

# Lowland heathland

## 1. A Definition

The expansive purple, golden and brown landscape which is lowland heathland is an evocative feature of southern England. Charged with history and alive with scent and colour, it combines an ancient origin with a vibrant living character. The power of heathland to evoke a sense of human desolation against the vastness of nature has led to it forming the backdrop to some of the most dramatic human stories of English literature over the last few hundred years.

Heathland is a product of human activity, formed where primeval forest was cleared for early agriculture on nutrient-poor soils, in the cool, moist climate of the Atlantic zone of north-western Europe. It relies upon the continuation of that human activity, and without it a reversion to woodland quickly takes place. However, while in the past heathland represented the most productive use which agricultural techniques could make of intrinsically poor quality land, today heathland survives only where there is a conscious intent to retain it, in the face of the capacity of modern agriculture and forestry to turn it to other uses.

Lowland heathland is defined as open uncultivated land below about 300 metres in altitude, dominated by dwarf shrubs - ling, cross-leaved heath and gorse - intermixed with acid grassland, bog, bracken, scrub and scattered trees. In Devon, lowland heath represents part of a continuum of overlapping, related habitats between the upland heaths of Dartmoor and Exmoor, and the lowland heathy wet grasslands of the Culm Measures and Blackdowns (Rhôs pasture). Culm Grassland is a difficult habitat to define, having both heathy and wetland characteristics. For the purpose of this Plan the larger moor-like Culm Grassland sites are included here, but all other Culm Grassland, which generally lacks an ericaceous character, is excluded. Culm Grassland is dealt with separately in the Rhôs Pasture Plan.

## 2. Why an Action Plan?

The UK's lowland heathlands are of international importance, and represent some 20% of the total area of the habitat in Europe. Most of that lowland heathland occurs in southern England and parts of Wales, from the Brecklands in Norfolk, the Suffolk Sandlings, through Surrey, the New Forest in Hampshire, through the large Dorset heaths, down to east and south Devon and the Lizard in Cornwall, and up through Pembrokeshire into parts of Gwynedd. Devon's lowland heathland is sometimes overlooked between the

larger expanses in Dorset and Cornwall, yet it represents one fifth of the total in the South West, and has a unique character.

Devon's lowland heathland, like many of its special wildlife habitats, is subject to great pressures and has declined markedly in the course of this century. Losses to agricultural improvement, with former heathland being converted to more productive pasture, and forestry, which now covers substantial areas of former heath, have reduced the county's lowland heaths to some 4000 hectares. Much of what remains is now managed specifically for its wildlife and landscape value, but such management is costly and relies upon a continued political commitment to existing and future funding mechanisms. Meanwhile strategic decisions about land use offer the potential for the re-establishment of heathland in some areas, if there is a collective will to see the habitat consolidated and enhanced.

Many of Devon's most cherished and characteristic wildlife species depend upon heathland, including the nightjar, woodlark, Dartford warbler and silver-studded blue butterfly. Their continued presence in Devon, and that of the superb landscape they inhabit, requires the commitment of a number of organisations, which in turn requires a clear, agreed framework for action.

### 3. Characteristic wildlife

The character of Devon's lowland heathland is provided not just by heather, which is less predominant in Devon's heathlands than it is in other heathland areas further to the east, but by a varying mosaic of heather, western gorse, bristle bent, cross-leaved heath and bell heather. Other frequent plants are bilberry, bracken, tormentil and lichens of the genus *Cladonia*, with bracken sometimes predominating.

Most of Devon's heathland complexes contain wetter areas, where purple moor grass becomes abundant and cross-leaved heath more frequent, together with a variety of sedges (common, carnation and star sedge for example), bog mosses, rushes and devil's-bit scabious. Less common specialities of these boggy areas include bog pimpernel, bog asphodel, round-leaved sundew and pale butterwort.

Patches of scrub, dominated by willow and birch, are also an integral part of heathland, though without management these spread to the detriment of the open heath. Isolated trees, including Scots pine, are also a feature of drier heathland sites, and add much to their character.

The fauna of lowland heathland in Devon is diverse and includes a wide range of species dependent on the conditions heathland provides. The invertebrate and bird faunas are especially notable. More than 35 species of butterfly and 21 species of dragonfly and damselfly breed on Devon's heathland, making heathland one of the most important invertebrate habitats in the county. Meanwhile a number of specialist bird species breed on the county's lowland heathland, including nightjar, Dartford warbler, stonechat, whinchat, tree pipit

and a dwindling number of curlew in wetter areas. The reptile fauna which is such a speciality of Dorset heathlands is less well represented in Devon, though adders are frequent.

## 4. Special species

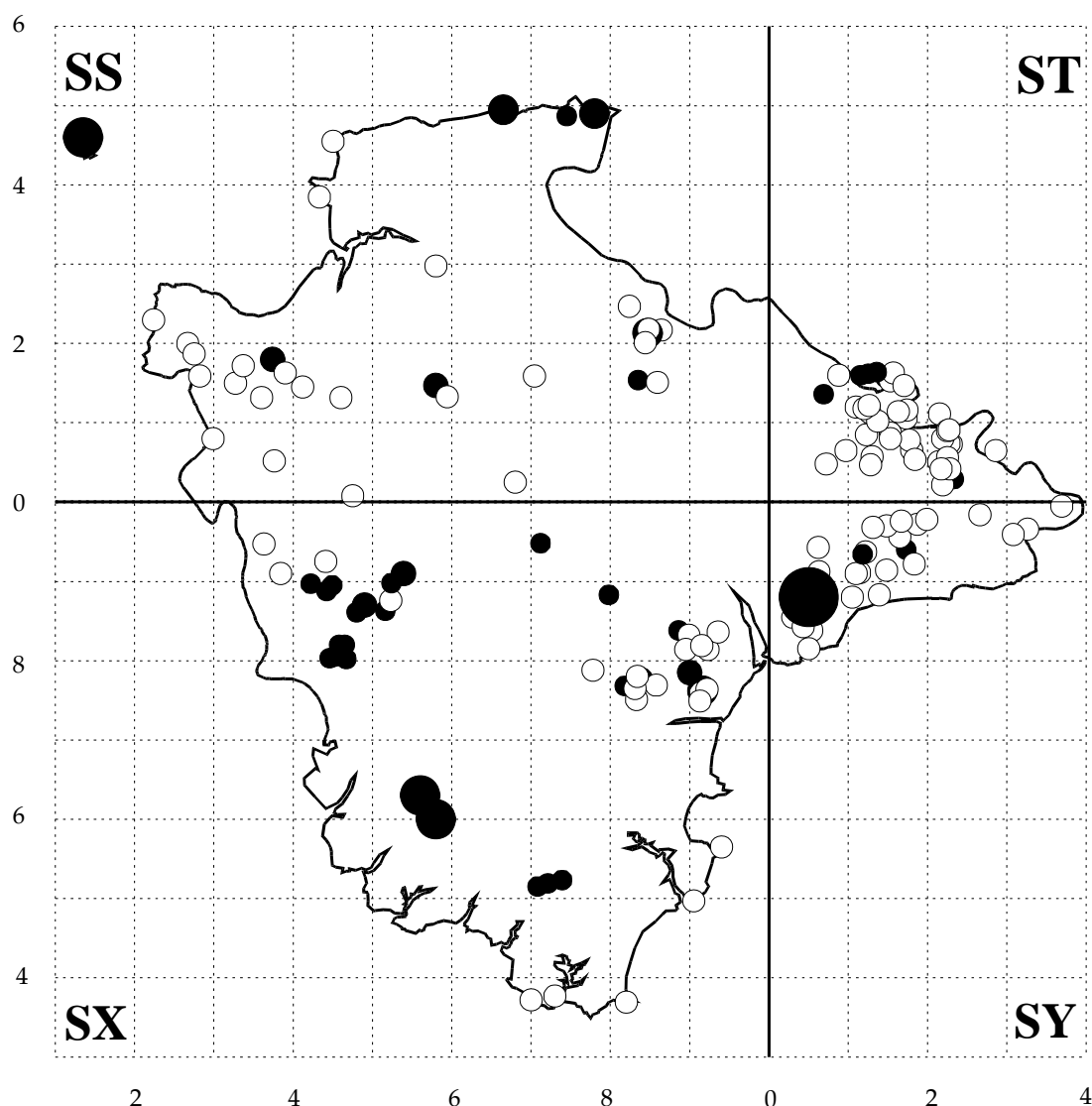
The following species of conservation concern are associated with lowland heath in Devon. Species marked (p) are 'Species of Principal Importance in England' (NERC Act, S.41).

- **Birds**: Nightjar (p), woodlark (p), Dartford warbler, stonechat
- **Butterflies**: Silver-studded blue (p), pearl-bordered fritillary (p), grayling (p)
- **Dragonflies & damselflies**: Keeled skimmer, Southern damselfly (p), small red damselfly
- **Other insects**: Narrow-headed ant (p), raft spider, bog bush cricket, wood cricket, small grass emerald moth
- **Vascular plants**: Heath lobelia (p), pale dog violet (p)
- **Lower plants**: Marsh clubmoss (p)

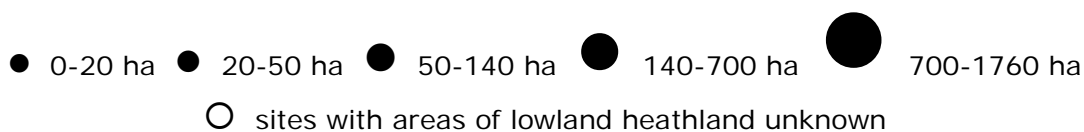


Heathland restoration, Bovey Basin

## 5. Lowland heathland distribution in Devon (1998)



10 Km grid squares showing main areas of lowland heathland



(Data supplied by English Nature, RSPB)

## 6. Current extent (1998)

Lowland heathland occurs in seven specific areas or zones of Devon, which together hold a total area of approximately **3895 hectares**. The largest single block is in East Devon on the **Pebblebed Heaths**, amounting to 1390 hectares; the **Haldon Ridge** holds about 540 ha of land carrying heathland vegetation, although about half of this is under partial forestry cover; the

**Bovey Basin** has 95 ha of heathland; the heathlands on or close to the **Blackdown Hills** amount to some 450 ha; the transitional heaths on the **Dartmoor fringes** cover some 100 ha; the Trendlebeare Down site covers 190 ha; the **heathy Culm Grassland sites** cover 500 ha; the **coastal areas** of the county, including the south Devon coast, Hartland coast and North Devon coast, hold maritime heath amounting to some 600 ha; and a small outpost of 20 ha of heathland occurs on Codden Hill near Barnstaple.

In addition much of the land cover of Lundy Island is maritime heath.

The total UK resource of lowland heathland is estimated at around 58,000 hectares (UK Biodiversity Steering Group Report), of which some 14,500 ha occur in the South West (Action for Biodiversity in the South West). Thus the Devon lowland heathland area represents more than 20% of the regional total, and nearly 7% of the national total.

Internationally lowland heathland occurs in the Atlantic zone of north western Europe, including the western seabords of Brittany, north west Spain, Portugal and Normandy.

## 7. Current problems for lowland heathland in Devon (1998)

**Agricultural improvements:** Much of the loss of lowland heathland over the course of this century (i.e. the 20<sup>th</sup> Century) in Devon has been due to agricultural improvement of land by drainage, ploughing, re-seeding and fertiliser application. Losses to this cause have largely come to a halt now, though some of the smaller heathland sites remain vulnerable, and a recent prosecution by English Nature for ploughing of part of a major heathland SSSI in the county has once again highlighted that heathland remains open to abuse.

**Afforestation:** Much of the former heathland area of the county is now under forestry. In particular the large Forest Enterprise estate on the Haldon Ridge was originally established in large part on open heath. Some blocks of former heathland were turned to forestry also in the Bovey Basin and on the East Devon Pebblebeds. Forestry and heathland are not necessarily entirely incompatible however; heathy vegetation may persist under plantations, and can be maintained on forest rides and glades. Areas of clearfell and crops under 8 years old also provide a heath-like environment which provides a habitat for the more mobile species; these areas can be maintained at about one sixth of the forest area. The persistence of heathland under forestry means that, in many cases, heathland can be restored if the conifer crop is harvested and not replaced.

**Mineral workings:** have caused the loss of lowland heathland sites in the Bovey Basin (ball clay extraction), the Dartmoor fringes (china clay extraction) and the East Devon Pebblebeds (sand and gravel extraction), both to mineral excavation and to subsequent mineral waste tipping. Such losses are

absolute, but in the long term site restoration plans offer the potential to recreate a heathland after-use. Several heathland sites are subject to extant mineral planning consents.

**Overgrazing:** Less drastic than full agricultural improvement, but ultimately as damaging, overstocking of heathland vegetation with sheep or cattle causes a gradual transition to poor acid grassland, as the vigour of the heather and other dwarf shrubs is reduced by excessive grazing and trampling. Poorly regulated exercising of common grazing rights is sometimes the cause of such overstocking.

**Abandonment and neglect:** Conversely, many of the smaller heaths, and much of the coastal heathland complexes, have suffered from too little rather than too much grazing, often because they do not offer a viable source of grazing, and are not in keeping with the rest of larger farm units, yet have not been economic to convert to grass. Such sites become degraded, or have been lost altogether due to scrubbing up and succession to woodland.

**Fragmentation and isolation of sites:** The above factors mean that some heathland sites are separated and surrounded by improved agricultural land or forestry, often making their continued management by traditional means impractical, and preventing free movement and colonisation by less mobile species.

**Recreational use:** One site in the Bovey Basin currently suffers from unsustainable use as an unofficial motorbike scrambling site (2004 update: this site is now being positively managed by the Devon Wildlife Trust and has been declared a LNR). In recent summers several sites have been subject to accidental or deliberate fires which, though fire is an important tool in heathland management when carried out carefully in the winter months, is seriously damaging to vegetation and to breeding wildlife if it occurs in the summer. One of these fires was caused by a model aircraft igniting after crashing on the heath, illustrating the risks accompanying large scale recreational use of heathland sites.

## 8. Recent changes in extent (1998)

Studies of tithe maps and OS first editions have allowed relatively detailed assessments to be made of changes in lowland heathland cover in two of its Devon strongholds.

On the East Devon Pebblebed Heaths more than 640 hectares of heathland have been lost since 1906, representing a 30% decline. Since 1947 380 hectares have gone, of which 166 ha are now under conifer plantation, 79 ha are under improved grassland, 15 ha are under arable, and 120 ha have been lost to minerals developments.

On the Haldon Ridge some 917 hectares of heathland were taken into forestry use between 1900 and 1946, followed by a further 100 ha since 1946.

2004 update: heathland restoration has been achieved on part of Haldon and at Dalditch Plantation in East Devon by clear felling conifers and allowing natural regeneration.

## 9. Current site protection (1998)

18 SSSIs in Devon contain lowland heathland, covering most of Devon's major heathland sites: East Devon Pebblebeds; Chudleigh Knighton Heath; Bovey Heathfield; Great Haldon Heaths; Haldon Forest; Little Haldon Heaths; Yarner Wood and Trendlebere Heaths, Maiden Down; Blackdown Common; and parts of the coastal sites: Marsland to Clovelly Coast; Saunton to Baggy Point; Morte Point; Lundy; West Exmoor Coast & Woods; Exmoor Coastal Heaths; Bolt Head to Bolt Tail; Prawle Point to Start Point; Berry Head to Sharkham Point. In addition a further 6 Culm Grassland SSSIs have a heathy character: Bursdon Moor, Hare's Down, Knowstone & Rackenford Moors, Beaford Moor, Dunsdon, Common Moor, and Staddon Moor.

3 of these SSSIs (East Devon Pebblebed Heaths, West Exmoor Coast & Woods and Exmoor Coastal Heaths) are included within Special Areas of Conservation, notified for 'Dry heaths' which are listed on Annex 1 of the EC Habitats Directive.

Aylesbeare Common together with much of the larger expanses of the Pebblebed Heaths in East Devon are managed as nature reserves by the RSPB in partnership with the owners, Clinton Devon Estates, and the Ministry of Defence. English Nature manages Trendlebere Down, which will form part of the East Dartmoor Woods & Heaths NNR (2004 update: Trendlebere Down is now part of this NNR). Two heathland LNRs in East Devon are protected by special by-laws. Devon Wildlife Trust manages heathland on nature reserves at Venn Ottery and Bystock Pools in East Devon, and at Chudleigh Knighton Heath in the Bovey Basin (2004 update: Bovey Heathfield LNR is also managed by the Trust). Much of the coastal heathland of the county is owned by the National Trust.

## 10. Biodiversity planning context

The Devon Biodiversity Action Plan forms a key link in the chain of biodiversity planning running from the National Plan, through Regional guidance, to local delivery.

### National BAP Context

Habitat of principal importance in England (NERC Act, S.41):

- Lowland heathland

Current national BAP targets can be viewed on the [Biodiversity Action Reporting System](#) (BARS).

## Regional Plan Context

Regional targets for priority BAP habitats can be found on the website of [Biodiversity South West](#).

### Associated Action Plans within the Devon BAP:

- Rhôs pasture
- Alder and willow wet woodland
- Pits, quarries and cuttings
- Nightjar
- Pearl-bordered fritillary
- Southern damselfly

## 11. Biodiversity objectives and targets for lowland heathland in Devon

### Objective 1

Maintain existing lowland heathland in Devon.

#### Targets:

- No further loss of heathland to forestry, agricultural improvement or built development.
- No further avoidable losses of heathland to mineral extraction, with heathland restoration plans in place to ensure no net loss and with the aim of securing a net gain of heathland in Devon.

### Objective 2

Maintain and improve the condition of lowland heathland in Devon.

#### Targets:

- 95% (by area) of heathland SSSIs to be in favourable or recovering condition by 2010.

- All other extant heathland sites to be under positive management regimes by 2010.

### Objective 3

Expand the extent of lowland heathland in Devon by targeted restoration and re-establishment.

#### Targets:

- 180 hectares of heathland in East Devon, and 200 hectares of heathland on Haldon and the Bovey Basin, restored or re-established by 2010 on land currently under forestry, degraded rough land, improved grassland, restored mineral sites or other land use not of existing conservation interest.
- Ensure appropriate long-term management regimes are in place for restored sites.

### Objective 4

To foster greater public understanding, involvement and enjoyment of lowland heathland and its wildlife.

#### Targets:

- All heathland sites suited to public access to be open and adequately interpreted by 2010.
- High quality awareness-raising material on Devon's heathland and its wildlife, in the form of literature or through other media, to be widely available to the public by 2006.

## 12. Wider benefits from pursuing these objectives

The pursuit of the objectives set out in this Plan will not only benefit the biodiversity of lowland heathland. Conservation has wider benefits for society, by providing the basis of many aspects of the local economy, and by adding to quality of life in ways which are beyond financial measure. Thus enhancing biodiversity enhances the interests of society as a whole.

Land supporting lowland heathland and similar habitats has tended to be regarded as a block to economic progress in the countryside, and in terms of the accepted definition of productive dairy and beef farming this is perhaps true. However, the combined effects of the recent misfortune of

the beef industry following the BSE scare, and the prospect of CAP reform highlight the need for economic diversification. When regarded in the context of new opportunities for income generation in the countryside, lowland heathland begins to appear less as a restriction on progress, and more as a positive opportunity. Meanwhile at present, management agreements with farmers for heathland sites help to maintain farm incomes.

The landscape beauty of lowland heathland and the diversity of wildlife it supports is a source of great interest to many people who choose to visit Devon on holiday, and heathland represents an important recreational resource in the County. However, experiencing it requires access to sites, guidance as to what to look for, and facilities for staying in the area. Thus if carefully packaged and marketed, lowland heathland may offer the basis for green tourism, linked to farm accommodation and other services, as an alternative source of rural income.

The open landscapes of heathlands in East Devon are valued by the military as training areas.

### 13. Priority or indicative actions for lowland heathland in Devon

Action	Key Partners
1. Ensure that all heathland sites are protected against inappropriate development through general or specific Local or Structure Plan (or Local Development Framework) policies reflecting the importance of statutory and non-statutory wildlife sites.	LAs; DCC; NE; DWT; RSPB
2. Seek to ensure that all heathland sites are under positive management (particularly heathland SSSI complexes) using, where appropriate, WES and agri-environment funding.	DWT; NE; RSPB; Defra FE; NT; Site owners and managers
3. Identify sites for heathland re-establishment and liaise with landowners and funding bodies to initiate work, particularly where projects can link or buffer existing heathland sites.	DWT; NE; FE; RSPB; NT; Defra
4. Continue to offer advice and guidance to heathland wildlife site owners on appropriate management.	DWT; NE; RSPB; LAs; HCS; FWAG
5. Continue to survey and monitor the condition of old and new heathland sites, including key species.	DWT; RSPB; NPAs; NE; DBWPS; BC; DRAG; BSBI; BDS
6. Ensure data is made widely available and that the central data source is DBRC.	DBRC; DWT; RSPB; NPAs; NE; DBWPS; BC; DRAG; BSBI; BDS
7. Continue to highlight the value of heathland to owners and managers and the wider public through literature, articles, interpretation and events. Information should include the wildlife and aesthetic value of heathland, the need for management and the dangers of accidental fires and some recreational uses.	All

Lowland Heathland Action Plan Champion: Natural England

### Abbreviations used in text and table

BC	Butterfly Conservation (Devon Branch)
BDS	British Dragonfly Society (Devon Branch)
BSBI	Botanical Society of the British Isles (Devon Recorders)
DBRC	Devon Biodiversity Records Centre
DBWPS	Devon Bird Watching & Preservation Society
DEFRA	Department of Environment Food and Rural Affairs
DRAG	Devon Reptiles & Amphibians Group
DWT	Devon Wildlife Trust
EDDC	East Devon District Council
FE	Forest Enterprise
FWAG	Farming & Wildlife Advisory Group
HCS	Heritage Coast Services
LAs	Local Authorities
LPAs	Local Planning Authorities
MoD	Ministry of Defence
NE	Natural England
NPAs	National Park Authorities
NT	National Trust
RSPB	Royal Society for the Protection of Birds