

Site Improvement Plan

Rex Graham Reserve

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)

UK0019866 Rex Graham Reserve SAC

Site description

Covering approximately 2.67 hectares and situated within the Brecks National Character Area, Rex Graham Reserve comprises a small disused chalk pit, together with surrounding grassland and woodland, which supports a large number of Military orchid *Orchis militaris*. Only two other wild populations of this plant are known in the UK and the Rex Graham Reserve population is by far the largest, comprising more than 95% of the current total UK population.

The SAC sits within Thetford Forest, the largest lowland conifer forest in England, in an area where light, sandy acid and calcareous soils overlie chalk, on a gently south-facing slope in the valley of the River Lark. The digging of the pit pre-dates the planting of Thetford Forest in the 1920s and 1930s, and probably ceased to be actively worked in the early Twentieth Century. Military orchids were first found in the pit in the 1950s, and since then conservation management has maintained a high population.

The open sides and floor of the pit are covered with a mixture of plants typical of calcareous grassland and scrub transitions such as mouse-ear hawkweed *Pilosella officinarum*, twayblade *Listera ovata*, adder's-tongue fern *Ophioglossum vulgatum*, ploughman's spikenard *Inula conyza*, mullein *Verbascum thapsus*, and hemp agrimony *Eupatorium cannabinum*. The pit also contains a large number of bushes of mezereon *Daphne mezereum* which occurs here as a wild plant.

Management aims to keep the pit largely free of scrub and trees, control coarse herbaceous vegetation, and create small bare chalk surfaces to aid the regeneration of military orchid. The browsing of orchids is prevented by a deer-and rabbit-proof fencing, which also limits damage to the vulnerable plants from human damage from trampling and picking. A second small separately-fenced pit, created in 1999/2000, allows visitors closer access to see military orchids throughout the summer.

Grassland is maintained around the pits to attract pollinating insects which aid the reproduction of military orchids, and these are in turn surrounded by coniferous and deciduous woodland within and outside the SAC, which give some screening from the adjacent trunk road.

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 Changes in species distributions	Pressure	H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites)	Create new chalk pits and exposures for orchid colonisation	Forest Enterprise, Forestry Commission
2 Air Pollution: risk of atmospheric nitrogen deposition	Threat	H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites)	Further investigate potential nitrogen impacts on the SAC	Natural England

3	Habitat fragmentation	Threat	H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites)	Improve and create flower-rich habitat to aid connectivity	Forest Enterprise
4	Deer	Threat	H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites)	Deer impact assessment and control	Forest Enterprise
5	Invasive species	Threat	H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites)	Rabbit and hare impact assessment and control	Forest Enterprise
6	Public Access/Disturbance	Threat	H6210 Dry grasslands and scrublands on chalk or limestone (important orchid sites)	Control of public access where necessary	Forest Enterprise

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 Changes in species distributions

There is insufficient area of early successional habitat to allow orchid populations to be maintained and expand.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1A	Create new chalk pits and exposures for orchid colonisation.	£400,000	2014-25	Habitat creation / restoration strategy: Creation of new habitat	LIFE, Conservation Enhancement Scheme (CES)	Forest Enterprise	n/a
Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
1B	Monitor current and new pits/exposures: populations, regeneration, habitat variables	£37,500	2014-25	Investigation / Research / Monitoring	LIFE, Conservation Enhancement Scheme (CES)	Forestry Commission	n/a

2 Air Pollution: risk of atmospheric nitrogen deposition

Nitrogen deposition exceeds the site-relevant critical load for ecosystem protection and hence there is a risk of harmful effects through increased site fertility and biomass accumulation, favouring more competitive species. This requires further investigation.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
2A	Further investigate potential nitrogen impacts on the site, based on the application of guidance from the Chief Scientist's Group Nitrogen Task and Finish Group.	Not yet determined	2014-17	Investigation / Research / Monitoring	Not yet determined	Natural England	n/a

3 Habitat fragmentation

There is insufficient insect pollination to sustain the isolated orchid population and the surrounding habitat is of relatively low value to pollinators.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
3A	Create flower-rich habitat around pits and exposures to support pollinators.	£42,000	2014-35	Habitat creation / restoration strategy: Creation of new habitat	LIFE	Forest Enterprise	n/a

4 Deer

There is a threat to the orchid population from browsing by deer, exacerbated by the orchid population's small size and isolation.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
4A	Establish the numbers of deer and their impact upon interest features and agree a monitoring strategy.	£10,500	2014-35	Investigation / Research / Monitoring	LIFE	Forest Enterprise	n/a

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
4B	Control deer numbers and reduce their impact through strategic deer fencing.	Not yet determined	2014-35	Invasive Control Plan: Invasive Species Control Programme	LIFE	Forest Enterprise	n/a

5 Invasive species

There is a threat to the orchid population from browsing by rabbits and hares exacerbated by the orchid population's small size and isolation.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
5A	Rabbit and hare impact assessment to assess potential damage to larger newly created site.	£10,500	2014-35	Investigation / Research / Monitoring	LIFE, Conservation Enhancement Scheme (CES)	Forest Enterprise	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>
5B	Exclusion and control of rabbits and hares.	Not yet determined	2014-35	Invasive Control Plan: Invasive Species Control Programme	LIFE, Conservation Enhancement Scheme (CES)	Forest Enterprise	n/a

6 Public Access/Disturbance

There is an ongoing threat of damage to the site features from illegal plant collection, exacerbated by the orchid population's small size and isolation.

<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>
6A	Assess the impact of plant collecting, through site survey and monitoring.	£10,500	2014-35	Investigation / Research / Monitoring	Defra, LIFE	Forest Enterprise	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>
6B	Control of public access where necessary, e.g. through additional fencing and/ or wardening.	Not yet determined	2014-35	Mechanism not identified / develop mechanism	Defra, LIFE	Forest Enterprise	n/a

Site details

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

Qualifying features

#UK Special responsibility

Rex Graham Reserve SAC

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

Site location and links

Rex Graham Reserve SAC

Area (ha) **2.67** Grid reference **TL737746** [Map link](#)

Local Authorities Suffolk

Site Conservation Objectives [European Site Conservation Objectives for Rex Graham Reserve 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.

Rex Graham Reserve SAC

River basin

[Anglian RBMP](#)

WFD Management catchment

Cam and Ely Ouse (including South Level)

WFD Waterbody ID (Cycle 2 draft)

n/a

Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)	
Rex Graham Reserve SAC	Rex Graham Reserve SSSI

National Nature Reserve (NNR)	
Rex Graham Reserve SAC	n/a

Ramsar	
Rex Graham Reserve SAC	n/a

Special Areas of Conservation (SAC) and Special Protection Areas (SPA)	
Rex Graham Reserve SAC	Breckland SPA

<i>Version</i>	<i>Date</i>	<i>Comment</i>
1.0	06/01/2015	

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