ACID GRASSLAND AND HEATHLAND

LOCAL HABITAT ACTION PLAN FOR CAMBRIDGESHIRE AND PETERBOROUGH

Last updated: December 2008

1 CURRENT STATUS

1.1 In Cambridgeshire, there are only relatively small areas of acid grassland remaining and this resource is now scattered and fragmented. The majority of remaining habitat is contained within nature conservation sites and includes several vegetation community groupings. Acid grassland characterised by Sheep's Fescue *Festuca ovina*, Common Bent-grass *Agrostis capillaris* and Sheep's Sorrel *Rumex acetosella* with frequent *Cladonia* lichen species and mosses. This type of vegetation is mostly referable to the NVC U1 acid grassland community which is frequent in Breckland but very restricted in Cambridgeshire where sites include Whitemoor Marshalling Yards CWS, Halfmoon Plantation Pit CWS, Chippenham Gravel Pit CWS, Gamlingay Cinques Common CWS, New Barn Lake and Grassland CWS, Gamlingay Cemetery CWS and Block Fen gravel pits CWS.

1.2 'Chalk heath'can be used to describe species-rich vegetation which has developed on glacial gravels, sand, clay and ground-up chalk and containing mixtures of calcifuge and calcicole species. In terms of vegetation communities, it typically represents a mosaic of acid grassland, heath and chalk grassland (NVC communities U1, H1 and CG2). A range of interesting associated chalk grassland species include Common Rockrose *Helianthemum numullarium*, Common Thyme *Thymus praecox*, Common Mouse-ear *Hieracium pilosella*, Purging Flax *Linum catharticum*, Salad Burnet *Sanguisorba minor*, Common Quaking-grass *Briza media* and Meadow Oat-grass *Avenula pratense*. This type of vegetation is considerably more common in neighbouring Norfolk where it is commonly known as 'Breckland Heath'. In Cambridgeshire, it is now rare and the remaining sites lack heather but can be considered as degraded chalk heath. They include the isolated Furze Hill SSSI near Hildersham, Half Moon Plantation Pits, Burwell disused railway, Freckenham road verge, Kennett Gravel Pits, Newmarket Golf Course and a road verge near Furze Hill. Chippenham Gravel Pits formerly held chalk heath species. Half Moon Plantation Pits and Chippenham Gravel Pits are sites within the former 'Kennett heath' area.

1.3 The dry grass-heath vegetation referable to the NVC H1 heathland community characterised by Heather *Calluna vulgaris*, Sheep's Fescue *Festuca ovina*, frequent *Cladonia* lichen species and mosses is now absent from the county, though remnant stands of heather have been recorded in the recent past from Bedford Purlieus SSSI, Castor Hanglands SSSI and Gamlingay Cinques Common and Stanground Wash railway sidings (part of the Wildlife Trust Stanground Wash nature reserve). Heather was until recently also still present at Whitemoor Marshalling Yards at March however, it appears to have been lost as a result of the Network Rail development in 2003/04. Several recently worked gravel pits, such as Fen Drayton Gravel Pits also include some early successional sand habitats with heathland invertebrate communities.

1.4 Wet heath characterised by Cross-leaved Heath *Erica tetralix*, Heather *Calluna vulgaris*, Purple Moor-grass *Molinia caerulea*, Common Tormentil *Potentilla erecta* and various *Sphagnum* moss species and referable to the NVC M16 wet heath

community occurs in the neighbouring County of Norfolk but is apparently extinct in Cambridgeshire. A form of wet heath does still occur at Holme Fen NNR with *Erica tetralix* and various *Sphagnum* species, but it is likely that this community represents a heathy form of Purple Moor-grass mire (NVC M25). Other key wet heath species have become extinct in Cambridgeshire through habitat modification including Deer-grass *Trichophorum caespitosum*, last seen in 1820 and the Moss *Sphagnum auriculatum var. auriculatum*, last seen 1930 (Crompton & Whitehouse, 1983).

1.5 Owing to the nature of the geology and soil types of Cambridgeshire acid habitats have always had a limited distribution in the county. However, they formerly covered a greater area than they do today. This is supported by historical records, such as those from the seventeenth century for heather on the Gog Magog hills as well as by studies such as Ewen & Prince, 1975.

1.6 The extent of acid grassland in lowland Britain is unlikely to exceed 30,000 hectares. It occurs on acid bedrocks such as sandstones, and on superficial deposits such as sands and gravels. In the lowlands it is becoming an increasingly rare habitat, and in areas such as East Anglia it provides an important reservoir of rare species. In England only one sixth of the Heathland present in 1800 now remains with none in Cambridgeshire. One hundred and fifty years ago, important species-rich chalk heath was more widespread on either side of the Icknield Way between Newmarket and Royston (Coombe, 1987). In Cambridgeshire, recent assessments suggest that about 40 hectares of acid grassland remain (see acid grassland sites spreadsheet).

1.7 Acid habitats and heaths where formed on sandy soils are important for invertebrates especially Diptera and Hymenoptera. Cambridgeshire species such as the scarce *Melecta luctuosa*, ruby-tailed wasp *Chrysis fulgida*, the solitary wasp *Psenulus schencki* and the cuckoo bees *Sphecodes reticulatus, S. Rubicundus* have all become scarce within the County through destruction and fragmentation of habitat. In addition, Bedford Purlieus SSSI is the last Cambridgeshire stronghold of the adder.

2 CURRENT FACTORS CAUSING LOSS AND DECLINE

2.1 Historically, the major loss of acid grassland habitats in the county has arisen from mineral extraction, with agricultural intensification by use of fertilisers, herbicides and other pesticides, re-seeding or ploughing playing a lesser role. Some sites have also been lost to development, including recently a significant area of Whitemoor Marshalling Yards and one or two as a result of forestry plantations. The loss of acid heathland habitats has been more the result of subtle habitat changes arising from changes in management.

2.2 The major threat today is the lack of appropriate management, particularly grazing. Some sites are maintained by rabbit grazing, however, on occasions this may cause its own problems if too heavy.

2.3 Some sites remain threatened by development activities, notably the remaining areas of Whitemoor Marshalling Yards and Chippenham Gravel Pit.

2.4 Spray drift and enrichment through fertiliser run-off may also be a problem on some sites. Atmospheric pollution, particularly eutrophication from nitrogen deposition and

climate change are recognised as potentially significant issues for the future; however, the influence of these factors has not been fully assessed nationally and very little is known locally, though anecdotal evidence suggests that some road verges are becoming more rank, though this may be as a result of only being cut once per year in autumn. Salt spray is also having an impact on road verges.

2.5 Although not a significant local issue, most acid grasslands do not have a statutory designation and there could still be loss of habitat due to development activities such as mineral extraction, road building, housing and landfill.

2.6 Road verges are particularly vulnerable to changes whether management or development related. A long list of factors adversely affecting road verges have been recorded; road improvement schemes, conversion of verge to hard surfaced footpaths or cycle paths, essential cable and pipe laying work, modification of verge for agricultural access to adjoining farm land, modification through introduction of new roadside ditch systems or widening of existing roadside drainage ditches, encroachment on verge by adjacent landowner (including ploughing of the verge), leachate run-off from adjoining agricultural land, spray drift from adjacent fields, lack of cutting and associated scrub encroachment, inappropriate cutting regimes and timing of cutting and even in some cases hedge and tree planting.

2.7 Recreational pressure bringing about floristic changes associated with soil compaction or soil erosion, or eutrophication from dog faeces.

2.8 The factors currently affecting acid grassland reduce the quality and quantity of the habitat, and its fragmentation brings increased risk of species extinctions in the small remnant areas. Many of the county's remaining areas of acid grassland are so small and isolated that chance extinctions due to unfavourable conditions, even if temporary, mean that the sites' diversity becomes impoverished over time. The less mobile fauna species are particularly at risk in this way.

3 CURRENT ACTION

3.1 Legal status

Lowland acid grassland hardly features in the SSSI series in Cambridgeshire.

The County Wildlife Site designation covers virtually all the remaining unimproved acid grassland in the county.

Several plant, invertebrate and bird species of acid grassland are protected under the Schedules of the Wildlife and Countryside Act 1981.

There is a range of national, regional and local planning policies that, along with other legislation, set out requirements for biodiversity conservation. Planning Policy Statement 9 (PPS9): Biodiversity and Geological Conservation (ODPM, 2005) is the key national planning policy document for biodiversity in England. It sets out the key principles that regional planning bodies and local planning authorities should adhere to in order to ensure that biodiversity is fully considered in the development of planning policy and determination of planning applications. The seven policies within the Environment chapter of the Regional Spatial Strategy for the East of England (GO-East,

May 2008) set out the requirements for proper consideration to be given to the potential effects of development on the natural, built and historic environment of the East of England. At the local level, the planning policy documents of local planning authorities should take account of BAP and HAP targets and priorities, setting overarching policies for the protection and enhancement of biodiversity.

3.2 Management, research and guidance

Initiatives such as Environmental Stewardship (and Countryside Stewardship and the English Nature Wildlife Enhancement Scheme beforehand) have played only a limited role in effective management of acid grassland sites, as many are now associated with former sand and gravel extraction sites and other brownfield sites.

The condition of acid grassland SSSIs is regularly monitored by Natural England. Natural England is undertaking acid grassland re-establishment at Holme Fen NNR.

The local Wildlife Trust has 2 nature reserves in Cambridgeshire & Peterborough with acid grassland a significant feature of their interest.

Sympathetic management is also undertaken by landowners on several sites. The Wildlife Trust in partnership with the County Council, Peterborough City Council, the district councils, Natural England, FWAG and the Environment Agency and established "partnership" to run the local County Wildlife Sites system. The Wildlife Trust employ a Wildlife Sites Officer, whose role is to co-ordinate surveys and provide management advice and support to landowners of CWS. FWAG also provide advice on some sites and help landowners to apply for the Environmental Stewardship scheme.

The Wildlife Trust regularly organises walks / talks to publicise the wildlife interest of grassland sites and to explain management activities undertaken thereon. Regular work parties involve members of the public in practical measures for grassland conservation.

4 OBJECTIVES AND TARGETS (Revised 2007)

4.1 Objectives

- Halt the loss of acidic grassland.
- Re-habilitate acidic grassland on known sites, bringing all significant stands of these habitats on SSSIs and CWSs into favourable condition.
- Buffer unimproved grassland sites to prevent damage by external factors, such as agricultural spray drift.
- Create new areas of acidic grassland, aiming to enlarge and link existing sites wherever possible.

4.2 Lowland Acid Grassland Targets for Cambridgeshire & Peterborough

1. Maintain the current extent of acidic grassland in Cambridgeshire & Peterborough (estimated to be 40 Ha, 2006).
2. Maintain at least the current condition for acidic grassland within SSSIs & County Wildlife Sites in Peterborough.
3. Achieve favourable or recovering condition for 45% by area of acidic grassland within SSSIs & County Wildlife Sites, by 2010 (75% by 2015 and 95% by 2020).
4. Restore 4 Ha of acidic grassland from semi-improved grassland, scrub and plantation on existing sites, by 2015 (and 8 Ha by 2020).

5. Create 10 Ha of acidic grassland from arable, improved grassland, or former minerals extraction sites, on, adjacent to and linking existing sites, by 2015.

5. ACTIONS

ACIDIC GRASSLAND: Habitat management, restoration & creation

BAP TARGET	PROGRESS TO 2006	ACTION	LEAD PARTNER	PRIORITY / DATE	RESOURCES
1. Maintain the current extent of acid grassland (estimated to be 40 Ha, 2006).	Loss of 13.4 Ha at Whitemoor Marshalling Yards CWS in 2005. Mitigation scheme to replace habitat in progress No known loss or damage to sites through agricultural intensification, since 2000	1.1 Ensure that all landowners and managers of SSSIs & County Wildlife Sites supporting acid grassland habitats are aware of their importance, through provision of site information	NE (SSSI) WiT / CCC (CWS)	High On-going	This is the role of Natural England for SSSIs. A local Wildlife Sites partnership is being formed to address the needs of County Wildlife Sites (see below). This will require support from all local authorities, including financial backing.
	Plans published recently all have site protection policies	1.2 Ensure all planning policy documents (LDF, Minerals & Waste Plans, etc.) have strong policies protecting SSSIs and County Wildlife Sites	CCC/LAs	High On-going	Existing staff resources
	Some of the acid grassland is likely to be contained within brownfield sites – eg MOD land airfields etc – all of which are threatened with development	1.3 Continue to assess planning applications that may affect acid grassland sites and comment on those that may have an adverse impact	CCC/LAs	Medium On-going	Existing staff resources

		1.4 Alert Natural England if a landowner is proposing / thinking of undertaking agricultural improvement activities on a site supporting acid grassland, so that the provisions of the EIA Regulations for Uncultivated Land can be implemented	NE, WT, FWAG	Medium On-going	Existing staff resources
		1.5 Ensure that the agreed mitigation plan for the habitat loss at Whitemoor Marshalling Yards, including the habitat creation at Conington, is implemented and successful	CCC, Network Rail (NE / WT)	High Ongoing	Action required by Network Rail as part of Planning Permission. County Council planning staff to monitor & enforce action. Natural England / Wildlife Trust advise County Council (existing staff resources)
2. Maintain at least the current condition for acid grassland within SSSIs & County Wildlife Sites. 3. Achieve favourable or recovering condition for 45% (by area) of acid grassland within SSSIs & County Wildlife Sites, by 2010 (75% by 2015 and 95% by 2020)	17% (6.8 out of 39 ha) SSSI & CWS favourable	2/3.1 Implement appropriate grazing or cutting regimes on all acid grassland sites, including road verges, ensuring that this is appropriate for plants and invertebrates Ensure that all landowners and managers are provided with information, advice and support regarding management of their sites to enable them to achieve this action	NE (SSSIs) WT / CCC (CWS)	High 2010	This is the role of Natural England for SSSIs. A local Wildlife Sites partnership is being formed to address the needs of County Wildlife Sites (see below). This will require support from all local authorities, including financial backing.
	Current contract for rural road verge maintenance, starting in 2007, includes clauses dealing with “Protected Road Verges”	2/3.2 Introduce and maintain a conservation mowing regime for Freckenham Road CWS, to include two cuts per year and cutting back of the hedgerows.	CCC	High On-going	A new conservation management regime for Protected Road Verges is being introduced in 2007 however cutting back of the hedgerows is not included.

	The Wildlife Trust has secured funding for advisory work through the Rural Enterprise Scheme until March 2009 and both the County Council & PCC have committed staff time.	2/3.3 Establish and support a local Wildlife Sites partnership to ensure monitoring & assessment of County Wildlife Sites and to provide information, advice & support to landowners	CCC / WT / PCC / other biodiversity partners	High 2007	This will require support from all local authorities, including financial backing.
		2/3.4 After March 2009, secure alternative funding to support County Wildlife Site advisory work and management of the local Wildlife Sites system	LAs / Biodiversity Partnership	High 2009	It is estimated that the cost of one full-time officer to manage the system on behalf of the partners would be £30,000 - £35,000 per year for both Cambridgeshire & Peterborough (2007 prices)
		2/3.5 Undertake site condition monitoring of all acidic grassland SSSI sites at least once every 6 years to record the extent and condition of habitats	NE (SSSI)	High On-going	This is the role of Natural England for SSSIs.
		2/3.6 Undertake site condition monitoring of all acidic grassland CWS sites at least once every 5 years to record the extent and condition of acid grassland habitats. All local authorities to fund a rolling programme of site re-surveys / site condition monitoring through an SLA with the Wildlife Trust until 2009 (beyond 2009 this could become part of the broader support of the local Wildlife Sites system – see action above)	CCC / SCDC / HDC / ECDC / FDC / WT	High On-going	The cost for all the acid grassland CWS over the period 2007-2011 is estimated to be £3000 (at 2007 prices).

4. Restore 4 Ha of acid grassland from semi-improved grassland and scrub / plantation on existing sites, by 2015 (and 8 Ha by 2020)		4.1 Identify and implement opportunities through individual site management plans for restoration of acid grassland on existing sites Key sites for action: Holme Fen SSSI, Gamlingay Heath Plantation, Whitemoor Marshalling Yards (scrub & plantation removal); Whitemoor Marshalling Yards, Conington Sidings, Chippenham Gravel Pit, New Barn Lake & Grassland (restoration of species-poor grassland)	NE, WT, CCC, Network Rail	High 2015	This is the role of Natural England for SSSIs. A local Wildlife Sites partnership is being formed to address the needs of County Wildlife Sites (see above). This will require support from all local authorities, including financial backing.
5. Create 10 Ha of acid grassland from improved grassland, arable, or former minerals extraction sites, on, adjacent to and linking existing sites, by 2015	The Wildlife Trust has undertaken an initial analysis of opportunities, many of which are included in this action plan.	5.1 Identify opportunities for the creation of acid grassland habitats around Gamlingay on the Greensand soils, around Kennett / Chippenham on the Breckland Soils (Halfmoon Plantation Pit & Chippenham Gravel Pit) and as part of major sand and gravel extraction around Block Fen. Creation of acid grassland should not destroy existing Open Mosaic Habitats on Previously Developed Land and their invertebrate interest. Seek to work with landowners to realise the opportunities.	WT	Medium 2012	While this could form part of the roles of current staff, it may be that a dedicated project officer could progress action more rapidly.
	Minerals plan includes these policies	5.2 Ensure Minerals & Waste planning policy documents have strong policies promoting biodiversity after-use and habitat creation.	CCC / PCC	Medium On-going	Part of the work of current staff including the Minerals Planning officers and Biodiversity Officer
		5.3 Identify and secure acid grassland creation opportunities through minerals restoration plans for the following sites: Kennett Hall Farm; Block Fen	CCC	Medium On-going	Part of the work of current staff including the Minerals Planning officers and Biodiversity Officer
		5.4 Monitor and record the extent of acid grassland being created through restoration of minerals extraction sites	CCC	Medium On-going	Should be achievable through the work programme of the Minerals Planning Officer and LDF process

		5.5 Monitor and record the extent of acid grassland being created through agri-environment schemes	NE	Medium On-going	This should form part of government monitoring of agri-environment schemes
		5.6 Monitor the condition of newly created acid grassland, assessing sites against the County Wildlife Sites criteria every 10 years	NE / PCC / WT	Medium On-going	No resources are currently made available for this. Ideally it would become part of the rolling programme of CWS re-surveys and the work of the CWS partnership in reviewing the CWS criteria.

Abbreviations

BSG	Cambridgeshire Biodiversity Steering Group
CCC	Cambridgeshire County Council
CPBRC	Cambridgeshire and Peterborough Biological Records Centre
CWS	County Wildlife Site
ECDC	East Cambridgeshire District Council
FDC	Fenland District Council
FWAG	Farming & Wildlife Advisory Group
HDC	Huntingdonshire District Council
HLS	Higher Level Stewardship
LAs	Local authorities
LDF	Local Development Framework
NE	Natural England, Local Team
PCC	Peterborough City Council
RES	Rural Enterprise Scheme
RSPB	Royal Society for the Protection of Birds
SCDC	South Cambridgeshire District Council
WT	Wildlife Trust for Bedfordshire, Cambridgeshire, Northamptonshire and Peterborough

6 LINKS TO OTHER PLANS

Lowland Calcareous Grassland HAP, Hedgerows HAP.

List of BAP priority species associated with this habitat and found in Cambridgeshire & Peterborough:

* *Cerceris quinquefasciata* – Solitary Wasp
* Adder *Vipera berus* (presumed extinct in area)
* Stone Curlew *Burhinus oedicnemus*
* Annual Knawel *Scleranthus annuus*
* Broad-leaved Cudweed *Filago pyramidata*
* Red-tipped Cudweed *Filago lutescens*
* Deptford Pink *Dianthus armeria*
* Field Wormwood *Artemesia campestrisi* (extinct in Cambs)
* Grizzled Skipper *Pyrgus malvae*
* Spanish Catchfly *Silene otites*
* Tower Mustard *Arabis glabra*

The list of invertebrates and lower plants have not been assessed.

7 REFERENCES

An **Appendix of Cambridgeshire and Peterborough site specific actions** on acid grassland SSSIs and CWSs is available from the Biodiversity Partnership Coordinator. This complements this Acid Grassland Habitat Action Plan.

Buglife: Managing priority habitats for Invertebrates, 2nd edition. For Lowland Dry Acid Grassland see: www.buglife.org.uk/conservation/adviceonmanagingbaphabitats/lowlanddryacidgrassland.htm

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Whitehouse, A.T. 2008. *Managing Aggregates Sites for Invertebrates: a best practice guide.* Buglife – The Invertebrate Conservation Trust, available on www.buglife.org.uk/Resources/Buglife/Documents/Managing%20Aggregates%20Sites%20for%20Invertebrates.pdf

8 LIST OF INDIVIDUALS AND ORGANISATIONS CONSULTED

ADAS
Anglian Water
Beetle Specialists
Biodiversity Partnership Co-ordinator
Bird specilists
Buglife
Butterfly Conservation
Cambridge City Council
Cambridge Preservation Society
Cambridgeshire County Council
Cambridgeshire and Peterborough Biological Records Centre
Countryside Restoration Trust
East Cambridgeshire District Council
Environment Agency
Farming and Wildlife Advisory Group
Fenland District Council
Flies specialists
Flowering plants specialists
Friends of Roman Road and Fleam Dyke
Froglife
Fungi specialists
Highways Agency
Huntingdonshire District Council
Huntingdonshire Fauna and Flora Society
Landowners
Langdyke Trust
Moth specialists
Natural England
Nene Park Trust
Network Rail
Opportunity Peterborough
Peterborough City Council
RSPB, East Anglia
RSPB, Fowlmere Nature Reserve
South Cambridgeshire District Council
The National Trust
The Wildlife Trust