

Vision for Essex Lowland Heathlands and Dry Acid Grasslands

Existing heaths have been extended and are managed in a favourable way, with grazing animals where possible.

Extensive heathlands re-created in areas where this habitat had become fragmented or lost altogether.

Heathland sites are appreciated by the public as places for quiet recreation and to see wildlife.

Populations of key national and Essex species have increased and are spread more widely throughout the county.



Lowland Heathland

National Description

Lowland heathland is a broadly open landscape on impoverished, acidic mineral and shallow peat soil, which is characterised by the presence of plants such as heathers and dwarf gorses. It is generally found below 300 metres in altitude in the UK, but in more northerly latitudes the altitudinal limit is often lower.

Areas of heathland in good condition should consist of an ericaceous layer of varying heights and structures, plus some or all of the following additional features, depending on environmental and/or management conditions; scattered and clumped trees and scrub; bracken; areas of bare ground; areas of acid grassland; lichens; gorse; wet heaths, bogs and open waters. Lowland heathland can develop on drift soils and weathered flint beds over calcareous soils (limestone or chalk heath).

Lowland heathland is a dynamic habitat which undergoes significant changes in different successional stages, from bare ground (e.g. after burning or tree clearing) and grassy stages, to mature, dense heath. These different stages often co-occur on a site.

The presence and numbers of characteristic birds, reptiles, invertebrates, vascular plants, bryophytes and lichens are important indicators of habitat quality.

In terms of distinguishing between lowland heathland and genuine acid grassland, less than 25% dwarf shrub cover should be assessed as grassland, over 25% as heathland.

British lowland heathland vegetation is a cultural habitat, which is part derived from human activity. Heath formation began during the Mesolithic period, when woodland was first cleared and increased when woodland clearance intensified during the Bronze Age.

Lowland heath is a rare and threatened habitat internationally and an extensive habitat throughout England. Today only one sixth of the exists covering less than 0.3% of England's land surface

Lowland heath is a priority for nature conservation because it is a rare and threatened habitat. In England only one sixth of the heathland present in 1800 now remains. The UK has some 58,000 ha of lowland heathland of which the largest proportion (55%) is found in England. The UK has an important proportion (about 20%) of the international total of this habitat.

Lowland Dry Acid Grassland

National Description

Lowland acid grassland typically occurs on nutrient-poor, generally free-draining soils with pH ranging from 4 to 5.5 overlying acid rocks or superficial deposits such as sands and gravels. It includes the *Festuca ovina* - *Agrostis capillaris* - *Rumex acetosella* (U1), *Deschampsia flexuosa* (U2), *Agrostis curtisii* (U3) and *Festuca ovina* - *Agrostis capillaris* - *Galium saxatile* (U4) National Vegetation Classification grassland plant communities. Inland vegetation, but not coastal dunes, characterised by *Carex arenaria* (*Carex arenaria* dune *Festuca ovina* sub-community (SD10b) and *Carex arenaria* - *Cornicularia aculeata* dune, *Festuca ovina* sub-community (SD11b)) is also included but is highly localised.

Definition of lowland acid grassland is problematical but here it is defined as both enclosed and unenclosed acid grassland throughout the UK lowlands (normally below c. 300m). It covers all acid grassland managed in functional enclosures; swards in old and non-functional enclosures in the upland fringes, which are managed as free-range rough grazing in association with unenclosed tracts of upland, are excluded. It often occurs as an integral part of lowland heath landscapes, in parklands and locally on coastal cliffs and shingle. It is normally managed as pasture.

Acid grassland is characterised by a range of plant species such as heath bedstraw *Galium saxatile*, sheep`s-fescue *Festuca ovina*, common bent *Agrostis capillaris*, sheep`s sorrel *Rumex acetosella*, sand sedge *Carex arenaria*, wavy hair-grass *Deschampsia flexuosa*, bristle bent *Agrostis curtisii* and tormentil *Potentilla erecta*, with presence and abundance depending on community type and locality. Dwarf shrubs such as heather *Calluna vulgaris* and bilberry *Vaccinium myrtillus* can also occur but at low abundance. Lowland acid grassland often forms a mosaic with dwarf shrub heath, the latter being covered in the separate lowland heathland action plan. Acid grasslands can have a high cover of bryophytes and parched acid grassland can be rich in lichens. Acid grassland is very variable in terms of species richness and stands can range from relatively species-poor (less than 5 species per 4m²) to species-rich (in excess of 25 species per 4m²).

Parched acid grassland in particular contains a significant number of rare and scarce vascular plant species many of which are annuals. These include species such as mossy stonecrop *Crassula tillaea*, smooth rupturewort *Herniaria glabra*, slender bird`s-foot-trefoil *Lotus*

angustissimus, bur medick *Medicago minima* and clustered clover *Trifolium glomeratum* and spring speedwell *Veronica verna*. Perennial taxa associated with these grasslands include, sticky catchfly *Lychnis viscaria* and shaggy mouse-ear-hawkweed *Pilosella peleteriana*.

The bird fauna of acid grassland is very similar to that of other lowland dry grasslands which collectively are considered to be a priority habitat for conservation action. Bird species of conservation concern which utilise acid grassland for breeding or wintering include woodlark *Lullula arborea*, stone-curlew *Burhinus oedicephalus*, nightjar *Caprimulgus europaeus*, lapwing *Vanellus vanellus*, skylark *Alauda arvensis*, chough *Pyrrhonorax pyrrhonorax*, green woodpecker *Picus viridis*, hen harrier *Circus cyaneus* and merlin *Falco columbarius*.

Many of the invertebrates that occur in acid grassland are specialist species which do not occur in other types of grassland. The open parched acid grasslands on sandy soils in particular, can support a considerable number of ground-dwelling and burrowing invertebrates such as solitary bees and wasps. A number of rare and scarce species are associated with the habitat, some of which are included on the UK Biodiversity Action Plan list of species of conservation concern, such as the field-cricket *Gryllus campestris*.

As with other lowland semi-natural grassland types, acid grassland has undergone substantial decline in the 20th century although there are no figures available on rates of loss. The decline is mostly due to agricultural intensification although locally, as in the Breckland, afforestation has been significant.

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 UK. Important concentrations occur in the Breckland, the New Forest, Dorset, Suffolk Sandlings, the Weald, Dungeness, the coasts of SW England and the Welsh and English border hills of Powys and Shropshire. Scotland is estimated to have less than 5000 ha and much of this is likely to be on the upland fringe. Extensive areas of acid grassland are included within sites designated as common land, but separate figures for uplands and lowlands are not available.

It will be important to ensure that acid grasslands are taken into account during implementation of the action plan for lowland heathland; actions in the two plans need to be closely integrated.

Status in Essex

Heathland once covered an extensive part of Essex, however today only a few remnant heaths remain. The heathland of Essex encompasses dry heath, wet heath and lichen heath, all of which are made up of a mosaic of acid grassland and heath. Dry heath is the most common form, with wet dwarf shrub heath mainly found in the Epping Forest complex. In Essex, present records indicate there is only 5.5 ha of Calluna heath in Essex, out of a total of 58,000 ha in the UK. This represents less than 0.01 % of the national resource. There is also 231 ha of acid grassland recorded making this the more dominant habitat in the county. Although the remnant heaths are small they are significant in a county context. Open, lowland heathland in Essex is concentrated in a small number of sites, of which nine are Sites of Special Scientific Interest (SSSI). The largest of these forms part of Epping Forest SSSI, with 15ha of existing and degraded heathland. Other significant sites include Thundersley Great Common SSSI, the Danbury Complex SSSIs and Tiptree Heath SSSI. The remaining sites are typically small and fragmented, with less than 2 hectares of dry heath and acid grassland at each site.

Heath and acid grassland sites are concentrated in a band running from the south west of Essex to the north east, with a few outlying sites in south Essex and on the Naze to the east of Colchester. This pattern reflects the underlying geology of Essex, following the ridge of glacial sands and gravels across the county, and the few outlying deposits in south Essex. This geology, together with the distribution of heathland indicator species can help to identify areas where heathland was likely to have been found in the past but where it has now all but disappeared under developing woodland. Heathland management, restoration and creation should be targeted at these 'priority areas' to reinstate heathland habitat.

Current factors affecting the habitat

Agricultural intensification and afforestation in the 20th century have been the primary cause of loss of heath but this is no longer the case. Current factors affecting heathland include:

DEVELOPMENT: High demand for housing, industry or leisure facilities e.g. golf courses has had a serious impact on the remnant heathland sites in Essex. There is scope to protect, manage and create heathland in future developments, especially on mineral sites and golf courses.

NEGLECT & MISMANAGEMENT: Heathland vegetation develops spontaneously from native plants, however it requires active management to maintain the vegetation communities. A significant threat to the remaining heathland in Essex is lack of management. The traditional grazing practices

which enabled heathland to develop have gradually declined and successional ecological processes have affected the majority of the heaths in Essex. Some heaths (such as Great Holland Pit and Glemsford Pit SSSIs) are only maintained through rabbit grazing. Elsewhere, only occasional unintentional burning knocks back invasive plant growth (although this is not a preferred management technique). Essex heathlands have a significant problem with developing scrub, and if left unmanaged will rapidly convert to woodland.

Another significant threat to many heaths and acid grasslands is over management by frequent 'amenity' cutting. The majority of heathland on commons and greens (outside of major sites at Tiptree, Fordham, Epping, Thundersley and Danbury) is rapidly being lost as a result of this practice. Inappropriate management of roughs on golf courses can also lead to a loss of heathland, as can changes to irrigation and the additions of fertilizers.

RECREATIONAL PRESSURES: Heathlands are popular sites for informal recreation. It is important to consider access as part of integrated site management plans, to protect heathland species which cannot tolerate disturbance. Increased use of heaths for informal recreation also increases the fire risk.

PUBLIC OPPOSITION: Public outcry at tree removal on historical heathland sites often prevents or curtails ambitious heathland management or restoration projects from happening. Raising awareness about the management requirements of heathland through publicity material and practical events is vital if restoration plans are to succeed.

ATMOSPHERIC POLLUTION: There is also a threat of atmospheric pollution affecting remaining heathland sites. Nutrient enrichment and chemical changes through pollution could alter the soil characteristics and in turn affect the character of heath plant communities.

At present, several sites in Essex have active management and restoration programmes to conserve and enhance this rapidly dwindling resource. Major heath restoration works are progressing under Environmental Stewardship concentrated in Epping, Danbury and Tiptree, where substantial pockets of heathland and acid grassland remain.

Targets

National Targets Lowland heathland		target date
1	No net loss of lowland heathland (95,116 ha).	ongoing
2	Improve by management all existing lowland heathland currently in unfavourable condition.	ongoing
3	Increase the extent of lowland heath by 7600ha	ongoing

National Targets Lowland dry acid grassland		target date
1	No net loss of existing lowland dry acid grassland 61,646ha	ongoing
2	Achieve favourable/recovering condition for 29,220ha	ongoing
3	Restore 313ha	ongoing
4	Re-establish 363ha	ongoing

East of England Targets Lowland heathland / Lowland dry acid grassland		target date
1	Restore 260 hectares of lowland heath or dry acid grassland from semi-improved or neglected grassland	2015
2	Re-establish 1400 hectares of heath or grassland of wildlife value from arable or improved grassland and increase the extent of lowland heathland	2015

Essex Targets Lowland heathland / Lowland dry acid grassland		target date
1	No net loss of area. There are currently 34 sites identified covering 236.5ha (Eof E Biodiversity Audit 2002)	2020
2	Undertake restoration on 75% of the existing habitat = 177ha	2020
3	Create 20ha on a minimum of 5 sites	2020
4	Achieve optimum biodiversity condition for 75% of existing habitat resource = 177ha	2020