



Bedfordshire  
Local Nature  
Partnership

# Bedfordshire's Natural Environment

– its value to us all

An Overview



## Foreword

Bedfordshire's natural environment is diverse, ranging from a limestone plateau in the north-west, with low-lying Claylands dissected by shallow river valleys encapsulating an elevated ridge of Greensand with its associated woodland, grassland and heathland habitats, to the chalk hills of the Chilterns in the south-east.

Bedfordshire's natural environment is a vital asset, providing many essential benefits – from food production to flood risk management, from clean air to breathe, to places to unwind, relax and be physically active. We often take all of this for granted.

But we are putting this natural environment under pressure. Whilst much good work is being done to protect and improve the environment, all of us, including central and local government, public service bodies, businesses and residents need to do more.

This review highlights some of the successes achieved in protecting and improving Bedfordshire's natural environment but also flags continuing pressures and points to areas where more work may be needed.

Undertaken by the Bedfordshire Local Nature Partnership (LNP), working with the South East Midlands Local Enterprise Partnership (SEMLEP), it seeks to encourage a greater understanding and appreciation of Bedfordshire's natural environment and the services it provides to people who live in, work in, or visit the area.

Professor Paul Leinster, CBE  
Chair of the Bedfordshire Local Nature Partnership

# Bedfordshire's Natural Environment

**Urban Green Spaces, Parkland, Trees and Gardens** ~ offer a range of physical, mental health, recreational and wellbeing benefits.

## Key

- ~ Threatened
- ~ Stable
- ~ Thriving



### County Wildlife Sites

There are over 400 sites covering 8,800 ha (7%) of Bedfordshire. Nearly 60% are in positive conservation management.



### Habitat Restoration

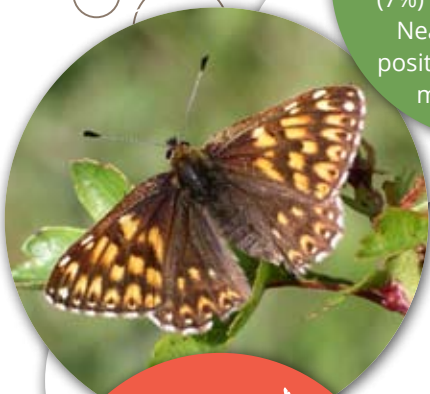
100 hectares of acid grassland have been restored/recreated at Sandy Warren SSSI and Sandy Heath Quarry, home to a rare spider-eating wasp (a first sighting in England).



### Duke of Burgundy



Most butterflies are in decline nationally. As one of the most threatened species, this butterfly is only found in a few special locations.



### Adder

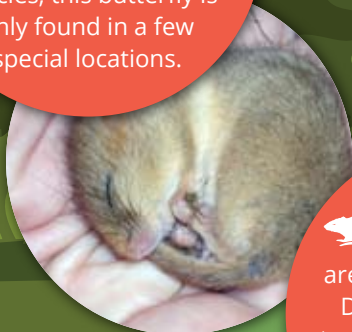
There are just a handful of locations in Bedfordshire with confirmed reports of this shy and retiring reptile.



### Dormouse



Nationally, they are in long term decline. Dormice are found in two locations locally, one of these being due to a successful re-introduction.



### Woodland



Bedfordshire is amongst the least wooded counties in England – it only has 6% woodland cover, compared to 13% for the UK. However, the creation of the Forest of Marston Vale will see around 4,000 hectares of new woodland planted between Bedford and Milton Keynes.



### Brown Hare



Numbers of these captivating creatures have declined by more than 80% in the last 100 years.



**Designated Sites for Nature** ~ these include protected habitats which are important for the natural environment such as Sites of Special Scientific Interest (SSSIs) and County Wildlife Sites (CWSs). Although these sites only account for a small proportion of Bedfordshire, they are home to a wealth of wildlife.

**Woodland, Hedgerows and Farmland** ~ As key landscape features these play a variety of roles in supporting wildlife and providing landscape character, and in soil and water management.



## Valuing Our Natural Environment

In addition to the natural environment's intrinsic value, we derive a wide range of essential services from the geology, soil, air, water and living things in our environment. These 'Ecosystem Services' are many and varied. They underpin our everyday lives and are essential to human existence.

They result from the stock of 'assets' in the natural environment, something we now recognise as 'Natural Capital'. Many of these environmental assets are increasingly valued in economic and financial terms. For instance, the role that trees perform in capturing carbon and reducing air pollution means their worth may be at least fifteen times their timber value.

National studies reveal that Bedfordshire's Natural Capital could be valued at approaching £10bn. This sum doesn't include the valuable contribution the natural environment makes to health and well-being. Treating mental ill-health in Bedfordshire costs over £1bn a year with an associated loss of production costing a further £200m annually. Greater access to the natural environment could reduce these costs.

While conventional infrastructure to tackle river pollution can be hugely expensive to construct and run, in some circumstances the creation of wetlands can provide low-cost solutions and the benefits of new habitats, creating additional natural capital.

Changes in land management practices can reduce the frequency and severity of flooding events, the ongoing costs of which run to several billion pounds in the UK.

Businesses making location decisions rank local environmental quality highly amongst the factors they consider. Respondents to a recent Bedford Borough Citizens Panel survey believed that businesses should do more for the environment, with 67% indicating that how much a business does for the natural environment affects their views of that business. A report produced for the South East Midlands Local Enterprise Partnership 'It's the economy, naturally' highlights the relationship between the economy and the environment ~ see [www.semlep.com/resource-hub](http://www.semlep.com/resource-hub)



### Willow Tit

Populations of this woodland bird have declined dramatically in recent years and they are probably now extinct in Bedfordshire with the last recorded sighting in 2009.



### Bees

are in decline across the country. Several species are now extinct and others subject to recovery programmes. Bedfordshire has a number of rare or scarce bee species.

### Hedgerows

Statistics suggest a halt to the major losses of the 1950s and 60s, but hedgerow species richness has declined. Nearly 6,000 km of hedgerows are now under environmental stewardship.

**Lakes, Rivers and Streams** ~ These provide critical habitat for a large variety of wildlife living in, on or around water. They also provide drinking water, irrigation, recreation and flood risk management services to Bedfordshire's towns and villages.

#### Industry and Sulphur

There has been a massive reduction in sulphur emissions from industry, bringing health benefits to the whole of the UK.

#### Traffic

Air quality monitoring sites across Bedfordshire show recent nitrogen dioxide concentrations are close to limits deemed safe for health.

#### River and Stream Quality

About 70% of the water bodies in Bedfordshire were of moderate or poor quality in 2013. Pollution from agricultural chemicals and sewage works discharges are among the major reasons for poor quality.

#### Yellow Wagtail

Though declining nationally by 67% between 1970 and 2013, they still breed in Bedfordshire, but remain uncommon.

#### White Clawed Crayfish

Britain's only native freshwater crayfish is in severe decline nationally and thought to be extinct in Bedfordshire due to habitat loss and disease carried by the introduced American Signal Crayfish.

#### Freshwater Fish

Fish are at risk from a range of threats including changes to rivers, pests and flooding.

#### Water Vole

One of Britain's fastest declining mammals. Small populations remain at Potton, Sandy and Luton but these are gradually disappearing.

#### Otters

are now found across Bedfordshire's river and stream network with surveys suggesting the local population has stabilised.

**Climate Change** ~ Widely recognised as a major global issue, climate change can have important and wide-ranging impacts on the natural environment and people's lives locally.



#### Earlier Spring

A clear indicator of the impact on the natural environment of climate change is the arrival of spring five to six days earlier than a century ago. An early spring can leave crops and plants vulnerable to subsequent frosts.



#### New Pests and Diseases

These are predicted to impact on woodlands, hedgerows and trees as well as other vegetation, crops and possibly humans.



#### Extreme Wet Weather

The increased likelihood of very wet winters and extreme rainfall days are likely to increase flooding - particularly as up to 10% of homes and over 33% of businesses are in flood risk areas.



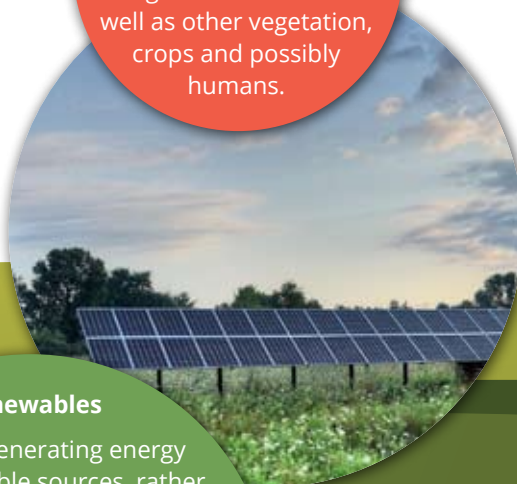
#### Extreme Heat Days

In the UK these are now occurring much more frequently. Such hotter drier conditions will also increase the risk of wild fires.



#### Renewables

Generating energy from renewable sources, rather than from fossil fuels, can help to reduce air and water pollution and carbon dioxide emissions linked to climate change. In Central Bedfordshire there are 8 solar farms generating enough energy to power 28,500 homes. An additional 16,500 homes receive electricity generated by wind and landfill gas.



## Where to from here?

This review of Bedfordshire's natural environment outlines some of the pressures it is under, some successes achieved and pointers to where more needs to be done.

Continued success will require businesses, organisations, groups and individuals to work together to identify how Bedfordshire's Natural Capital can be invested in, both through bold, imaginative solutions and a multitude of small initiatives.



# The Bedfordshire Local Nature Partnership

was established in October 2013, bringing together a wide range of partners from the public, private and third sectors interested in protecting and enhancing the natural environment. We are focusing on three main areas of work:

- **Valuing the natural environment** ~ we have produced this review to highlight some of the value of the natural environment to Bedfordshire's businesses, residents and visitors. We are working closely with the Local Enterprise Partnership (SEMLEP) to enable investment in the green and rural economy, and to support sustainable business growth.
- **The natural environment and health** ~ we are bringing together all parties that have an interest in the mental and physical health benefits of greater interaction with the natural environment. We aim to share and learn from good examples locally and beyond.
- **The natural environment and development** ~ we recognise the need for the development of new homes and places for people to work. We are working with planners and developers to provide guidance and support, so that development protects and enhances the character and quality of Bedfordshire's environment.

If you would like to find out more, or get involved with these areas of work, or if you have information or examples that would be useful, visit our website at:

[www.bedfordshirenaturally.com](http://www.bedfordshirenaturally.com) or email us at: [info@bedfordshirenaturally.co.uk](mailto:info@bedfordshirenaturally.co.uk)

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**Key Information Resources and Sources of More Information:** Defra England Natural Environment Indicators 2015 and the Bedfordshire and Luton Biodiversity Recording and Monitoring Centre.

**Photographic Credits in order of appearance:** Poppies Appley Wood Corner - Lisa King, Knocking Hoe County Wildlife Site - Dudley Miles, Dormouse - Richard Lawrence, Duke of Burgundy Butterfly - Keith Balmer, Adder - Marek Szczepanek, Sandy Heath Quarry - [geograph.org.uk](http://geograph.org.uk), Woodland - Jonathan Billinger, Willow Tit - RSPB, Bumblebee - Colin Carpenter (BNHS Bumblebee Recorder), Brown Hare - RSPB, Hedgerows - John Comont, New Housing - David Wilson Homes, Urban Trees - Alameda Middle School, Urban Parkland - Dylan Moore, Hedgehog - Gillian Day, Yellow Wagtail - RSPB, Water Vole - Fred Dawson, Otter - Bernard Landgraf, White Clawed Crayfish - Montgomery Wildlife Trust, Barbel - Sven Peterson, Traffic - iStock, Cooling Towers - MorgueFile.com, Early Spring Snowdrops - Woodland Trust, Extreme Wet Weather - Bedford Borough Council, Countryside Fire - Rob Gazzard, Forestry Commission, Ash dieback - Courtesy The Food and Environment Research Agency (Fera), Crown Copyright, Solar farm - Solarcentury, Biggleswade Green Wheel - Cliff Andrews.

## Get involved:

**Bedfordshire LNP**

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