning results in changes to plant species composition, peat properties, Dissolved Organic Carbon, peat chemistry, peat water table and peat flow-paths of blanket bog and upland wet heath habitats. Although managed burning is acceptable on upland dry heath, burn rotation length needs to be appropriate to avoid deterioration. Managed burning can have both positive and negative impacts on the habitat for SPA birds through changes to vegetation structure.

<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>
<b>5A</b>	Informed by the Uplands Evidence Review, improve blanket bog, wet heath and dry heath habitat so that they increasingly contribute to Favourable Conservation Status of these interest features by reviewing and if necessary changing existing burning rotations to ensure that appropriate management is in place.	Not yet determined	2015-20	Regulation: SSSI Regulation	Not yet determined	Natural England	Defra
<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>
<b>5B</b>	Informed by the Uplands Evidence Review, improve wet heath habitat so that it increasingly contribute to Favourable Conservation Status of this interest feature by investigating other ways (rather than burning) of achieving 'heather offtake' by using different grazing animals (such as Ling Cattle) on a 'trial' basis and heather cutting.	£30,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	Landowner/occupier

<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>
<b>5C</b>	Informed by the Uplands Evidence Review, improve blanket bog, wet heath and dry heath habitat so that they increasingly contribute to Favourable Conservation Status of these interest features by reviewing at the end of the current HLS agreement period those areas of these habitats currently in 'recovering' condition, and if necessary adapt management actions to ensure their continued recovery.	Not yet determined	2016-20	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	Not yet determined	Natural England	n/a

## 6 Planning Permission: other mineral and waste

Applications for new or extended quarrying / borrow pits are increasing, with the potential to affect SAC features.

<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>
<b>6A</b>	Assess the extent (ha) of 'borrow pits', ponds and tracks on the North York Moors by estate area and assess expansion rate in the past 10 -30 years. Develop Habitats Regulations compliant 'protocol' guidance about the opening up and running of borrow pits within the SAC/SPA site.	£10,000	2015-20	Advice	Not yet determined	Natural England	Defra, North York Moors National Park Authority

## 7 Game management: grouse moors

Intensive game management activity has the potential to affect SAC / SPA interest features. Of particular concern are grit mounds causing erosion of peat, effects of medicated grit and the potential for disease cross-over between game and wild birds.

<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>
<b>7A</b>	Assess the sustainability of existing 'grit mounds' regarding i) loss of SAC interest features via peat erosion and ii) potential impacts on invertebrates and consequent effects on SPA features.	£30,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	Defra, North York Moors 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>
<b>7B</b>	Investigate the number and scale of game bird releases at the edge of the SPA with the aim of investigating the likelihood of impact on SPA features.	£10,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	n/a

## 8 Changes in species distributions

Nationally Golden Plover numbers have fallen in recent years, and there is a known reduction in number of Merlin on the North York Moors. Causes of these declines need to be established and if possible action taken locally to ensure SPA features achieve Favourable Conservation Status

<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>
<b>8A</b>	Further develop ongoing initial analysis work which uses aerial imagery to investigate possible effects of changes in moorland management upon the merlin population (IPENS 066 'An analysis of changes in moorland management in the North York Moors Special Protection Area'). Based on results, develop plans for a wider national study.	£10,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	North York Moors 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>
<b>8B</b>	Continue investigations into the existing numbers, distribution and productivity of golden plover, including through population monitoring, in order to facilitate comparison with changes in burning patterns using a similar approach to the above merlin project (IPENS 066).	£20,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	Defra, North York Moors National Park Authority



## 9 Agriculture: other

Sustainable moorland management to protect Natura 2000 interest features can be affected by various issues, including socio-economic factors. An ageing population of land managers and changes to agricultural and conservation support mechanisms can effect the economic viability of farm holdings and changes to management practices need monitoring.

<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>
<b>9A</b>	Establish permanent monitoring plots to inform management of Natura 2000 interest features. These would enable investigation of a wide range of management issues including longer-term changes from rotational burning, wildfire, cutting / mowing to remove heather, assessment of recovering habitats, use of alternative grazing animals and effects of undergrazing.	£30,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	North York Moors National Park Authority, Yorkshire Commoners Federation
<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>
<b>9B</b>	Investigate requirements for sustainable management of Natura 2000 interest features, taking socio-economic factors into account. Work with national specialists to develop models for sustainable moorland management. In this context, repeat past economic surveys by Askham Bryan college looking at present day agricultural and conservation support levels and alternatives to present stock as well as likely support levels required to maintain a sustainable economic level for future generations.	£12,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	Defra, North York Moors National Park Authority

## 10 Energy production

Wind turbines encroaching towards edge of the SPA could pose a threat, particularly to golden plover feeding off site, both in terms of collision threat and the footprint of new developments.

<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>
<b>10A</b>	Wind turbines are increasingly encroaching on the boundaries of the existing SPA. It would be useful to undertake a proactive study additional to any work required under normal Habitats Regulations assessment procedures, to determine whether there are any effects on bird numbers and bird and bat flight paths etc to better inform the assessment of future planning applications.	£20,000	2015-20	Investigation / Research / Monitoring	Not yet determined	Natural England	Defra, North York Moors National Park Authority

## 11 Wildfire/ arson

Wildfire caused by 'managed' burns getting out of control, accident or deliberate action has the potential to damage large areas of the SAC/SPA, with dry heath being particularly vulnerable. The risk may increase with climate change.

<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>
<b>11A</b>	Assess wildfire risk and consider the various management options to make habitats more resilient to wildfire. Reduce and manage the risk by routinely including establishing wildfire risk plans as part of the wider moorland management plans.	To be determined	2014 onwards	Partnership agreement	Not yet determined	Natural England	North York Moors National Park Authority

## Site details

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

### Qualifying features

#UK Special responsibility

<b>North York Moors SAC</b>	H4010 Northern Atlantic wet heaths with <i>Erica tetralix</i>
	H4030 European dry heaths
	H7130# Blanket bogs
<b>North York Moors SPA</b>	A140(B) <i>Pluvialis apricaria</i> : European golden plover
	A098(B) <i>Falco columbarius</i> : Merlin

### Site location and links

#### North York Moors SAC

Area (ha) **44082.25**      Grid reference **NZ711021**      [Map link](#)

Local Authorities      North Yorkshire; Redcar and Cleveland

Site Conservation Objectives      [European Site Conservation Objectives for North York Moors SAC](#)

European Marine Site conservation advice      [n/a](#)

Regulation 33/35 Package      [n/a](#)

Marine Management Organisation site plan      [n/a](#)

#### North York Moors SPA

Area (ha) **44087.68**      Grid reference **NZ725006**      [Map link](#)

Local Authorities      North Yorkshire; Redcar and Cleveland

Site Conservation Objectives      [European Site Conservation Objectives for North York Moors SPA](#)

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.

### North York Moors SAC

River basin

[Humber RBMP](#)

WFD Management catchment

Derwent (Humber), Esk and Coast, Swale, Ure, Nidd & Upper Ouse, Tees

WFD Waterbody ID (Cycle 2 draft)

GB103025071870, GB103025071890, GB103025071900, GB103025071920, GB104027067971, GB104027068010, GB104027068020, GB104027068030, GB104027068040, GB104027068050, GB104027068070, GB104027068080, GB104027068090, GB104027068110, GB104027068120, GB104027068140, GB104027068150, GB104027068170, GB104027068230, GB104027068240, GB104027068250, GB104027068260, GB104027068500, GB104027068520, GB104027068540, GB104027068550, GB104027068580, GB104027068591, GB104027068600, GB104027068610, GB104027068620, GB104027068630, GB104027068720, GB104027068770, GB104027069010, GB30429122

### North York Moors SPA

River basin

[Humber RBMP](#)

WFD Management catchment

Derwent (Humber), Esk and Coast, Swale, Ure, Nidd & Upper Ouse, Tees

WFD Waterbody ID (Cycle 2 draft)

GB103025071870, GB103025071890, GB103025071900, GB103025071920, GB104027067971, GB104027068010, GB104027068020, GB104027068030, GB104027068040, GB104027068050, GB104027068070, GB104027068080, GB104027068090, GB104027068110, GB104027068120, GB104027068140, GB104027068150, GB104027068170, GB104027068230, GB104027068240, GB104027068250, GB104027068260, GB104027068500, GB104027068520, GB104027068540, GB104027068550, GB104027068580, GB104027068591, GB104027068600, GB104027068610, GB104027068620, GB104027068630, GB104027068720, GB104027068770, GB104027069010, GB30429122

## Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)	
North York Moors SAC	North York Moors SSSI Beck Hole SSSI Farndale SSSI
North York Moors SPA	North York Moors SSSI Beck Hole SSSI Farndale SSSI
National Nature Reserve (NNR)	
North York Moors SAC	n/a
North York Moors SPA	n/a
Ramsar	
North York Moors SAC	n/a
North York Moors SPA	n/a
Special Areas of Conservation (SAC) and Special Protection Areas (SPA)	
North York Moors SAC	North York Moors SPA
North York Moors SPA	North York Moors SAC Fen Bog SAC

<i>Version</i>	<i>Date</i>	<i>Comment</i>
1.0	03/11/2014	

[www.naturalengland.org.uk/ipens2000](http://www.naturalengland.org.uk/ipens2000)

