

# NORFOLK BIODIVERSITY ACTION PLAN

## LOWLAND HEATHLAND AND DRY ACID GRASSLAND

The UK BAP identifies heathland as consisting of “an ericaceous layer of varying heights and structures, some areas of scattered trees and scrub, areas of bare ground, gorse, wet heaths, bogs and open water”. In Norfolk, heathland is much more of a mosaic, with acid grassland and bracken often being significant elements. Even more distinctive are the heaths of the Brecks which include chalk grassland and little or no heather.

In East Anglia, the typical lowland acid grassland community is NVC U1, comprising sheep’s-fescue *Festuca ovina*, common bent *Agrostis capillaris* and sheep’s sorrel *Rumex acetosella*. Other species may include wavy hair-grass *Deschampsia flexuosa*, heath bedstraw *Galium saxatile* and tormentil *Potentilla erecta*.

### 1., CURRENT STATUS

#### National Status

- In England, only a sixth of the heathland present in 1800 now remains. The UK has about 95,000 ha of lowland heathland (58,000 ha of which are in England) representing about 20% of the international total of this habitat.
- As with other lowland semi-natural grassland types, acid grassland underwent substantial declines in the 20<sup>th</sup> century. Although there are no figures available on the current rate of loss, it is thought to be slowing. The decline is primarily the result of under-management, specifically under-grazing and abandonment. In Norfolk, afforestation has also been a significant factor in heathland decline (although perversely, in Breckland, the soil disturbance associated with forestry management may have helped to sustain the very high levels of biodiversity - particularly invertebrates - that the area supports today.)
- Cover data for lowland acid grassland across the UK for the full altitudinal range are not currently available. Stands remote from the upland fringe, which are the primary focus of conservation attention, are now of restricted occurrence and it is estimated that less than 30,000 ha now remain in the UK. Important concentrations occur in Breckland, the New Forest, Dorset, Suffolk Sandlings, the Weald, Dungeness, the coasts of south-west England and the Welsh and English border hills of Powys and Shropshire. Scotland is estimated to have less than 5,000 ha and much of this is likely to be on the upland fringe.

Ref 1/H6	Tranche 1	Habitat Action Plan 6
Plan Author:		Norfolk County Council
Plan Co-ordinator:		Heathland BAP Topic Group
Plan Leader:		Norfolk County Council
Date:		Stage:
31 December 1998		Version 1
April 2004		Version 2
17 November 2011		Version 3

## Norfolk Status

- It has been estimated that the extent of heathland (taking a wide definition) in 1797 was 30,500ha. The estimate of that existing today is 7,787ha<sup>1</sup>, of which approximately 3,610ha has been mapped as heathland and 4176ha as dry acid grassland. This represents a decline of 75 per cent. However, the Stanford Training Area, which has a large and important area of largely relatively recent grass heath of about 3,116ha, represents 40 per cent of this figure. Over 80 percent (6,472ha) of Norfolk's existing heathland and acid grassland is covered by Site of Special Scientific Interest designation. Approximately 538ha are in County Wildlife Sites.
- Priority BAP bird species associated with Norfolk's heaths include nightjar, woodlark, red-backed shrike, stone curlew, skylark, grey partridge and linnet. Priority invertebrates include silver-studded blue butterfly solitary wasp (*Cerceris quinquefasciata*) and two ground beetles (*Harpalus H. froelichii* and *Ophonus laticollis*). Other priority BAP species associated with heaths include tower mustard, nail fungus, starry breck lichen, pillwort and natterjack toad.
- The Breckland Biodiversity Audit (Dolman, Panter and Mossman, 2010) has highlighted the importance of structural heterogeneity and active ecological processes for integrating the requirements of important BAP species; i.e., heaths are systems which function best when they support the maximum diversity of conditions across the habitat, including bare ground, and are often best maintained with a high level of soil disturbance.

## 2. CURRENT FACTORS CAUSING LOSS OR DECLINE IN NORFOLK

- Encroachment of trees, shrubs and bracken due to abandonment of traditional management such as grazing, fuelwood gathering and to some extent, controlled burning. These factors affect most sites, including even SSSIs.
- Declining availability of water for wetland areas within heaths.
- Uncontrolled fires in some areas (eg, Mousehold Heath), particularly in summer.
- Atmospheric deposition of nitrogen.
- Development of non-statutory sites.
- The access provision in the CROW Act may act as a disincentive to heathland creation in some situations.
- Losses to agriculture have been a major factor in the past. With the recent introduction of current EIA regulations, it is hoped that these losses have ceased.

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<sup>1</sup> This is a maximum amount, as it has been mapped using the Natural England standard. If a polygon contains an area of heathland or dry acid grassland of unknown extent, the whole polygon will have been mapped as that habitat.

### 3. CURRENT ACTION IN NORFOLK

#### The Brecks

- The Breckland Biodiversity Audit was a collaborative venture headed by a team from UEA, to review the status of Breckland biodiversity and the evidence basis for its management. Nearly one million biological records were collated during the study, from a wide variety of organisations and individual recorders. Information about the ecological processes required by individual species was also gathered, along with information about the management of Breckland sites. The audit demonstrated the outstanding importance of Breckland for UK biodiversity. Some 12,845 species were recorded, including 2,149 species of conservation concern. The audit also showed that 28 per cent of all UK priority BAP species occur in Breckland.
- Plantlife is carrying out a Grantscape-funded project in the Brecks. This involves micro-habitat management trials, looking at a variety of disturbance factors and processes, concentrating on creating early-successional habitats. The overall aims of the project include addressing the decline in plant species particular to the Brecks, establishing effective methods of managing small-scale habitats and developing a landscape-scale plant conservation strategy for the Brecks.
- Butterfly Conservation's project, "Restoration of Norfolk Brecks Heathlands for Threatened Butterflies and Moths", is focusing on nine BAP species, and being carried out on the Norfolk side of the Brecks.
- The Forestry Commission has been working to integrate the recommendations of the Breckland Biodiversity Audit into its management of Thetford Forest. This has included widening the forest rides and promoting greater soil disturbance.
- The University of East Anglia has been carrying out research into invertebrate responses to experimental ride management in Thetford Forest.

#### Norfolk Excluding the Brecks

- The Norfolk Wildlife Trust has been involved in a major heathland restoration project at Grimston Warren in north-west Norfolk, funded by a variety of organisations including English Nature (now Natural England), the SITA Trust, WREN, the John Jarrold Trust, Norfolk County Council, and HLS. Management has included tree felling, brash collection, stump grinding, litter removal and grazing by Dartmoor Ponies. Guided walks have been held to promote the work to local people and NWT supporters, and articles have appeared in NWT's magazine *Tern* and the local press. Breeding reports for Grimston Warren now include nightjar, woodlark, black darter dragonfly and turtle dove, among others.
- Following consultation with Norfolk Landscape Archaeology and local herpetologists, and with the support of the Holt Lowes Trustees, NWT embarked on a major restoration project at Holt Lowes in 2010/11, funded through Higher Level Stewardship. The project has included the clearance of 15ha of mature scrub and the removal offsite of approximately 15,000 cubic metres of humus. The aim is to restore open heathland on this important SSSI and SAC valley fen site. Because of the site's reptile and archaeological interest, machine movements have been carefully controlled, with extensive areas being cleared by hand and other areas left unscrapped.
- NWT's Hidden Heaths Project aims to deliver BAP targets for non-statutory heathland sites in Norfolk by raising the profile of heaths for wildlife, increasing public interest in heaths and by bringing more sites into appropriate management.

- NWT's Heathland CWS Audit is gathering information on 68 sites with a heathland or acid grassland component for which there is no current condition assessment. Of the 96 sites assessed so far, 46 were deemed to be declining, neglected or damaged; 24 were deemed to be improving, and 21 were felt to be in reasonable or good/excellent condition. The status of five sites remains unknown.
- Substantial areas of former mineral sites have been restored to heathland/acid grassland, particularly at Leziate quarries in west Norfolk. Some of these sites are now of a high biodiversity value.
- A new management plan for Mousehold Heath has been prepared, covering the period 2008-2013. This aims to maintain, enhance, increase and join up areas of lowland heath vegetation, control the encroachment of trees and bracken, maintain and enhance acid grassland areas and increase public understanding of issues related to the conservation of lowland heaths.
- Management of Salthouse and Kelling Heaths is continuing under a Higher Level Stewardship scheme. Recent work has included fencing 2ha of heathland to allow grazing by sheep to maintain archaeological features and control birch re-growth. A second fencing project at Salthouse Heath has been implemented to exclude deer from important nightingale nesting areas. The dense scrub and understorey formerly used by the birds is disappearing as a result of canopy closure and grazing of the understorey. These areas are being fenced and selective thinning of birch is taking place to encourage the understorey to re-establish. On Kelling Heath, bare ground is being created to benefit heathland invertebrate species, particularly silver-studded blue butterfly and the associated black ants *Lasius niger*.
- Information about Kelling Heath is being compiled by local naturalists and can be accessed at: <http://www.kellingheathwildlife.org.uk>
- The Forestry Commission has established a link between Marsham and Buxton heaths, by clearing a corridor of conifers between the two sites.

## **4, ACTION PLAN OBJECTIVES AND PROPOSED TARGETS**

### **National Targets (Baseline 2005)**

#### Heathland

- Maintain the current extent of all existing lowland heathland (94,788 ha - no net loss of habitat).
- Maintain the area of lowland heathland currently in favourable condition.
- Improve the condition of lowland heathland on sites currently in unfavourable condition (12,762 ha).
- Increase the extent of lowland heathland by 7,600 ha by 2015.
- Increase the number of heathland patches over 30 ha from 10% of the total resource to 50% by 2030.

#### Lowland Dry Acid Grassland

- Maintain the current extent of lowland dry acid grassland in the UK (61,646 ha - no net loss of habitat).
- Maintain at least the current condition of lowland dry acid grassland.
- Achieve favourable or recovering condition for 34,745 ha of lowland dry acid grassland by 2015.
- Restore 597 ha of lowland dry acid grassland from semi-improved or neglected grassland, which no longer meets the priority habitat definition by 2015.
- Re-establish 411 ha of grassland of wildlife value from arable or improved grassland by 2015.
- 312 ha (75%) of re-established area to be adjacent to existing lowland dry acid grassland or other semi-natural habitat by 2015.
- 208 ha (50%) of re-established area to contribute to resultant habitat patches of 6 ha or more of lowland dry acid grassland by 2015. Wherever practicable, bigger patches should be created.

### **East of England Targets, 1996-2015**

- Restore 260 hectares of lowland heath or dry acid grassland from semi-improved or neglected grassland.
- Re-establish 1,400 hectares of heath or grassland of wildlife value from arable or improved grassland and increase the extent of lowland heathland.

## Norfolk Targets and Objectives

### Objectives

- To maintain 100% of the current lowland heathland and acid grassland in the county (no net loss of habitat).
- To maintain the condition of those sites already in favourable management, by ensuring the continuation of existing management regimes.
- To identify and rehabilitate priority areas which are not currently in favourable condition.
- To restore and create new heathland and acid grassland at priority sites. Particular emphasis should be placed on enlarging, buffering and re-connecting sites, in line with the recommendations of the Norfolk ecological network mapping project.

### Targets

<b>Target Type:</b>	<b>Target Text</b>	<b>Target Value</b>	<b>Units</b>	<b>Target Date</b>
Maintain Extent:	To maintain the current extent and quality of heathland and acid grassland (no net loss of area and no loss of condition).	7,787ha <sup>2</sup>	ha	2011
Achieve Condition:	To bring 75% of heathland/ acid grassland County Wildlife Sites into favourable or recovering condition.	400	ha	2015
Achieve Condition:	To bring 50% of heathland SSSIs into favourable condition	3,236	ha	2020
Restore:	To restore areas of heathland/ acid grassland at priority sites.	140 <sup>3</sup>	ha	2015
Expand:	To expand the area of heathland and acid grassland in appropriate areas.	44 <sup>4</sup>	ha	2015

<sup>2</sup> This is a maximum amount, as it has been mapped using the Natural England standard. If a polygon contains an area of heathland or dry acid grassland of unknown extent, the whole polygon will have been mapped as that habitat.

<sup>3</sup> Based on an estimated 30 ha/year for four years through HLS and 5 ha/year through other schemes, eg, FC, NWT, RSPB.

<sup>4</sup> Based on an estimated 5 ha/per year for four years through HLS, 1 ha/year through other schemes, and 20 ha for the NWT project at the Delft, Grimston Warren.

ACTION TO BE TAKEN		ACTION BY:	PARTNERS:	DATE BY:
<b>5.1 Policy and Legislation</b>				
5.1.1	Survey all potential new heathland/acid grassland County Wildlife Sites and designate those areas which meet CWS criteria. (There are currently approximately 30 sites on the list in the Brecks, Norwich and North Norfolk).	NWT	NCC, NE, NBIS, NBP	2015
5.1.2	Ensure that heathland/acid grassland remains a high priority for HLS targeting in the county, by responding to consultations from Natural England and taking part in the Regional Agri-environment Advisors' Group.	NCC, NWT, RSPB	NE	Ongoing
5.1.3	Secure the creation of heathland/acid grassland as after-use on at least one former mineral extraction site per year.	NCC	Mineral companies	Ongoing
5.1.4	Ensure the implementation of the new Open Habitats Policy leads to significant increases in heathland/acid grassland.	FC	Heathland BAP Topic Group	2015
5.1.5	Ensure that heathland/acid grassland creation and management are accorded priority in the Green Infrastructure Strategies for Norwich, Thetford and King's Lynn.	GNDP, BDC, BCKLWN	Heathland BAP Topic Group	Ongoing
5.1.6	Ensure that existing heathland and acid grassland sites are not damaged by excessive recreational pressures, particularly in the Greater Norwich north-eastern growth point and in the vicinity of Thetford.	GNDP, BDC	Heathland BAP Topic Group	Ongoing
<b>5.2 Site Safeguard and Management</b>				
5.2.1	Apply to HLF's Landscape Partnership programme and to Defra's Nature Improvement Area competition as a means of taking forward the recommendations in the Breckland Biodiversity Audit.	Brecks Partnership	Heathland BAP Topic Group	2012
5.2.2	Use HLS to bring 50 per cent of heathland/acid grassland SSSIs into favourable condition by 2020.	NE	Landowners	2020
5.2.3	Use HLS to create a link between Salthouse and Kelling Heaths.	NE	Salthouse Trustees, NCP, landowners	2015
5.2.4	Complete the link between Marsham and Buxton Heaths.	FC	NWT	2015

ACTION TO BE TAKEN		ACTION BY:	PARTNERS:	DATE BY:
5.2.5	<p>Target the following priority heathland/ acid grassland County Wildlife Sites to receive Natural England agri-environment support:</p> <ul style="list-style-type: none"> <li>• Broome Heath (CWS 130)</li> <li>• Broomscott Common (CWS 598)</li> <li>• Disused gravel pit (CWS 1411)</li> <li>• Galley Hill Warren (CWS 2085)</li> <li>• Cat's Bottom Heath (CWS 451)</li> <li>• Coxford Meadows (CWS 589)</li> <li>• Cawston College Heath (CWS 1363)</li> <li>• Belton Heath North (CWS 1429)</li> </ul>	NE	FWAG	2015
5.2.6	Continue to provide support to heathland/acid grassland CWS not covered by HLS agreements, in order to bring them into favourable condition.	NWT	CWS Partnership	2015
5.2.7	Develop and seek funding for a project to restore and manage the heaths complex north of Horsford.	NWT	Heathland BAP Topic Group	2012
5.2.8	Develop and seek funding for a project to restore 20 ha of land (known as the "Delft") in the Gaywood Valley to a mosaic of heathland and grassland.	NWT		
<b>5.3 Advisory</b>				
5.3.1	Continue to hold the Breckland Heaths Forum at least twice a year, as a mechanism for promoting networking and information sharing among Brecks site managers.	NE	NWT, SWT, RSPB, NT, FC	Ongoing
5.3.2	Continue to hold the Norfolk Heaths Practitioners' Forum once or twice a year, to promote information sharing about best practice heathland management techniques.	NBP	NWT, NE, FC, RSPB, NCiC, NCC	Ongoing
5.3.3	Ensure the recommendations from the Breckland Biodiversity Audit are incorporated into the Breckland script (an internal document developed by Natural England to guide agri-environment schemes in Breckland). Update the script every six months to incorporate new findings.	NE		Ongoing
5.3.4	Organise at least one training seminar on the	NE	FWAG,	2015



ACTION TO BE TAKEN		ACTION BY:	PARTNERS:	DATE BY:
5.3.5	use of the Breckland script for agronomists, land agents and farm advisors.  Secure a future for the Brecks Partnership by assisting with an HLF Landscape Partnership application and a Nature Improvement Area bid.	NCC	agronomists, land agents  Heathland BAP Topic Group	
<b>5.4 Future Research and Monitoring</b>				
5.4.1	Develop a proposal and seek funding for the Implementation of Phase 2 of the Breckland Biodiversity Audit.	UEA	NBP, SBP	2011
5.4.2	Consider organising a similar biodiversity audit to that in the Brecks for the North Norfolk heaths.	NBP, NCP	UEA	2012
5.4.3	Ensure the Heathland BAP Topic Group functions as an informal co-ordinating and networking body for heathland/acid grassland projects, including the new Breckland projects that have recently been launched by Butterfly Conservation and Plantlife.	NBP	Heathland BAP Topic Group	Ongoing
5.4.4	Gather condition information on the remaining 'unknown' sites for the NWT Heathland CWS Audit	NWT	Heathland BAP Topic Group	2011
5.4.5	Investigate and share information about the impacts and potential benefits of recreational disturbance (e.g. from horse riding, biking etc) on heath/acid grassland dependent species. In the first instance, investigate impacts on ants, Lepidoptera and beetles.	NNNS	BC, NBIS, County Recorders	2015
5.4.6	Undertake regular ecological monitoring of selected heathland/acid grassland sites, to identify long-term trends and assess the biodiversity impacts of different management regimes.	NWT, NE, FC, NCiC, MoD	Plantlife, BC, UEA, NNNS, County Recorders, estate owners	Ongoing
<b>5.6 Communications and Publicity</b>				
5.6.1	Encourage the Norfolk and Suffolk Biodiversity Partnerships to work more closely together, by ensuring that representatives continue to sit on each others' heathland BAP working groups.	NBP, SBP		Ongoing
5.6.2	Publish and disseminate NWT's Hidden Heaths report.	NWT	NBP	2011
5.6.3	Use the Mousehold Heath extension as an	NCC	GNDP	Ongoing

ACTION TO BE TAKEN		ACTION BY:	PARTNERS:	DATE BY:
5.6.4	<p>opportunity to work with adjacent schools and the public, in order to raise awareness of the value of heathland/acid grassland and appropriate management practices.</p> <p>Ensure that heathland/acid grassland is featured in articles and public events.</p>	Heathland BAP Topic Group		Ongoing
<b>5.7 Links with Other Plans</b>				
5.7.1	<p>This plan should be considered in conjunction with the Norfolk Habitat Action Plans for lowland calcareous grassland and arable margins, and the Species Action Plans for silver-studded blue butterfly, <i>Harpalus froelichii</i>, <i>Ophonus laticollis</i>, tower mustard, nightjar, stone curlew, woodlark, nail fungus, starry-breck lichen and scaly-breck lichen. (See Annex 1 for a complete list of BAP species associated with lowland heath and acid grassland in Norfolk.)</p>	Heathland BAP Topic Group, Farmland BAP Topic Group		Ongoing

### Organisational Abbreviations

BC	Butterfly Conservation
BCKLWN	Borough Council of King's Lynn and West Norfolk
BDC	Breckland District Council
FC	Forestry Commission
FWAG	Farming and Wildlife Advisory Group
GNDP	Greater Norwich Development Partnership
MoD	Ministry of Defence
NBIS	Norfolk Biodiversity Information Service
NBP	Norfolk Biodiversity Partnership
NCC	Norfolk County Council
NCiC	Norwich City Council
NCP	Norfolk Coast Partnership
NE	Natural England
NT	National Trust
NWT	Norfolk Wildlife Trust
RSPB	Royal Society for the Protection of Birds
SBP	Suffolk Biodiversity Partnership
SWT	Suffolk Wildlife Trust
UEA	University of East Anglia

## **MANAGEMENT GUIDANCE**

***(This guidance is a general summary; for more detailed information or advice, please consult the references or contacts below.)***

Heathland and acid grassland typically occur on acidic, light sandy and gravelly soils. In Norfolk, these occur predominantly in the Brecks, north Norfolk, and around Norwich and its northern periphery. In the Brecks, these soils are often found in fine mosaics with chalky soils.

The soils which support heathland and acid grassland are inherently infertile. The accumulation of nutrients, e.g. by agricultural intensification, aerial nitrogen deposition (local, national and international), afforestation, and the development of scrub and woodland, are damaging to the plants and animals of typical heathland/acid grassland communities.

Historically, heathland and acid grassland were important within the rural economy, providing grazing land for domestic animals (cattle, sheep), meat (rabbits), fuel (wood, gorse) and animal bedding (bracken). With agricultural improvement and social changes during the 20<sup>th</sup> century, the direct link between heathland/acid grassland and the local economy has weakened significantly.

Heaths and acid grasslands are typically very open habitats. Without continued management such as grazing, bracken control and scrub/tree management, heaths and acid grasslands quickly develop into dense scrubland and woodland, with a consequent loss of species dependent on the heath/acid grassland habitat.

Heathlands and acid grasslands frequently occur in mosaics, together with bracken, scrub and scattered trees. In places, heaths and acid grasslands can be found in close association with fens and mires and, in the Brecks, chalk grassland, fluctuating meres and pingos.

On the majority of heaths outside the Brecks, dwarf shrubs (i.e. heather, cross-leaved heath and bell heather) are usually the dominant plants. An important component of management is to create and maintain a variation of age classes and structure, from pioneer seedlings through to mature and degenerate plants. In the grass heaths typical of the Brecks, heather is less significant, and may be a minor component of the vegetation or even absent.

Scrub species such as gorse, broom and hawthorn are integral components of the heathland/acid grassland landscape, and many characteristic heathland species depend upon them. In north Norfolk especially, wood pasture (scattered mature trees in an open landscape of heathland/acid grassland) is a particularly characteristic feature. However, the cover of scrub and trees must be managed so as not to exclude species of more open habitats, and scrub and woodland management and clearance are frequent elements of heathland management and restoration.

Short turf and open, bare, physically disturbed soils (e.g. along trackways and old sand pits) and the ecological processes associated with these, are an especially important component of heathland/acid grassland, on which many rare and scarce species of plants, birds and invertebrates rely.

In the Brecks, many heaths/acid grasslands are derived from the true arable brecks (fields cultivated for a period and then fallowed or allowed to tumble back to grass heath), including most recently much of the Stanford Training Area. The peculiar land-use history

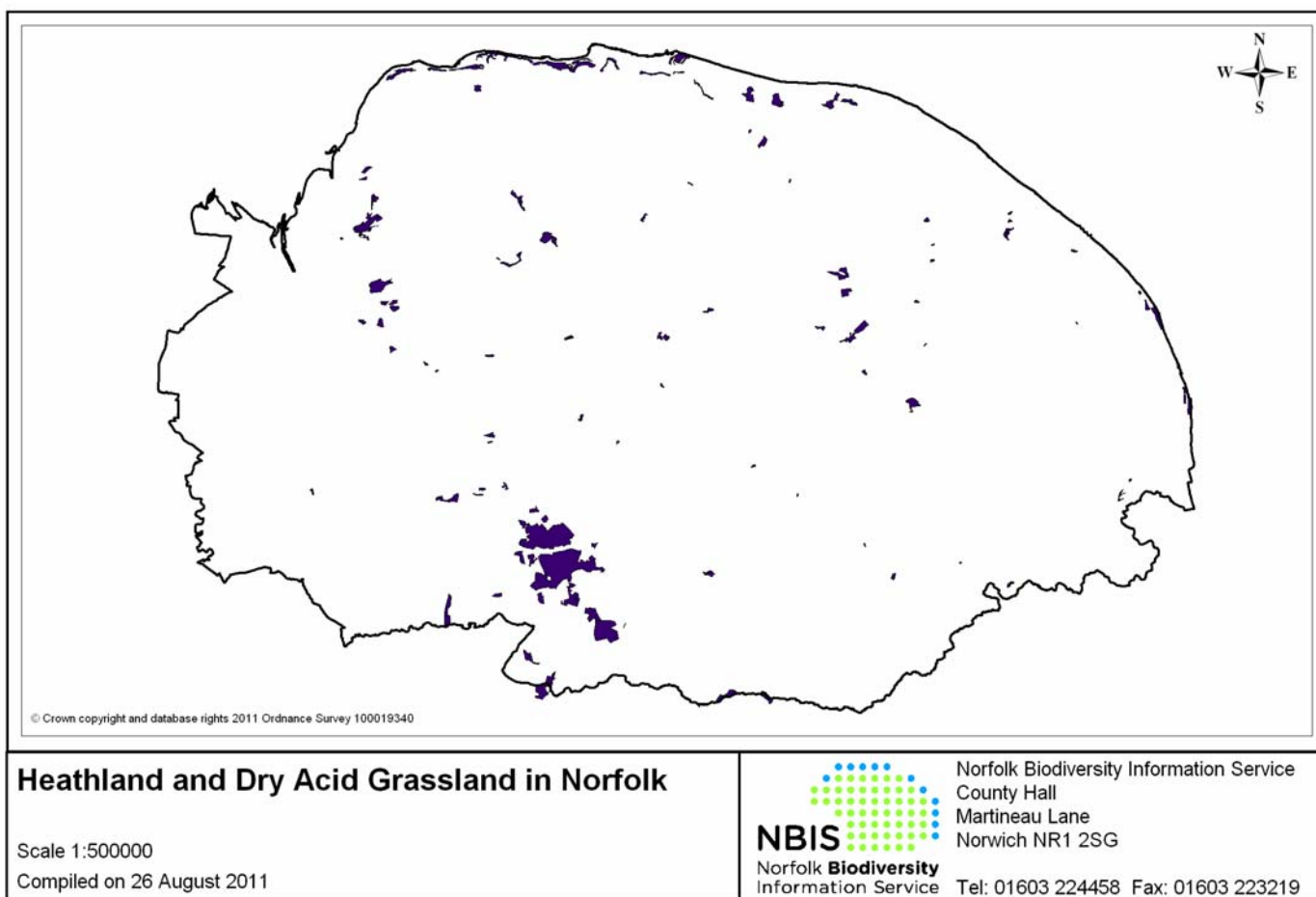
of the Brecks means that many rare, scarce and declining species are found equally across heaths, arable land and in Thetford Forest.

Many BAP species are associated with heathland and acid grassland, as well as many other species of conservation concern.

Much of the heathland and acid grassland in Norfolk is designated as open access under the Countryside and Rights of Way Act, providing an excellent resource for recreation for local people and visitors alike. Around Thetford and Norwich, these habitats represent an important component of green infrastructure.

Heathlands and acid grasslands have remained largely free of modern agricultural intensification, and as a result, often have great historic interest. Scheduled monuments and locally important sites can often be preserved there, and good habitat management can help conserve these historic features, e.g. by preventing damage from scrub and tree encroachment.

## NORFOLK DISTRIBUTION



## REFERENCES

- Dolman, P.M., Panter, C.J., Mossman, H.L. (2010). *Securing Biodiversity in Breckland: Guidance for Conservation and Research. First Report of the Breckland Biodiversity Audit*. Norwich: University of East Anglia.
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## DATA SOURCES

- Draft Lowland Heathland BAP Priority Habitat Inventory for England Version 1.2. Natural England.
- Lowland Dry Acid Grassland BAP Priority Habitat Inventory for England Version 2.0.1. Natural England
- Norfolk Update to the Draft Lowland Heathland BAP Priority Habitat Inventory for England. Norfolk Biodiversity Information Service.

## KEY CONTACTS

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**Annex 1:**  
**List of BAP Species Associated with Heathland/Acid Grassland in Norfolk**

Scientific Name	Common Name	Taxon Group	Order	Family	Date of Last Record
<i>Bufo calamita</i>	Natterjack toad	Amphibian	Anura	Bufoidea	2010
<i>Rana lessonae</i>	Pool frog	Amphibian	Anura	Ranidae	2005
<i>Triturus cristatus</i>	Great crested newt	Amphibian	Urodela	Salamandridae	2010
<i>Saaristoa firma</i>	a money spider	Arachnid	Araneae	Linyphiidae	2009
<i>Agroeca cuprea</i>	a spider	Arachnid	Araneae	Liocranidae	1999
<i>Sitticus caricis</i>	a jumping spider	Arachnid	Araneae	Salticidae	1989
<i>Dipoena inornata</i>	Silky galloways-spider	Arachnid	Araneae	Theridiidae	1959
<i>Caprimulgus europaeus</i>	Nightjar	Bird	Caprimulgiformes	Caprimulgidae	2010
<i>Burhinus oedichenus</i>	Stone curlew	Bird	Charadriiformes	Burhinidae	2010
<i>Numenius arquata</i>	Eurasian curlew	Bird	Charadriiformes	Scolopacidae	2010
<i>Cuculus canorus</i>	Cuckoo	Bird	Cuculiformes	Cuculidae	2010
<i>Perdix perdix</i>	Grey partridge	Bird	Galliformes	Phasianidae	2010
<i>Alauda arvensis</i>	Skylark	Bird	Passeriformes	Alaudidae	2010
<i>Lullula arborea</i>	Woodlark	Bird	Passeriformes	Alaudidae	2010
<i>Emberiza citrinella</i>	Yellow hammer	Bird	Passeriformes	Emberizidae	2010
<i>Carduelis cabaret</i>	Lesser redpoll	Bird	Passeriformes	Fringillidae	2009
<i>Carduelis cannabina</i>	Linnet	Bird	Passeriformes	Fringillidae	2010
<i>Lanius collurio</i>	Red-backed shrike	Bird	Passeriformes	Laniidae	2008
<i>Anthus trivialis</i>	Tree pipit	Bird	Passeriformes	Motacillidae	2010
<i>Poecile montanus</i>	Willow tit	Bird	Passeriformes	Paridae	2009
<i>Prunella modularis</i>	Hedge accentor (dunnock)	Bird	Passeriformes	Prunellidae	2010
<i>Locustella naevia</i>	Common grasshopper warbler	Bird	Passeriformes	Sylviidae	2010
<i>Eurhynchium pulchellum</i>	Elegant feather-moss	Bryophyte	Hypnales	Brachytheciaceae	1967
<i>Lophozia capitata</i>	Large-celled flapwort	Bryophyte	Jungermanniales	Jungermanniaceae	1993
<i>Lycopodiella inundata</i>	Marsh clubmoss	Bryophyte	Lycopodiales	Lycopodiaceae	1992
<i>Fossombronia foveolata</i>	Pitted frillwort	Bryophyte	Metzgeriales	Fossombroniaceae	1988
<i>Leptodontium gemmascens</i>	Thatch moss	Bryophyte	Pottiales	Pottiaceae	1997
<i>Pilularia globulifera</i>	Pillwort	Fern	Marsileales	Marsileaceae	2010
<i>Asparagus officinalis</i>	Wild asparagus	Flowering plant	Asparagales	Asparagaceae	1998
<i>Muscari neglectum</i>	Grape-hyacinth	Flowering plant	Asparagales	Asparagaceae	2008
<i>Artemisia campestris</i>	Field wormwood	Flowering plant	Asterales	Asteraceae	2009

<i>Chamaemelum nobile</i>	Chamomile	Flowering plant	Asterales	Asteraceae	1990
<i>Filago lutescens</i>	Red-tipped cudweed	Flowering plant	Asterales	Asteraceae	2009
<i>Arabis glabra</i>	Tower mustard	Flowering plant	Brassicales	Brassicaceae	2009
<i>Dianthus armeria</i>	Deptford pink	Flowering plant	Caryophyllales	Caryophyllaceae	1992
<i>Scleranthus perennis</i> ssp. <i>prostratus</i>	Perennial knawel	Flowering plant	Caryophyllales	Caryophyllaceae	2009
<i>Silene otites</i>	Spanish catchfly	Flowering plant	Caryophyllales	Caryophyllaceae	2009
<i>Juniperus communis</i>	Juniper	Flowering plant	Pinales	Cupressaceae	1988
<i>Carex ericetorum</i>	Rare spring-sedge	Flowering plant	Poales	Cyperaceae	2008
<i>Astragalus danicus</i>	Purple milk-vetch	Flowering plant	Fabales	Fabaceae	2009
<i>Clinopodium acinos</i>	Basil thyme	Flowering plant	Lamiales	Lamiaceae	2009
<i>Mentha pulegium</i>	Pennyroyal	Flowering plant	Lamiales	Lamiaceae	1998
<i>Euphrasia anglica</i>	Eyebright	Flowering plant	Lamiales	Orobanchaceae	2005
<i>Veronica verna</i>	Spring speedwell	Flowering plant	Scrophulariales	Plantaginaceae	2008
<i>Poronia punctata</i>	Nail fungus	Fungi	Sphaeriales	Xylariaceae	1982
<i>Amara famelica</i>	a ground beetle	Insect - beetle	Coleoptera	Carabidae	1966
<i>Amara fusca</i>	Wormwood moonshiner	Insect - beetle	Coleoptera	Carabidae	1997
<i>Anisodactylus nemorivagus</i>	a ground beetle	Insect - beetle	Coleoptera	Carabidae	1964
<i>Carabus monilis</i>	Necklace ground beetle	Insect - beetle	Coleoptera	Carabidae	1988
<i>Harpalus froelichii</i>	Brush-thighed seed-eater	Insect - beetle	Coleoptera	Carabidae	2009
<i>Ophonus laticollis</i>	Set-aside downy-back	Insect - beetle	Coleoptera	Carabidae	2003
<i>Poecilus kugelanni</i>	Kugelann's green clock	Insect - beetle	Coleoptera	Carabidae	2006
<i>Psylliodes sophiae</i>	Flixweed flea beetle	Insect - beetle	Coleoptera	Chrysomelidae	2002
<i>Melanotus punctolineatus</i>	a click beetle	Insect - beetle	Coleoptera	Elateridae	1997
<i>Meloe proscarabaeus</i>	Black oil-beetle	Insect - beetle	Coleoptera	Meloidae	2005
<i>Erynnis tages</i>	Dingy skipper	Insect - butterfly	Lepidoptera	Hesperiidae	2011
<i>Pyrgus malvae</i>	Grizzled skipper	Insect - butterfly	Lepidoptera	Hesperiidae	2011
<i>Plebejus argus</i>	Silver-studded blue	Insect - butterfly	Lepidoptera	Lycaenidae	2011
<i>Hipparchia semele</i>	Grayling	Insect - butterfly	Lepidoptera	Nymphalidae	2011
<i>Coenonympha pamphilus</i>	Small heath	Insect - butterfly	Lepidoptera	Nymphalidae	2011
<i>Asilus crabroniformis</i>	Hornet robberfly	Insect - Diptera	Diptera	Asilidae	1979
<i>Bombylius minor</i>	Heath bee-fly	Insect - Diptera	Diptera	Bombyliidae	2008
<i>Thyridanthrax fenestratus</i>	Mottled bee-fly	Insect - Diptera	Diptera	Bombyliidae	1865
<i>Andrena (Poliandrena) tarsata</i>	Tormentil mining bee	Insect - Hymenoptera	Hymenoptera	Andrenidae	1979
<i>Eucera longicornis</i>	a long-horned bee	Insect - Hymenoptera	Hymenoptera	Anthophorinae	2006
<i>Bombus humilis</i>	Brown-banded carder bee	Insect - Hymenoptera	Hymenoptera	Apidae	2010
<i>Bombus muscorum</i>	Moss carder bee	Insect - Hymenoptera	Hymenoptera	Apidae	2009
<i>Bombus ruderarius</i>	Red-shanked carder bee	Insect - Hymenoptera	Hymenoptera	Apidae	2009

<i>Bombus sylvarum</i>	Shrill carder bee	Insect - Hymenoptera	Hymenoptera	Apidae	1963
<i>Cerceris quadricincta</i>	Weevil hunting wasp	Insect - Hymenoptera	Hymenoptera	Sphecidae	1983
<i>Cerceris quinquefasciata</i>	5-banded tailed digger wasp	Insect - Hymenoptera	Hymenoptera	Sphecidae	2010
<i>Coleophora tricolor</i>	Basil thyme case-bearer	Insect - moth	Lepidoptera	Coleophoridae	2009
<i>Cossus cossus</i>	Goat moth	Insect - moth	Lepidoptera	Cossidae	2009
<i>Cyclophora porata</i>	False mocha	Insect - moth	Lepidoptera	Geometridae	2009
<i>Lithostege griseata</i>	Grey carpet	Insect - moth	Lepidoptera	Geometridae	2011
<i>Trichopteryx polycommata</i>	Barred tooth-striped	Insect - moth	Lepidoptera	geometridae	2011
<i>Orgyia recens</i>	Scarce vapourer	Insect - moth	Lepidoptera	Lymantriidae	2009
<i>Heliophobus reticulata</i>	Bordered gothic	Insect - moth	Lepidoptera	Noctuidae	2009
<i>Noctua orbona</i>	Lunar yellow underwing	Insect - moth	Lepidoptera	Noctuidae	2011
<i>Polia bombycina</i>	Pale shining brown	Insect - moth	Lepidoptera	Noctuidae	2006
<i>Tyta luctuosa</i>	Four-spotted	Insect - moth	Lepidoptera	Noctuidae	2006
<i>Hemaris tityus</i>	Narrow-bordered bee hawk-moth	Insect - moth	Lepidoptera	Sphingidae	1999
<i>Adscita statices</i>	Forester	Insect - moth	Lepidoptera	Zygaenidae	2009
<i>Coenagrion mercuriale</i>	Southern damselfly	Insect - Odonata	Odonata	Coenagrionidae	1983
<i>Stethophyma grossum</i>	Stethophyma grossum	Insect - Orthoptera	Orthoptera	Acrididae	1968
<i>Gryllus campestris</i>	Field cricket	Insect - Orthoptera	Orthoptera	Gryllidae	1911
<i>Squamarina lentigera</i>	Scaly breck-lichen	Lichen	Lecanorales	Bacidiaceae	2002
<i>Buellia asterella</i>	Starry breck-lichen	Lichen	Lecanorales	Buelliaceae	1997
<i>Toninia sedifolia</i>	A lichen	Lichen	Lecanorales	Ramalinaceae	1991
<i>Anguis fragilis</i>	Slow-worm	Reptile	Squamata	Anguidae	2011
<i>Natrix natrix</i>	Grass snake	Reptile	Squamata	Colubridae	2010
<i>Zootoca vivipara</i>	Common (viviparous) lizard	Reptile	Squamata	Lacertidae	2011
<i>Vipera berus</i>	Adder	Reptile	Squamata	Viperidae	2010