



Hertfordshire's natural environment continues to benefit from initiatives

Programmes including the Biodiversity Action Plan (BAP), Living Landscapes and Green Infrastructure¹ continue to enhance Hertfordshire's biodiversity.

There are development pressures which impact upon wildlife, from smaller applications affecting protected species, major infrastructure developments such as the Hitchin Rail link, M25 widening and Strategic Rail Freight Interchange at St Albans, to major development projects at Stevenage and Hemel Hempstead. New local plan processes continue to emerge in the context of increasing development pressure in the region for possibly over half a million new homes and the increased demands upon the natural environment that will be generated. In addition, impacts of climate change on land use and hydrology, renewable energy and the local food agenda place increasing challenges and opportunities on the natural world. Understanding that environment, monitoring it and managing it through nature reserves, agri-environment schemes and other initiatives continue to help deliver an ecology that works and a quality of life for local communities. Or does it?

Indicator WH1 - Water Voles²

The Wetlands for Water Voles and People Project 2007-2011 continues to progress water vole conservation in Hertfordshire. Of 125 water vole monitoring sites across the county, 119 have been surveyed during the period 2004 to 2009. Of these, 22% have shown positive signs of water vole presence. The rivers Mimram, Purwell, Lea, Rhee and Chess remain as strongholds for supporting important populations. Control of American Mink, the main predator of water voles, continues as a critical component of vole conservation on many rivers, and reported sightings of mink in many areas are down from previous years.

Indicator WH2 - Birds³

The British Trust for Ornithology's (BTO) Breeding Birds Survey (BBS) provides data on bird population changes. In Hertfordshire, 104 BBS plots were surveyed in 2007.

Four key indicator species have been chosen to reflect the quality of particular habitats or land-use

types in Hertfordshire. The following data is from the 2008 BBS report (BTO) and the 2007 Hertfordshire Bird Report (Herts Bird Club).

Grey heron

Grey herons breed in colonies and their nests are counted annually. A wetlands indicator, this bird is on the national Green List of birds of conservation concern. In England, its population increased by 7% (1995-2007), but declined in the Eastern Region by 24% (1994-2007). A total of 146 occupied nests were reported in Hertfordshire in 2007.

Skylark

Indicative of the condition of farmland, this national Biodiversity Action Plan species is on the national Red List of birds of conservation concern. In England, numbers declined by 17% (1995-2007) and declined by 26% in the Eastern Region (1995-2007). In Hertfordshire, numbers declined by 2% (2006-2007).

Song thrush

Indicative of the condition of woodlands and mixed farmland, this national Biodiversity Action Plan species remains on the national Red List of birds of conservation concern. In England, numbers increased by 24% (1995-2007), but declined by 9% in the Eastern Region, (1995-2007). In Hertfordshire, numbers increased by 3% (2006-2007).

House sparrow

Indicative of the condition of the urban environment, house sparrows are classified as a national Red List species. In England, numbers declined by 18% (1995-2007). Regionally, the species declined by 34% (1995-2007). In Hertfordshire, House sparrows declined by 18% (2006-2007).

Indicator WH3 - Wildlife Sites⁴

Wildlife Sites, also known as Local Sites, are the most important places for wildlife outside legally protected land such as Sites of Special Scientific Interest (SSSIs). They are essential to 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 BAP. By May 2009 there were 1,994 wildlife sites covering about 10% of the county.

Their identification assists site owners, planners and conservation bodies to make informed decisions to protect and maintain the county's biodiversity.



Given appropriate protection through the planning system in 2008/09, the Wildlife Sites Partnership responded to 351 planning applications which may have affected these sites directly or indirectly.

In 2008 volunteer surveyors also carried out botanical surveys to assess the condition and status of 32 sites as part of an ongoing monitoring programme. Partly as a result of this, five new sites were ratified and five de-selected as they no longer met the criteria.

New Indicator WH3a - Condition of Wildlife Sites NI 197⁵

As one of the Government's National Performance Indicators, NI 197 has been defined by the Department for Communities and Local Government as "Improved Local Biodiversity – proportion of Local Sites where positive conservation management (PCM) has been, or is being, implemented during the last five years". In Hertfordshire, surveys established a baseline figure for 2008/09 which was 19.4% for the county as a whole. It is important to note that this is a measure only of how many sites we currently know to be in PCM, not necessarily all those sites in receipt of such management.

Indicator WH3a: Condition of Wildlife Sites NI 197				
District	Total No. of County Wildlife Sites	Total Candidate Local Sites		
		Total No. of NI 197 candidate Local Sites	No. of LSs known to be in Positive Conservation Management (% of total candidate LSs)	
Broxbourne	94	81	10	12.35%
Dacorum	247	224	49	21.88%
East Hertfordshire	609	524	93	17.75%
Hertsmere	130	126	20	15.87%
North Hertfordshire	346	303	67	22.11%
St Albans	197	170	31	18.24%
Stevenage	40	36	18	50.00%
Three Rivers	152	132	28	21.21%
Watford	33	23	4	17.39%
Welwyn Hatfield	206	181	31	17.13%
County	1,994	1,788	347	19.41%

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



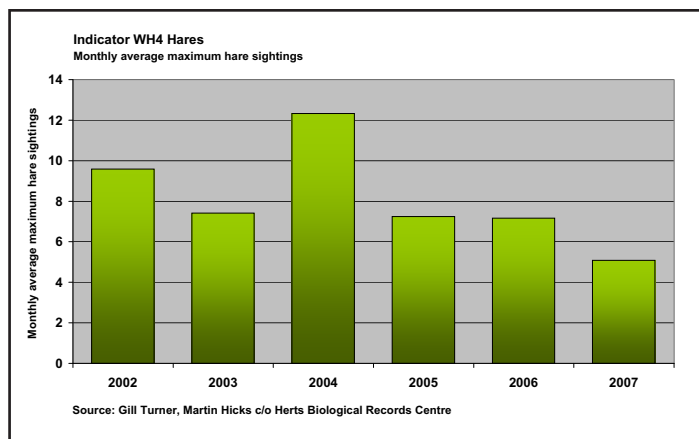
2009 saw an increase in hare numbers. Photo: Martin Hicks

Indicator WH4 - Hares⁶

A long term study of hares continues within the Broxbourne Woods area of south-east Hertfordshire and it is possible to use some of this data to show population trends. The countryside includes mixed woodland with coppiced hornbeam, surrounded by grazing land, hay meadows and mixed arable land.

Hares are most frequently observed in the arable areas. There has been a gradual decline since 2002 but 2009 saw a slight increase in numbers. This is partly due to greater female survival which attracts more males to the area and there may be indications of earlier breeding. There has been no apparent drop in predators or land use change. The snow in February 2009 showed that there was plenty of hare activity in the woods at night and also in the surrounding fields.

The very wet autumn in 2009 may have an impact, but whether increased numbers represent an emerging cyclical trend or simply variation within a continued decline remains to be seen.





Indicator WH5 - Butterflies⁷

Butterflies had a comparatively good year in 2009, in that more species have had increases than decreases, but this is compared to 2008 which was very poor. Scarce spring species Grizzled Skipper, Dingy Skipper and Green Hairstreak all at least doubled their numbers, though numbers are still very tiny. A summer grassland species that did well was Common Blue, which had an excellent year, but Small Heath, Small Copper and Brown Argus all dropped in numbers. Woodland species White-letter Hairstreak, Silver-washed Fritillary and Dark Green Fritillary all declined, though sightings were still frequent enough to hope that both Fritillaries will become established in Hertfordshire again, and intense surveys of White-letter Hairstreak by Andrew Middleton and Elizabeth Goodyear are indicating that this species is much more widespread than had been previously known.



Silver-Washed Fritillary. Photo: John Murray

Indicator WH6 - Condition of SSSIs⁸

There are 43 Sites of Special Scientific Interest (SSSI) in Hertfordshire, designated for their national biological or geological importance. Their condition is now a Government indicator and sites are monitored to assess whether they are favourable or unfavourable, as well as improving or declining. The table shows the total percentage of all sites considered favourable over the last six years, as at November 2009.

'Favourable' is defined as being in favourable condition (49.4%) as well as unfavourable but recovering (42.2%).

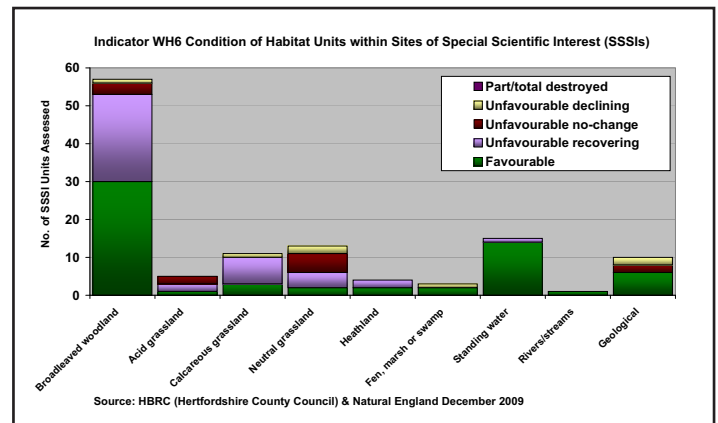
Indicator WH6 - SSSIs in a favourable condition

2004	2005	2006	2007	2008	2009
66%	66%	70%	87%	88%	92%

Source: Natural England County Statistics, M Hicks, HBRC

Each SSSI is divided into a number of separate habitat or land management units each of which is assessed independently. Of the total number of 119 units, 35 were assessed during 2009. The overall condition figures are calculated on the sum of all visits in previous years, and all but one has been visited within the last ten years.

95% of the aquatic and woodland habitats are in a favourable condition, but 30% of the grassland and heathland units are unfavourable, largely reflecting inappropriate grazing due to the availability of suitable livestock and management. Successful management is supported by various agri-environment or forestry schemes.



Indicator WH7 - Damselflies and Dragonflies⁹

These species are good indicators of high quality wetland and associated habitat. King's Meads between Hertford and Ware remains one of the best sites in the county for this group. Although only a reflection of one site, regular recording provides valuable monitoring of a key site. A summary of the total species numbers recorded are shown opposite. The only Hertfordshire species not recorded were White-legged damselfly – the habitat is not particularly suitable – and Southern hawker, a woodland or parkland / garden pond species. It would appear that in terms of species, King's Meads has perhaps shown a slight increase over recent years, a reflection of the positive management the site receives as a Wildlife Trust reserve.



Indicator WH7 - Dragonfly species at King's Mead 2003-8

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

Source: Alan Reynolds, Herts Dragonfly Group King's Meads Report 2008

Hertfordshire Biodiversity Action Plan Update¹⁰

Woodland: The Woodland Trust are planning to plant 600,000 native broadleaf trees to create 'Heartwood Forest' within St Albans District, which will be the largest new native forest in England. It will buffer and enhance existing ancient semi-natural woodland and provide 858 acres of free public access.

Orchards: Hertfordshire Orchard Initiative (HOI) had another busy year promoting and encouraging Hertfordshire's orchard and fruit growing heritage. Activities included talks, guided walks, juicing demonstrations and displays at events. There was also an extensive programme of 'Apple Days' during October across the county.

Grassland: Chalk grassland restoration through scrub removal and grazing has been continuing at Tring Park and several other sites across the Chilterns which have benefited from agri-environment scheme or other support.

Farmland: 5 higher applications for Higher Level Stewardship have been made by Countryside Management Service officers and specialist advisers. If successful, the schemes will attract approximately £2.8 million of funding over 10 years that will support landscape scale biodiversity.

Tree Sparrow: 2009 saw an increase to the highest total of young fledged ever recorded by the project, despite the loss of nests and unhatched eggs.

Bittern: In partnership with British Waterways, the Herts & Middlesex Wildlife Trust (HMWT) used a 'Truxor' amphibious reed cutting machine to improve the structure of reedbeds at Tring Reservoirs and Amwell Nature Reserve for bitterns.

Otters: Artificial holts were installed at Tewinbury, Hertford and Cheshunt. Prints have been found on the banks of the Small River Lea and an otter was seen at Amwell Nature Reserve.

Grizzled Skipper: Partnerships with a number of landowners in the north of the county ensure that expansion sites for the species are appropriately managed.

Purple Emperor: The new management plan for Broxbourne and Bencroft Wood proposes to retain and

manage sallow, the caterpillar's foodplant, in key areas of the HCC Nature Reserve.

River Water-dropwort: A re-survey was undertaken between September and November 2008 and the results indicate it is still present at all the sites where it occurred in the last survey of 2003-2004.

Green Infrastructure¹: Hertfordshire County Council, Natural England and the Herts & Middlesex Wildlife Trust organised a conference in November 2009 to consider the opportunities for high quality Green Infrastructure in the county. Given the emerging Green Infrastructure Framework for Hertfordshire, the Biodiversity Partnership is developing Key Biodiversity Areas as their strategic approach to landscape scale biodiversity delivery.

Status publications and reports¹¹

Following publication of the Moth and Dragonfly atlases in 2008, the Herts Natural History Society published the Flora of Hertfordshire in 2009. This major reference work, the result of eighteen years of surveys, will provide fundamental information resource on Hertfordshire's plants and habitats, updating the previous 1967 Flora. The data is highly valuable for understanding conservation management of species and sites as well as monitoring the impacts of processes such as land use and climate change. Hertfordshire Biological Records Centre also compiled Priority Habitat information on Herts Grazing Marshes as part of a regional inventory of the resource.

Acknowledgements and Footnotes

1 Green Infrastructure (GI) is a strategically planned and delivered network of high quality green spaces and other environmental features. It includes parks, open spaces, playing fields, woodlands, allotments and private gardens.

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7 Dr John Murray, Herts Natural History Society & Butterfly Conservation

8 Natural England County Statistics, M Hicks, HBRC

9 Alan Reynolds, Herts Dragonfly Group King's Meads Report 2008, M Hicks, HBRC

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