

Habitat Action Plan

Chalk Grassland



marbled white © Mike Waite

"It is interesting to contemplate a tangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent upon each other in so complex a manner, have all been produced by laws acting around us." (Charles Darwin, 1859. This is the last paragraph from *On the Origin of Species*, believed to refer to the chalk grassland at Downe Bank in the borough of Bromley)

1. Aims

- To co-ordinate the protection, management and restoration of London's chalk grassland.
- To ensure that the need for habitat restoration and management of London's chalk grasslands is widely understood and accepted.

2. Introduction

Chalk grasslands develop on shallow lime-rich soils, which occur in London mainly on the parts of the North Downs in the south and Chilterns in the west. Nutrient-poor and free-draining, they support a wide array of wildflowers, butterflies, grasshoppers and other invertebrates, many of which are restricted to chalk soils. For the purposes of the plan, the habitat also includes young chalk scrub that has developed through a lack of management. Mature scrub and young chalk woodlands are not included.

Grass species like red fescue, sheep's fescue and quaking grass are common, along with plants such as wild thyme, marjoram and common bird's-foot trefoil. In addition, chalk grasslands support a range of orchids, many of which are nationally uncommon or scarce. The habitat is crucially important for butterflies, including those that are nationally or regionally scarce, such as grizzled skipper, dingy skipper, chalkhill blue, dark green fritillary and marbled white. Of particular note is the small blue.

3. Current Status

Traditionally chalk grasslands were kept open largely by grazing, primarily by sheep, although rabbits were also responsible for maintaining a short sward. Grazing declined after the 19th century and by 1945 few areas in London were grazed. In the 1950s myxomatosis devastated the rabbit population, which further reduced grazing pressure and led to the spread of scrub and eventually woodland.

London's suburban development during the inter-war period led to expansion of residential areas onto the chalk. The establishment of the Metropolitan Green Belt in 1949 was instrumental in preventing further significant loss through development, and many tracts became secured by public authorities and retained as public open spaces. However, much of the rest was of declining value as pasture and has since been converted to arable land or is grazed intensively by horses. In recent years, the identification of chalk grasslands as important resources for biodiversity has led to establishment of chalk grassland nature reserves in an effort to restore and conserve them. Scrub-clearance remains a key issue for managers.

There are about 320 hectares of chalk grassland in London, just over 3% of that of south-east England. This is distributed across a number of sites within five boroughs: Croydon (184 ha), Bromley (92 ha), Sutton (37 ha), Hillingdon (6 ha), and Lewisham (<1 ha). Most of these sites lie on the northern parts of the North Downs, especially along the slopes of a number of dry valleys in Bromley and Croydon.

4. Specific Factors Affecting the Habitat

4.1 Scrub encroachment

Abandonment of chalk grassland management since the 1950s has led to the widespread invasion of scrub and woodland species that once established can be difficult and expensive to remove.

4.2 Lack of grazing

The lack of livestock grazing on chalk grassland in London has been the principal factor leading to loss of grassland to scrub and woodland. Changes in market conditions have severely affected farming profits, leading to the continued decline in serious agricultural commitment in the relatively under-productive North Downs region.

4.3 Fragmentation

The loss of chalk grassland through habitat fragmentation has resulted from arable conversion, agricultural improvement, scrub encroachment, development, quarrying and recreation. This results in isolation of small areas of chalk grassland within the outer suburban matrix of London, making populations of species less viable and positive management more difficult.

4.4 Amenity use

The growth of leisure activities on London's chalk grasslands has grown demonstrably since the start of the 20th century and can have a detrimental effect. In recent years off-road motorcycling, scrambling and 4-wheel drive motoring have all become significant local problems, causing erosion, vegetation damage and disturbance to the tranquility of such sites.

4.5 Problem species

Hawthorn, blackthorn, dogwood, bramble, ash and some exotic species may colonise chalk grassland to the detriment of other species that depend on the open nature of the habitat.

4.6 Others

There may be local impacts caused by surface run-off from adjacent roads (including salt), nutrient enrichment from vehicle emissions and even air, noise and light pollution. Street lighting adjacent to chalk grasslands will interfere with the behaviour of glow-worms and can hence have an impact on local population sizes. Occupation of sites by travellers, fly-tipping and illegal grazing can also have detrimental effects. Removal of chalk grassland species (including butterflies, reptiles and orchids) by collectors has been a problem in the past, and probably still continues at a very low level, as does the deliberate introduction of such species onto sites. These issues have not been sufficiently researched.

5 Current Action

5.1 Legal status

There are four Sites of Special Scientific Interest (SSSI) within London that consist primarily of chalk grassland. A fifth site, Croham Hurst (Croydon), includes an area of chalk grassland scrub which was recommended for denotification in 1996. Only one site, Roundshaw Downs in Sutton, has been declared a Local Nature Reserve (LNR).

Of the total resource in London, some 20 sites containing chalk grassland have been designated as Sites of Metropolitan Importance for nature conservation and a further 30 sites are of Borough Importance.

London's chalk grasslands support a range of protected species. Of particular importance are early gentian (1 site), greater yellow-rattle and small blue butterfly. Greater yellow-rattle is a nationally rare plant, which has the bulk of its UK population on London chalk grasslands. The small blue butterfly is found on a number of London sites, including three in Sutton, two in Croydon and two in Bromley. Both this species and its larger relative the chalkhill blue are protected only from trade, however. Other protected species associated with London's chalk grasslands include common lizard, slow-worm, adder and badger.

5.2 Mechanisms Targeting the Habitat

These current actions are ongoing. They need to be supported and continued in addition to the new action listed under Section 7.

5.2.1 Decline of traditional management

In the past, species-rich chalk grassland was maintained as an incidental result of traditional agricultural practices. In recent decades, these practices have either disappeared completely in London, or been significantly altered through the impact of modern technology. The management mechanisms that are currently in place are either modifications of standard agricultural practices, or are replications of traditional practices such as hay cutting, often led by local authorities.

5.2.3 Downlands Countryside Management Project

The Downlands Countryside Management Project (DCMP) has been active on a number of London chalk grasslands, providing volunteer labour, expert advice and importantly, livestock for grazing. They assist in the management of a number of chalk grassland sites in London and hold a roving flock of 40 sheep that can be moved around different sites.

5.2.2 Countryside Stewardship Scheme

The Countryside Stewardship Scheme, administered by the Farming and Rural Conservation Agency, currently targets chalk grassland. A number of sites have been entered into the scheme. Individual agreements are for 10 years and provide both capital and revenue costs to benefit biodiversity, as well as access and general environmental improvement. Scrub clearance, stock fencing, grazing and reversion of arable land to grassland can be funded.

6. Flagship Species

These special plants and animals are characteristic of chalk grassland in London.

Pyramidal orchid	<i>Anacamptis pyramidalis</i>	This attractive, pure pink orchid is one of the delights of chalk grassland in mid summer and grows in reasonably large colonies on some sites.
Marjoram	<i>Origanum vulgare</i>	Widespread on chalk soils, this aromatic herb was recommended by Culpepper as a cure for a great number of ills.
Quaking grass	<i>Briza media</i>	'Tottering grass' is a delicate and distinctive plant most commonly found on chalk grassland.
Marbled white	<i>Melanargia galathea</i>	One of the most easily identified and attractive butterflies, often seen in large numbers in high summer.
Yellow meadow-ant	<i>Lasius flavus</i>	Forming distinctive domed ant-hills, this ant is an indicator of well-established traditional chalk grassland.

7. Objectives, Actions and Targets

Most of these actions are specific to this habitat. However, there are other, broader actions that apply generically to a number of habitats and species. These are located in a separate 'Generic Action' section which should be read in conjunction with this document. There are generic actions for Site Management, Habitat Protection, Species Protection, Ecological Monitoring, Biological Records, Communications and Funding.

Please note that the partners identified in the tables are those that have been involved in the process of forming the plan. It is not an exclusive list and new partners are both welcomed and needed. The leads identified are responsible for co-ordinating the actions – but are not necessarily implementers.

Objective 1 To identify and map the existing and potential chalk grassland resource within London

Target: Prepare an audit of London's chalk grassland by the end of 2001

Action	Target Date	Lead	Other Partners
Complete audit of all chalk grassland sites on a Geographical Information System (GIS)	2001	LWT	GLA, LA

Objective 2 Ensure that all existing chalk grassland is maintained and enhanced by appropriate management

Target: Appropriate management in place on all existing chalk grassland sites by 2005

Action	Target Date	Lead	Other Partners
Establish a Chalk Grassland Working Group to help oversee the implementation of the plan and monitor chalk grassland in London	2001	LWT	GLA, EN, LA, CoL, DCMP, Site Managers, Others
Identify key chalk grassland species with specialist requirements	2001	Working Group	Butterfly Conservation
Produce and distribute guidance for land managers on appropriate management for these species	2002	LWT	Working Group
Develop a regional grazing scheme	2002	Working Group	
Provide management advice/ details of incentive schemes to all owners of chalk grassland	2002	Working Group	
Establish appropriate mechanisms to ensure good practice in management is shared	2002	Working Group	
Develop management plans for all sites where possible	2005	Working Group	LA, land managers, LWT

Objective 3 Implement habitat creation and restoration on a number of identified sites.

Target: Begin implementation of project proposals by 2004

Action	Target Date	Lead	Other Partners
Identify areas for restoration through audit of sites	2001	Working Group	
Develop costed plans for creation/restoration projects	2002	Working Group	LA
Implement habitat creation and restoration on suitable sites	2004	Working Group	

Objective 4 Promote the heritage and cultural value of London's chalk grasslands

Target: Produce leaflet informed by public questionnaire by 2002

Action	Target Date	Lead	Other Partners
Produce a questionnaire for public/user groups to find out how chalk grassland is valued	2001	LBB	LA, LWT

Commission research into the cultural, 'sense of place' and ecological history aspects of London's chalk grassland	2002	LWT	Working Group
Produce chalk grassland leaflet for 3 London boroughs to encourage access where this is not detrimental to biodiversity	2002	LBB	LA, LWT

Relevant Action Plans

London Plans

Woodland; Private Gardens; Churchyards and Cemeteries; Railway Linesides; Farmland; Parks, Amenity Grasslands and City Squares; Wasteland.

National Plans

Lowland Calcareous Grassland; Calcareous Grassland Habitat Statement.

Key References

Nature Conservancy Council (1986). The management of chalk grassland for butterflies *Focus on nature conservation no.17*.

Abbreviations

CoL – Corporation of London
DCMP - Downlands Countryside Management Service
GLA – Greater London Authority

LA - Local authorities
LBB - London Borough of Bromley
LWT - London Wildlife Trust

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