



# wildlife and habitats

## Hertfordshire's biodiversity continues to flourish

**Biodiversity in Hertfordshire remains a key indicator of the quality of our natural environment and our impacts on it. New development continues to have a degrading impact where there is a net loss of wildlife habitat, although larger schemes continue to be heavily scrutinised and compensation, mitigation or enhancements sought where appropriate. The importance of continuing management on key nature reserves and other sites in order to maintain valuable habitats is reflected in maintained butterfly populations and new discoveries of dormice, water vole survival and the problems of a potential mink resurgence.**

### Indicator WH1 - Water voles<sup>1</sup>

The Wetlands for Water Voles & People Project has now completed 3 years of surveying the Hertfordshire water vole monitoring sites. Of 125 sites only 6 have not been surveyed.

Comparison with previous monitoring shows that the number of water vole sites declined sharply in the 1990s but have recovered well recently. Interestingly, the distribution of water vole sites has changed during the period since 1989 with new records for sites on the rivers Beane, Chess, Purwell, Mimram, Rhee and in the Lee Valley. However, there have also been losses of positive sites on the Grand Union Canal and rivers Ash, Beane, Bulbourne, Colne, Gade, Hiz, Stort, Ver, the upper and middle Lee and parts of the Lee Valley.

The rivers Mimram, Purwell, Lee, Rhee and Chess remain as strongholds supporting important water vole populations, whilst a small number of water vole sites near the River Stort in Hertfordshire and Essex give hope that we may one day see their return to this waterway.

### Indicator WH2 - Birds<sup>2</sup>

The British Trust for Ornithology (BTO)'s Breeding Birds Survey (BBS) provides data on bird population changes. In Hertfordshire, 104 BBS plots were surveyed in 2009.

Four key indicator species reflect the quality of particular habitats or land-use types in Hertfordshire. The following data is from the 2009 BBS report (BTO) and the 2007 Hertfordshire Bird Report (Herts Bird Club).

**Grey Heron** (wetland indicator) are on the national Green List of birds of conservation concern. In England, its population increased by 3% (1995-2008), but declined in the Eastern Region by 13% (1994-2008). A total of 146 occupied nests were reported in Hertfordshire in 2007.

**Skylark** (farmland indicator) are on the national Red List of birds of conservation concern. In England, numbers declined by 19% (1995-2008) and declined by 27% in the Eastern Region (1995-2008). In Hertfordshire, numbers declined by 2% (2006-2007).

The **Song Thrush** (woodlands and mixed farmland indicator) remains on the national Red List of birds of conservation concern. In England, numbers increased by 25% (1995-2008), but declined by 7% in the Eastern Region (1995-2008). In Hertfordshire, numbers increased by 3% (2006-2007).

**House Sparrow** (urban environment indicator) are classified as a national Red List species. In England, numbers declined by 20% (1995-2008). Regionally, the species declined by 37% (1995-2008). In Hertfordshire, House Sparrows declined by 18% (2006-2007).

### Indicator WH3 - Wildlife Sites<sup>3</sup>

Wildlife Sites are the most important places for wildlife outside legally protected land such as Sites of Special Scientific Interest (SSSIs). They are essential for biodiversity conservation and together with statutory sites and nature reserves form a major part of the county's natural assets. They also play a vital role in progressing the county's Biodiversity Action Plan (BAP).

By December 2009 there were 1,954 wildlife sites covering about 10% of the county. Hertfordshire Biological Records Centre (HBRC) has refined the biological database to exclude statutory sites from this figure, which explains much of the decline in numbers from 2008/09.

In 2009 volunteer surveyors carried out botanical surveys to assess the condition and status of 29 sites as part of an ongoing monitoring programme.

### Indicator WH3a - Condition of Wildlife Sites NI 197<sup>3</sup>

In Hertfordshire, surveys established a baseline figure of 19.41% for proportion of Local Sites where positive conservation management (PCM) in 2008/09. This increased to 25.14% in 2009/10. It is important to note that this is a measure only of how many sites we

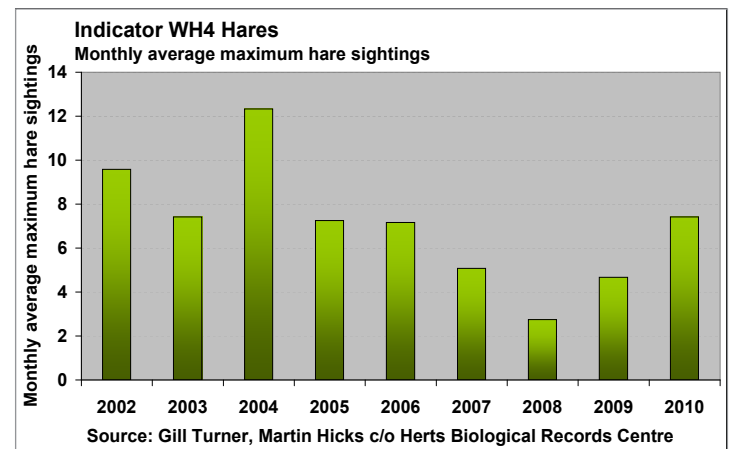


currently know to be in PCM. It is not necessarily all those sites in receipt of such management. Although the Government has recently removed the requirement to report on this performance indicator, understanding how well wildlife sites are performing in terms of biodiversity conservation is still essential. It is therefore intended to continue monitoring this measure of ecological condition in Hertfordshire.

Indicator WH3a - Condition of Wildlife Sites NI 197				
District	Total No. of County Wildlife Sites	Total Candidate Local Sites		
		Total No. of NI197 candidate Local Sites	No. of LSs known to be in Positive Conservation Management (% of total candidate LSs)	
Broxbourne	93	76	10	13.16%
Dacorum	246	215	67	31.16%
East Herts	611	455	102	22.42%
Hertsmere	130	99	24	24.24%
North Herts	348	277	77	27.80%
St Albans	197	150	40	26.67%
Stevenage	40	37	19	51.35%
Three Rivers	152	119	28	23.53%
Watford	34	28	5	17.86%
Welwyn Hatfield	205	171	34	19.88%
(AONB)	169	145	50	34.48%
<b>County</b>	<b>1,994</b>	<b>1,579</b>	<b>397</b>	<b>19.41%</b>

Source: Jennifer Gilbert, HMWT  
 Note: The total number of sites is less than the sum of the individual District figures because some sites fall within more than one district.

The countryside of the Broxbourne Woods is diverse mixed woodland with coppiced hornbeam, surrounded by small fields of grazing land, hay meadows and mixed arable land. It contrasts with the north of the county where a new comparative study of hares has now begun. This consists of more open, exposed countryside of undulating chalk hills with much larger open fields. Here, hares have always been more plentiful and early survey work is showing interesting differences in seasonal behaviour of hares compared to those in southern Hertfordshire.



## Indicator WH4 - Hares<sup>4</sup>

A long term study of hares in the Broxbourne Woods area of south-east Hertfordshire continues to show interesting population trends.

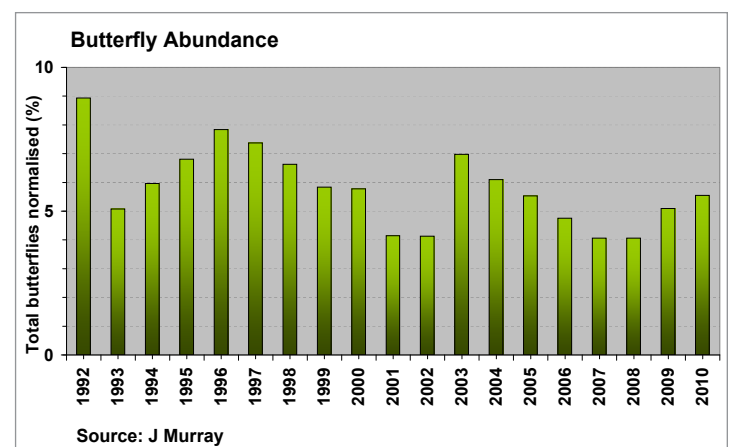
Following a gradual decline since 2002, both 2009 and 2010 have seen an increase in numbers, suggesting a cyclical trend. This may have been influenced by the areas of fallow among arable fields in 2010 which were favoured by leverets and sub-adult hares, attracted to the wild plants and previous crop's regrowth. It may also be due to greater female survival which attracts more males to the area, or earlier breeding.

Forestry operations within local woods lowered the number of foxes seen, although there may not have been a decrease in numbers. Fox numbers do not appear to have stopped hares from sheltering within or travelling through the woodland, where they spend winter days before going out to the surrounding fields to graze during the night.

## Indicator WH5 - Butterflies<sup>5</sup>

2010 has been an encouraging year for butterflies in Hertfordshire, with an overall increase in numbers of 9%. Though not as large an increase as last year, it does continue the reversal of the overall decline in numbers that has occurred over the past 15 years.

Most important have been the increases in rarer species, and also the return to the county and increasingly viable state of species that disappeared from Hertfordshire between 1970 and 2003.





# wildlife and habitats

**BAP species of conservation concern.** Numbers of Dingy Skipper, Grizzled Skipper and Green Hairstreak were maintained, whilst Purple Emperor was reported from double the number of sites.

**Chalk grassland.** Chalkhill Blue numbers were nearly five times those of 2009, and Common Blue abundance more than doubled. Dark Green Fritillary, which ceased to breed in Hertfordshire about 40 years ago, had its best year since 2007, raising hopes that it would establish itself here again like its relative the Silver-washed Fritillary. The extraordinary sighting of a worn Duke of Burgundy by Alan Bernard in his garden in the extreme west of the county in 2009 was unfortunately not repeated in 2010. This butterfly had last been seen in Hertfordshire in 1998.



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**Chalkhill Blue Butterfly**

**Neutral grassland/damp meadows.** Grassland butterflies overall showed little change, with Meadow Brown decreasing and Marbled White increasing by a similar amount, though the blues all did well.

**Acid grassland/heath/bracken.** Small Heath doubled its numbers after 5 years of continuous decline, and Small Copper increased both in numbers and range by more than 35%.

**Mature broad-leaved woodland.** White Admiral and Purple Emperor both held steady, and the latter greatly increased its range. Purple & White-letter Hairstreak both showed substantial increases in abundance of 28% and 67% respectively.

**Rides and Glades.** Silver-washed Fritillary, a species that returned to breed in the county in 2004 after a gap of 30 years, has increased more than 40% in numbers and was reported from 3 times the number of localities. Speckled Wood numbers fell by 25%.

**Scrub/hedgerows.** Gatekeeper & Ringlet both held steady this year.

## Indicator WH6 - Condition of SSSIs<sup>6</sup>

There are 43 Sites of Special Scientific Interest (SSSI) in Hertfordshire designated for their national biological or geological importance. Their condition is a Government indicator and sites are monitored to assess whether they are favourable or unfavourable, recovering or declining, or destroyed.

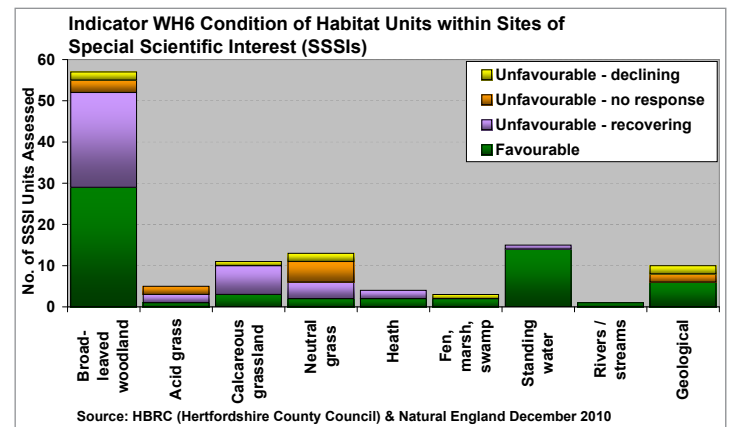
Progress of these sites towards achieving favourable status over the last seven years, as at 1st August 2010, is shown below.

Indicator WH6 - SSSIs in a favourable condition						
2004	2005	2006	2007	2008	2009	2010
66%	66%	70%	87%	88%	92%	92%

Source: Jennifer Gilbert, HMWT Source: Natural England County Statistics, M Hicks, HBRC

Every SSSI is divided into a number of separate habitat or land management units and each of these is assessed independently. The 43 Hertfordshire SSSIs are divided into 119 recording units, four of which were assessed by Natural England during 2010. The condition figures are calculated on the sum of all visits in previous years, and all have been visited within the last eight years.

70% of the woodland and aquatic units are considered to be in an entirely favourable condition, but only 24% of the grassland and heathland units are similarly favourable. This reflects the difficulty in securing appropriate grazing or hay cutting due to the decline in suitable livestock, management and traditional farming systems. In places, successful management is supported by various agri-environment or forestry schemes. 60% of geological sites are considered to be in favourable condition.



## Indicator WH7 - Damselflies and Dragonflies<sup>7</sup>

Dragonflies and damselflies - are dependant upon good wetland and associated habitats. King's Meads between Hertford and Ware, one of the few remaining river and meadow complexes that still regularly



floods and is one of the best sites in the county for damselflies and dragonflies. Species numbers for the site are shown below. The only Hertfordshire species not recorded in 2010 were White-legged Damselfly and Southern Hawker. The maintenance of high species numbers is an indication of the positive management that King's Mead receives as a Wildlife Trust reserve.

Indicator WH7 - Dragonfly species at King's Mead 2003-10

2003	2004	2005	2006	2007	2008	2010
16	18	15	16	18	17	17

Source: Alan Reynolds, Herts Dragonfly Group King's Meads Report 2009, A Brown, HMWT

## Herts Biodiversity Action Plan Update<sup>8</sup>

**Woodland:** The first season of the Woodland Trust's Heartwood project saw volunteers and local schools plant 90,000 native broadleaf trees over 54 hectares.

**Orchards:** Hertfordshire Orchard Initiative produced a Habitat Action Plan for Traditional Orchards and organised a regional meeting in March to review and support activities. Other events at Hatfield House, Waltham Abbey, Ashridge and Tring were attended as well as numerous apple days promoted across the county.

**Wetlands:** An assessment of the wetland resource of the Lee Valley Park, with special reference to waterbirds was completed on behalf of Herts & Middlesex Wildlife Trust (HMWT), Environment Agency, Lee Valley Regional Park Authority, Natural England and Thames Water. It outlines management recommendations for the next 10 years.

**Campaign for the Farmed Environment:** The Biodiversity Partnership Group helped compile a list of key farmland species to be promoted through the CFE in Hertfordshire. Launched on 5th November 2009, the campaign encourages farmers, advisors and land managers to take up Environmental Stewardship or voluntary management to benefit their environment.

**Tree Sparrow:** The Herts Bird Club continued monitoring tree Sparrows. 2010 was the best for nesting attempts and eggs but fledgling survival was low.

**Bittern:** 16 Bitterns were recorded in Hertfordshire and the Lee Valley - c.16% of the UK wintering population, all using sites where reedbed creation or restoration has taken place.

**Otter:** An otter survey of the Colne Valley from Rickmansworth to the River Thames by HMWT recorded otters and identified habitat management to improve movement and breeding opportunities.

**Grizzled Skipper:** Numbers of this butterfly appear to be broadly stable. The north of the county remains a stronghold with local expansions and work with landowners to encourage appropriate management continues.

**Purple Emperor:** In 2010 there were sightings at Bricket Wood Common (new site) and from woods in the north of the county (important historic area), confirming the need to manage woods for the butterfly on a landscape scale. Conservation tasks are proposed for 2010/11.

**Common Dormouse:** The People's Trust for Endangered Species project 'Hedgerows for Dormice' in the Chilterns has been extended to cover Hertfordshire. A survey workshop was held in August and it is hoped to co-ordinate several initiatives across the county.

**DEFRA Consultation:** The Biodiversity Partnership responded to DEFRA's Discussion Document 'An invitation to shape the Nature of England' which asked how can we best protect and enhance our natural environment. It will be DEFRA's first environmental White Paper in 20 years and is to be published in Spring 2011.

**Integrated Biodiversity Delivery Areas (IBDAs):** To help ensure BAP targets for 2015 are met, each Regional Biodiversity Forum has identified larger IBDAs which aim to restore and/or create a number of different habitats. London has identified the River Thames as its IBDA which has been extended to include the Rivers Lee and Colne and their tributaries. A Steering Group to take the IBDA forward is developing a vision and objectives with partners including the Biodiversity Partnership.

## Status publications and reports<sup>9</sup>

The Herts Natural History Society and Geological Society published a definitive account of Hertfordshire's Geology and Landscape in 2010. This will provide a detailed account of the basic geology of the county and its relationship with soils, ecology, agriculture, prehistoric archaeology, hydrology, mineral resources and building stones, all factors which have and continue to influence Hertfordshire's wildlife. A lowland meadow inventory was also updated for Natural England during 2010, as part of a regional inventory of the resource.

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<sup>4</sup> Gill Turner, Martin Hicks c/o Herts Biological Records Centre

<sup>5</sup> Dr John Murray, *Hertfordshire Butterfly Conservation*

<sup>6</sup> M Hicks, HBRC, *Natural England County Statistics*

<sup>7</sup> A Brown, HMWT, M Hicks, HBRC, A Reynolds, *Herts Dragonfly Group*

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