Nature Recovery Herefordshire

Local Nature Recovery Strategy

Strategy Area Description

August 2026

Herefordshire Council

Contents

Acronyms and Abbreviations 4

1. Introduction 5
   - 1.1 What is a Local Nature Recovery Strategy? 5
   - 1.2 Who has been involved in the LNRS? 6
   - 1.3 Mapping 7

2. Strategy Area Description 8
   - 2.1 Designated Sites for Nature 9
   - 2.1.1 SSSI Status 13
   - 2.2 Landscape Character 14
   - 2.3 Geology and Soils 17
   - 2.4 Hydrology 19
   - 2.5 Historic Environment 21
   - 2.6 Countryside Access and Recreation 23
   - 2.7 Habitats and species 26
   - 2.7.1 Species-rich grasslands 27
   - 2.7.2 Tree, Woodland and Orchard Habitats 29
   - 2.7.3 Rivers, Standing Water, and Wetland Habitats 33
   - 2.7.4 Scrub and Mosaic Habitats 36
   - 2.7.5 Hedgerows and Boundary Features 38
   - 2.7.6 Upland Moorland and Heathland 39
   - 2.7.7 Farmland (Pasture and Arable) 41
   - 2.6.8 Built Environments 43
   - 2.7.9 Bird species indicators 45
   - 2.8 Pressures on Nature 46
   - 2.8.1 Tourism, Urbanisation and Development Pressure 46
   - 2.8.2 Agricultural Intensification 47
   - 2.8.3 Pollution 48
   - 2.8.4 Climate Change 50
   - 2.8.5 Disease and high-impact invasive species 51

3. Wider Environmental Benefits 52
   - 3.1 Herefordshire WEBs 53

4. Conclusion 56

Appendix A: Reference List and Data Sources 57
   - A.1 Sources provided by Herefordshire Council 57
   - A.2 Datasets 57
   - A.3 Reference List 58

Figures in Text

Figure 2-1: Statutory designated sites for nature conservation **9**
Figure 2-2: Priority habitats in Herefordshire **11**
Figure 2-3: Condition of SSSIs in Herefordshire **13**
Figure 2-4: National Character areas within Herefordshire **16**
Figure 2-5: Bedrock geology of Herefordshire **17**
Figure 2-6: Superficial (Drift) geology of Herefordshire **18**
Figure 2-7: Herefordshire's river catchments **19**

Tables in Text

Table 2-1: National Forestry Inventory (NFI) woodland (standard) cover within Herefordshire **29**
Table 2-2: Area (ha) of farming types within Herefordshire **41**

Photo credits:
Front Cover: Herefordshire Landscape *(Adobe Stock)*, Grey Heron *(Jane Tavener)*, Hazel Dormouse *(Adobe Stock)* and Common Spotted Orchid *(HBRC)*

Back cover: Honey Bee *(Abby Marshall), Water Vole (Adobe Stock)*, Large-leaved Lime *(Abby Marshall)* Meadow in Spring *(Abby Marshall)*, Dor Beetle *(Jane Tavener)* and Scarlet Waxcap *(Jane Tavener)*

Additional habitat and landscape photos provided by Herefordshire Biological Records Centre, Herefordshire Wildlife Trust, Kington Pollinators, Verging on Wild, Herefordshire Council, Chris Harris, Nigel Hand, Jane Tavener, Abby Marshall, and James Bisset, or under licence from Adobe Stock

Acronyms and Abbreviations

Acronym	Meaning
ACIB	Areas that could become important for biodiversity
AONB	Area of Outstanding Natural Beauty
APIB	Areas of particular importance for biodiversity
AQMA	Air Quality Management Area
ASNW	Ancient Semi-Natural Woodland
CLA	Country Land and Business Association
Defra	Department for Environment, Food & Rural Affairs
DWPP	Diffuse Water Pollution Plan
EA	Environmental Agency
EIP	Environmental Improvement Plan
FC	Forestry Commission
ha	hectares
HBRC	Herefordshire Biological Records Centre
HER	Historic Environment Record
HWT	Herefordshire Wildlife Trust
GCER	Gloucestershire Centre for Environmental Records
GWT	Gloucestershire Wildlife Trust
LGS	Local Geological Sites
LNP	Local Nature Partnership
LNR	Local Nature Reserves
LNRS	Local Nature Recovery Strategy
LWS	Local Wildlife Sites
my	million years
NCA	National Character Areas
NE	Natural England
NFI	National Forest Inventory
NFM	Natural Flood Management
NNR	National Nature Reserves
NRN	Nature Recovery Network
PAWS	Plantations on Ancient Woodland Sites
SAC	Special Areas of Conservation
SHINE	Select Heritage Inventory for Natural England
SSSI	Site of Special Scientific Interest
WCP	Wye Catchment Partnership
WEBs	Wider Environmental Benefits
WFD	Water Framework Directive

1. Introduction

1.1 What is a Local Nature Recovery Strategy?

Under the Environment Act (2021) England has been divided into 48 strategy areas. Each strategy area will have a designated "responsible authority" who will lead the preparation, publication, review and republication of their Local Nature Recovery Strategy (LNRS). Herefordshire Council is the "responsible authority" for the Herefordshire LNRS, as shown on the national map here.

The LNRS will identify locations to create or improve habitats, which deliver the greatest benefit to nature and the wider environment. Together, the LNRSs will form a system of spatial strategies vital to improving the state of nature both locally and nationally and will also help to encourage action that provides wider environmental or societal benefits, called "nature based solutions".

By law, each LNRS must include:

A Statement of Biodiversity Priorities, comprising:

- A Strategy Area Description outlining the evidence base that underpins the LNRS including a description of the county, its biodiversity and the pressures that nature faces;
- A Statement of Priorities and Measures giving:
    - The priorities for recovering or enhancing biodiversity (taking into account the contribution that this can also make to other environmental benefits); and
    - Proposals as to potential measures relating to those priorities.

A Local Habitat Map that identifies:

- Existing areas that are important for biodiversity (APIB) - These are areas that already have national or local designations.
- Areas that could be important for biodiversity (ACIB) - These are areas that have been identified through desk based analysis to suggest where the most suitable habitat should be created, restored or enhanced.

1.2 Who has been involved in the LNRS?

Herefordshire Council led the development the LNRS, working closely with the Steering Group and local partners. The Steering Group is made up of stakeholders including:

- Natural England (NE);
- Environment Agency (EA);
- Forestry Commission (FC);
- Herefordshire Wildlife Trust (HWT);
- Representatives from the two National Landscapes[1] (The Wye Valley and The Malvern Hills) which sit partly within the county;
- Landowner representation though the the CLA (Country Land and Business Association);
- Herefordshire Biological Records Centre (HBRC); and
- Wye and Usk Foundation (WUF).

The NFU (National Farmers Union) were also consulted during the development of the strategy.

During the development of the strategy, separate working groups were established to provide targeted knowledge in specific areas. These comprised of design of the mapping, short listing Priorities and Measures, shortlisting species and planning engagement events. To best capture the needs of each group the attendees were extended to wider stakeholders such as the Woodland Trust and country species recorders.

The Local Nature Partnership (LNP) were a group of local partners that had a substantial role in the development of the strategy.

As a high-level group of stakeholders for the improvement of the natural environment, their knowledge regarding specific habitat types and wider organisations looking to use the LNRS was vital in the process of creation and refinement of the strategy. Since April 2026 the LNP has been disbanded and replaced by the Herefordshire Environment Board (HEB) which will continue to play a key role in the delivery of the LNRS.

The Wye Catchment Partnership (WCP) is a key local partner; ensuring coordinated efforts for environmental restoration and sustainable management in the Wye catchment, a major component of the LNRS area. They are responsible for catchment planning, integrated management and supporting initiatives, which are well aligned with the LNRS.

The LNRS has been driven by the evidence and data available for Herefordshire and collaboration with local organisations, partners and individuals through consultations and working groups to ensure that nature recovery and local communities are at the centre of this strategy. Reports on initial public engagement and full public consultation have been published as separate documents.

[1]previously known as Areas of Outstanding Natural Beauty (AONB)

1.3 Mapping

The first step in developing the Local Habitat Map for the LNRS was to create a Nature Recovery Network (NRN) map for Herefordshire. The NRN identified national conservation sites, Local Nature Reserves, and other areas which are of particular importance for biodiversity (such as traditional orchards that are a key habitat for Herefordshire). It has also been used to map areas that could become of particular importance for biodiversity. These have been grouped into opportunity areas for four ecological networks: wetland; woodland; open habitats (species-rich grassland and heathland habitats); and open or woodland opportunities. These separate habitat opportunities will be used to target each of the measures and ensure that specific habitats are only receiving measures that they truly need.

Full technical details of the methodology can be found in the *Herefordshire Nature Recovery Network Mapping Methodology* document written by Gloucestershire Centre for Environmental Records (GCER) and Gloucestershire Wildlife Trust (GWT)[2]. There is also a summary of the mapping methodology which can be viewed on our website.

This initial opportunity mapping exercise has helped to identify areas where potential measures could be undertaken to deliver the priorities for the recovery or enhancement of biodiversity and make a particular contribution to other environmental benefits.

It identifies broad habitat opportunity areas by expanding upon and connecting existing high-quality habitats. This is done by utilising a mapping tool called 'cost distance analysis'. This analysis is a way of mapping a landscape to show how easily a species can move from one area to another. The mapping model estimates how easily different species can move through an area by assigning a 'permeability' score to each habitat. Using these scores, the model then calculates the path of least resistance across the entire map. The result is a map that doesn't just show habitats but also highlights the most critical areas for habitat restoration to improve connectivity between existing sites. This forms the 'Areas that could become important for biodiversity' (ACIBs).

Following on from the creation of the ACIBs, the habitat and species measures were mapped to the specific locations where they apply. Not all measures can be mapped, however those that can have been identified through the steering group. A combination of existing data sets have been selected and combined to create a new mappable layer for each measure. The measures are mapped to opportunity areas where they are best suited and will deliver the greatest benefits for nature. This uses an evidence driven approach to assigning on the ground actions to a particular place. Using a prioritisation matrix, that takes into account wider environmental benefits, the measures will appear on the interactive map in a ranked order.

[2]Hynes, J. (2024) Herefordshire Nature Recovery Network Mapping Methodology.

2. Strategy Area Description

The Strategy Area Description provides the evidence base that underpins the LNRS priorities and measures and should be read alongside the Local Habitat Map and Statement of Priorities and Measures. It presents a description of the county; it's geology, landscapes, soils, habitats and species, as well as the main cultural aspects and land uses. It also identifies the pressures that nature faces within Herefordshire, such as loss, fragmentation and degradation of habitats, climate change and pollution. The features of Herefordshire identified in this description are reflected in the selection of priorities and measures that have been created for the LNRS.

Herefordshire is a county known for its rural landscapes, ranging from the fertile floodplains along the River Wye to the dramatic scenery of the uplands, notably in the Black Mountains and the Malvern Hills. These landscapes are home to a great diversity of wildlife and natural habitats.

This section provides a description of the area encompassed by the LNRS. It draws together information from multiple sources to explore Herefordshire's natural environment as it currently stands and is defined by its iconic sites, habitats and species. Appendix A provides details on the data referred to within this section. Important habitats, from ancient woodlands and lowland meadows to traditional orchards and rivers, are described in detail. The range of species which call Herefordshire home are also explored.

Herefordshire's natural environment faces numerous pressures, such as from intensive agriculture, pollution, changes in land use and climate change. These are examined in the context of how they affect, or could affect, biodiversity assets in Herefordshire with the aim of identifying opportunities and guiding future action on how nature can be restored in the county.

Importantly, the thriving biodiversity that exists within Herefordshire has been protected through the hard work and dedication of committed networks of local organisations and partnerships. These groups strive to protect existing areas of high value for nature, as well as working to restore nature back into Herefordshire's landscapes, and to inspire people of all ages to discover and take action to defend and improve Herefordshire's wildlife. Their successes are highlighted throughout the document.

2.1 Designated Sites for Nature

Some 40,062hectares (ha) or 18% of Herefordshire is subject to nature-based designations (from international to local level) which seek to protect the most valuable habitats and their residing species. Land is subject to statutory designation where it meets published criteria in terms of being of valuable to particular species, species groups and habitats of high importance, among other features. These sites provide vital areas for nature to thrive, and act as key refugia for wildlife, linking together Herefordshire with the wider landscape. However, isolated sites cannot conserve nature on their own, they must form part of a larger well-connected ecological network to allow wildlife to cope with changes and pressures.

A wide range of statutorily designated sites for nature occur in Herefordshire. They include Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), Special Protection Areas (SPAs), National Nature Reserves (NNRs), and Local Nature Reserves (LNRs). Non-statutory sites are also present within the county including Local Wildlife Sites (LWS) and Local Geological Sites (LGS). Many of these statutory and/or non-statutory designated sites are of high value to nature, but if they are small, poorly connected to other natural habitats and sit in isolation, they can be threatened. For example, each species has a different capacity to move between habitats: a motorway will represent a significant barrier to amphibian and reptile movement, whereas birds of prey may fly over mostly unaffected. Unlit corridors of vegetation enable bats to fly and forage, and streams, canals and rivers allow movement of aquatic species along blue corridors.

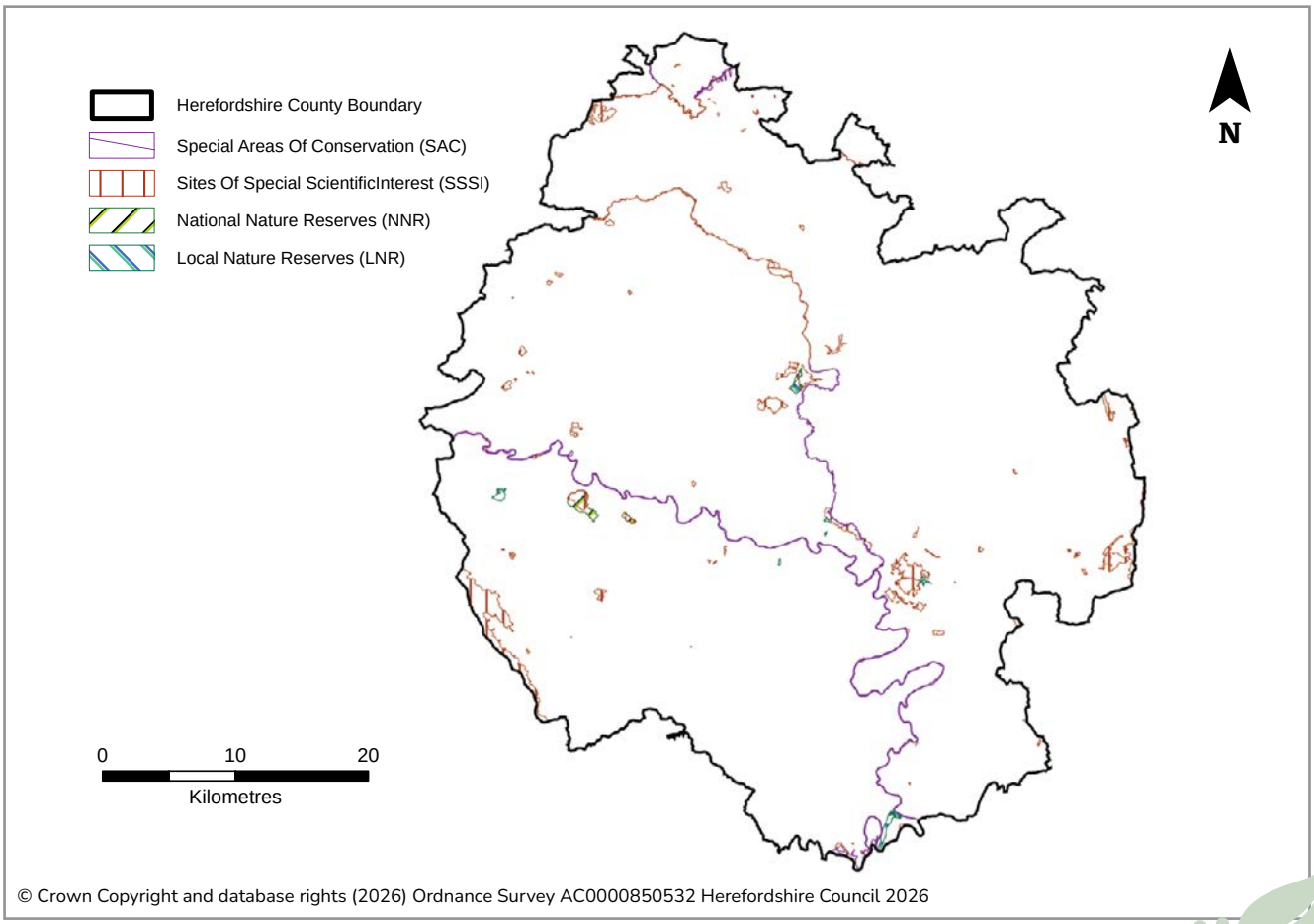


Figure 2-1: Statutory designated sites for nature conservation

Within Herefordshire, there are 77 SSSIs (covering 4,989 ha/2.3%), which are designated for their biological or geological interest or a combination of both (four sites). These range from the lowland woodlands of Downton Gorge, the lowland grasslands of the Lugg and Hampton Meadows, the Wye and Lugg rivers, to the upland scrub of the Black Mountains.

Four of the SSSIs are also SACs. These comprise woodland and freshwater habitats covering 0.5% of the county (Figure 2-1). This includes the River Wye, which is the only river in the UK that is cross border and designated along its full length. These represent the highest international level of designation that are protected by the Habitats Regulations, which implement the European Union Habitats Directive (Directive 92/43/EEC).

Three of the SSSIs are also designated as NNRs comprising woodland, wood pasture, and grassland habitats covering 0.1% of the county. NNRs are important nationally and are designated by NE as places that typically hold nationally important populations of species. A prime example is Moccas Park, managed by Natural England, which is one of the largest and most diverse examples of wood pasture habitat remaining in Britain.

An accurate image of the number of designated sites within the county can be located within the MAGIC Map from the Government website.

In terms of local designations, across Herefordshire, there are seven LNRs which comprise of woodland, ancient grassland, open grassland, and meadow habitats located mostly in the south, as well as 772 LWS covering 19,109 ha/9%. The LWS reflect the local character and distinctiveness of Herefordshire, having been identified and selected locally by a partnership of the local authority, nature conservation charities, statutory agencies, ecologists and local nature experts, using transparent criteria and detailed surveys. They can be found on both public and private land, including habitats such as species-rich grasslands, ancient woodlands, fens, orchards, and river corridors.

Irreplaceable habitats, as referred to in The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024, are considered extremely difficult or impossible to restore, create, or replace once destroyed due to their rarity, uniqueness, species diversity, and/or age. Within Herefordshire, such irreplaceable habitats include ancient and veteran trees, ancient woodland, blanket bog, certain areas of semi-natural grassland, and lowland fens. Planning permission for developments that result in the loss of these irreplaceable habitats would only be granted in exceptional circumstances.

In addition, Herefordshire hosts many UK Priority habitats – these can be rare and valuable habitat types, which therefore receive additional protection in a planning context and are the target for many conservation and restoration projects. These are outlined in Figure 2-2 and the infographic overleaf.

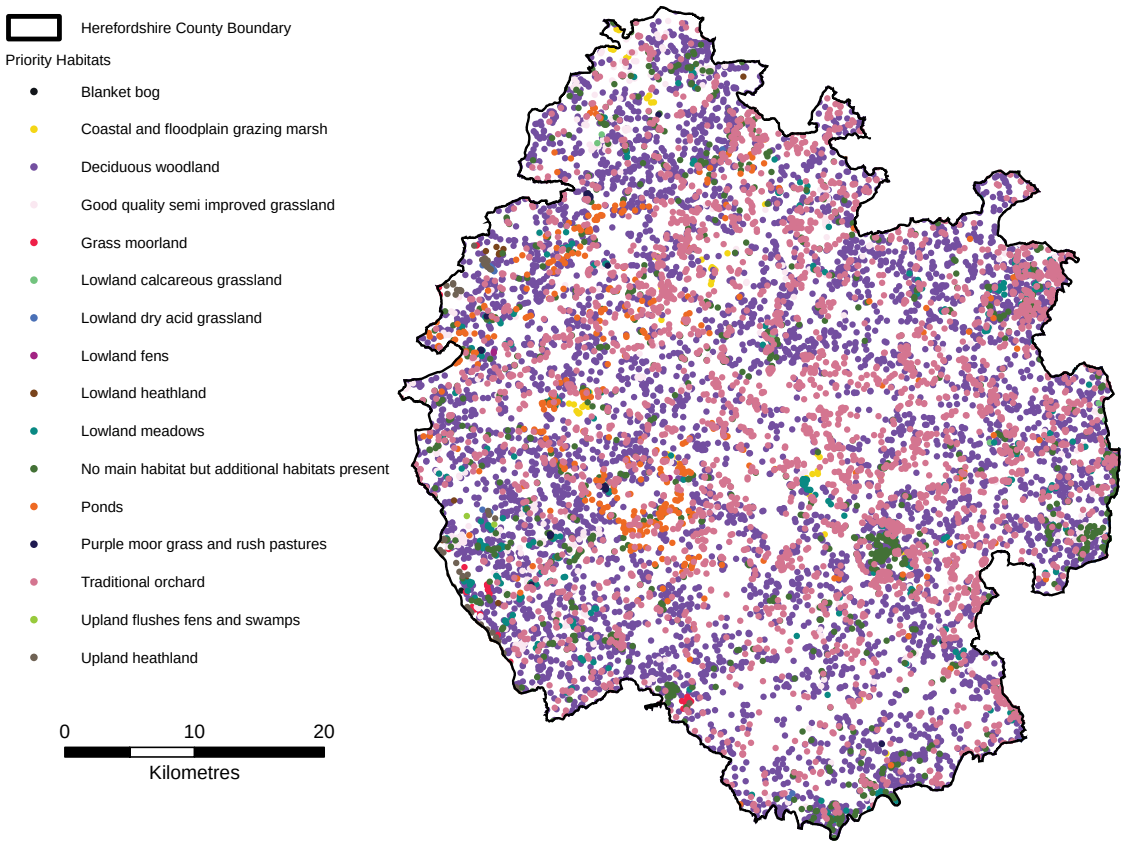


Figure 2-2: Priority habitats in Herefordshire

TOTAL AREAS OF PRIORITY HABITATS IN HEREFORDSHIRE

DECIDUOUS WOODLAND

14,954 ha
75%

TRADITIONAL ORCHARD

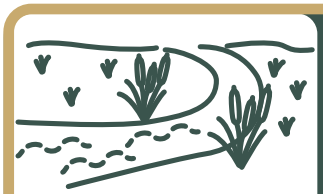
2,562 ha
13%

LOWLAND MEADOWS

1,279 ha
6%

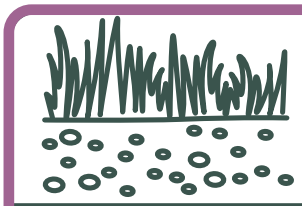
UPLAND HEATHLAND

429 ha
2%



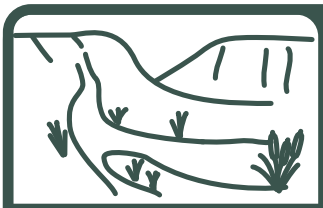
COASTAL & FLOOD PLAIN GRAZING MARSH

334 ha
1.7%



LOWLAND DRY ACID GRASSLAND

201 ha
1%

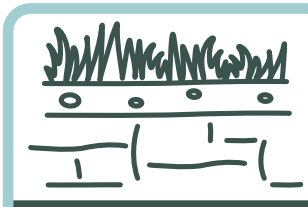


UPLAND FLUSHES, FENS, AND SWAMPS

121 ha
0.6%

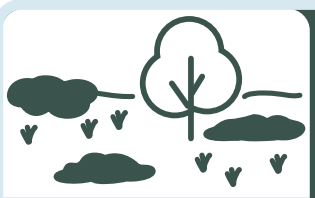
PURPLE MOOR GRASS AND RUSH PASTURES

51 ha
0.25%



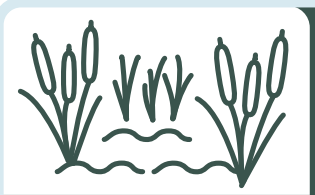
LOWLAND CALCAREOUS GRASSLAND

38 ha
0.2%



LOWLAND HEATHLAND

18 ha
0.1%



LOWLAND FENS

9 ha
0.04%

TOTAL AREA: 19,994ha

(October 2025 data)

2.1.1 SSSI Status

Long term data is collected on the condition of SSSIs within Herefordshire (Figure 2-3), to monitor their conservation value and the progress of any remedial / restoration measures that may have been put in place against published standards. The condition of SSSIs in Herefordshire varies. For some sites the designated features are in decline and in unfavourable condition, whereas other features or sites are recovering or favourable.

Currently, only 35.7% (1,780 ha) of features are in favourable condition, with the remaining 64.3% (3,209 ha) in unfavourable condition. However, over the years some of the SSSI sites have improved and have moved towards being managed for recovery rather than remaining unfavourable – no change, although approximately one quarter of SSSIs are still classed as suffering with a category of unfavourable – declining. This includes the River Wye and Lugg SSSI. Compared to the country average (41.2%), Herefordshire has fewer SSSIs in favourable condition. However, not all sites have been surveyed or re-surveyed at the same time, with the result that some condition data may be more than a decade old and, as such, should be interpreted with caution. Further independent checks that have been carried out by the County Botanical Recorder on multiple sites have also shown that no further sites are classed as favourable but several could now be classed as less favourable.

Whilst the data above relates only to SSSIs, Herefordshire Council are currently resurveying all of the Local Wildlife Sites within the county with the aim of providing an update on the existing habitats, as well as include new criteria relating to traditional orchard habitats.

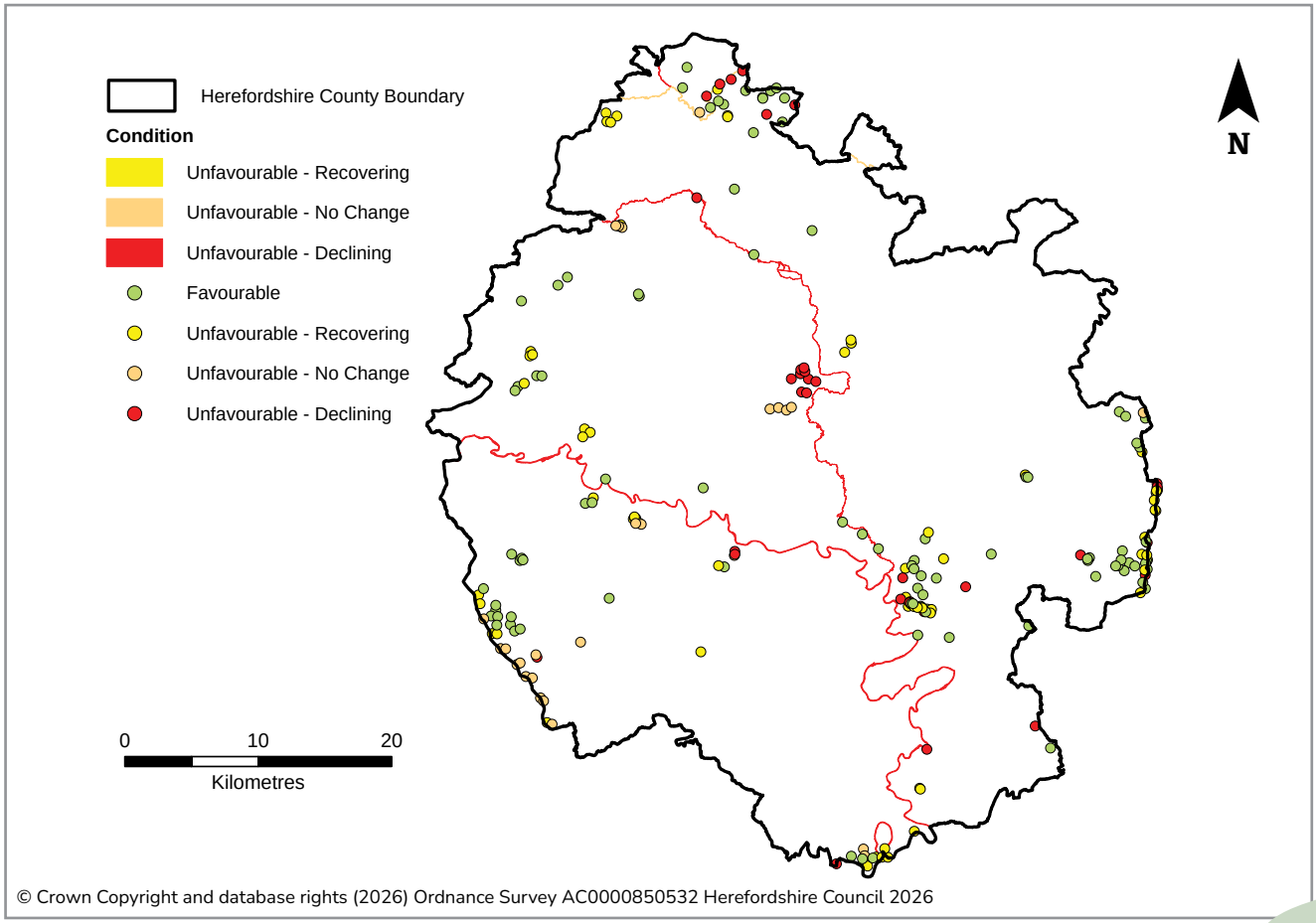


Figure 2-3: Condition of SSSIs in Herefordshire

2.2 Landscape Character

Herefordshire is a county with rich and diverse landscapes that have formed over centuries as people and communities have interacted with the physical landscape. This has resulted in locally distinctive qualities in the region as both physical controls on the landscape (such as geology, temperature, altitude and topography) are combined with historic and current human influence from farming to development. In general, although Herefordshire has a city and towns it has retained its rural and in places remote character, with both small, dispersed villages and linear villages, that originally formed around features such as churches and along roads or at river crossings.

Lowland farmland dominates the centre of the county, associated with river floodplains and the different morphologies of river valleys.

On the broadest scale, National Landscapes (formerly known as Areas of Outstanding Natural Beauty or AONBs) in England are protected areas valued for their distinctive and beautiful landscapes. Herefordshire contains two of these National Landscapes, the Wye Valley and the Malvern Hills which are shared with neighbouring counties.

The Wye Valley National Landscape lies to the southeast of Hereford, following the catchment and floodplain of the lower River Wye. This landscape is characterised by wooded valleys, meandering riverbanks, and hedgerow-lined fields.

The Malvern Hills National Landscape lies to the east of Ledbury in the south-east of the county. The Malvern Hills form a distinctive skyline in views eastward from many of Herefordshire's rolling lowlands. The narrow line of Precambrian igneous rocks which form the Hills run along the boundary of Herefordshire and Worcestershire, with its dramatic topography forming a distinctive feature in the region's landscape.

On a finer scale, National Character Areas (NCAs) are also used to describe landscapes. There are 159 NCAs across England and they are subdivided based on landscapes, biodiversity, geodiversity and economic activities.

Herefordshire contains six NCAs and an additional two border the county. They are shown in Figure 2-4 below and comprise:

Herefordshire Lowlands: this NCA lies almost entirely within Herefordshire largely in the centre of the county and is mainly rural in character but does include the larger settlements of Hereford and Leominster. There are other small, dispersed settlements of hamlets and villages, many of which contain older traditional buildings and also have historic farmsteads. The lowlands are underlain by Upper Silurian, easily eroded, red mudstones, the first of the Old Red Sandstone rocks. Rising out of the lowlands are the incised hills of the Lowest Devonian sandstones.

South Herefordshire and Over Severn: this NCA stretches from the border with the Forest of Dean in the south, north eastwards almost to the southern point of the Malvern Hills and northwards to Hereford. The River Wye flows southwards through the centre of this area and has a well-wooded landscape with substantial areas of Ancient Semi-Natural Woodland (ASNW). It is underlain mainly by Devonian sandstones, resistant to erosion.

Teme Valley: this NCA is predominantly situated in Worcestershire but comprises the River Teme. This NCA has a highly rural character, with fertile farmlands and areas of valley woodlands.

Forest of Dean and Lower Wye: this NCA incorporates the southern tip of Herefordshire, bounded by the Wye Gorge, with the plain of South Herefordshire to the north, and the wide valley of the River Severn and Estuary to the south and east, this NCA has a central plateau, that is dominated by the Forest of Dean but also contains an undulating landscape of arable and pasture farmland. It is underlain in part by Carboniferous Limestones seen in the spectacular Wye Gorge

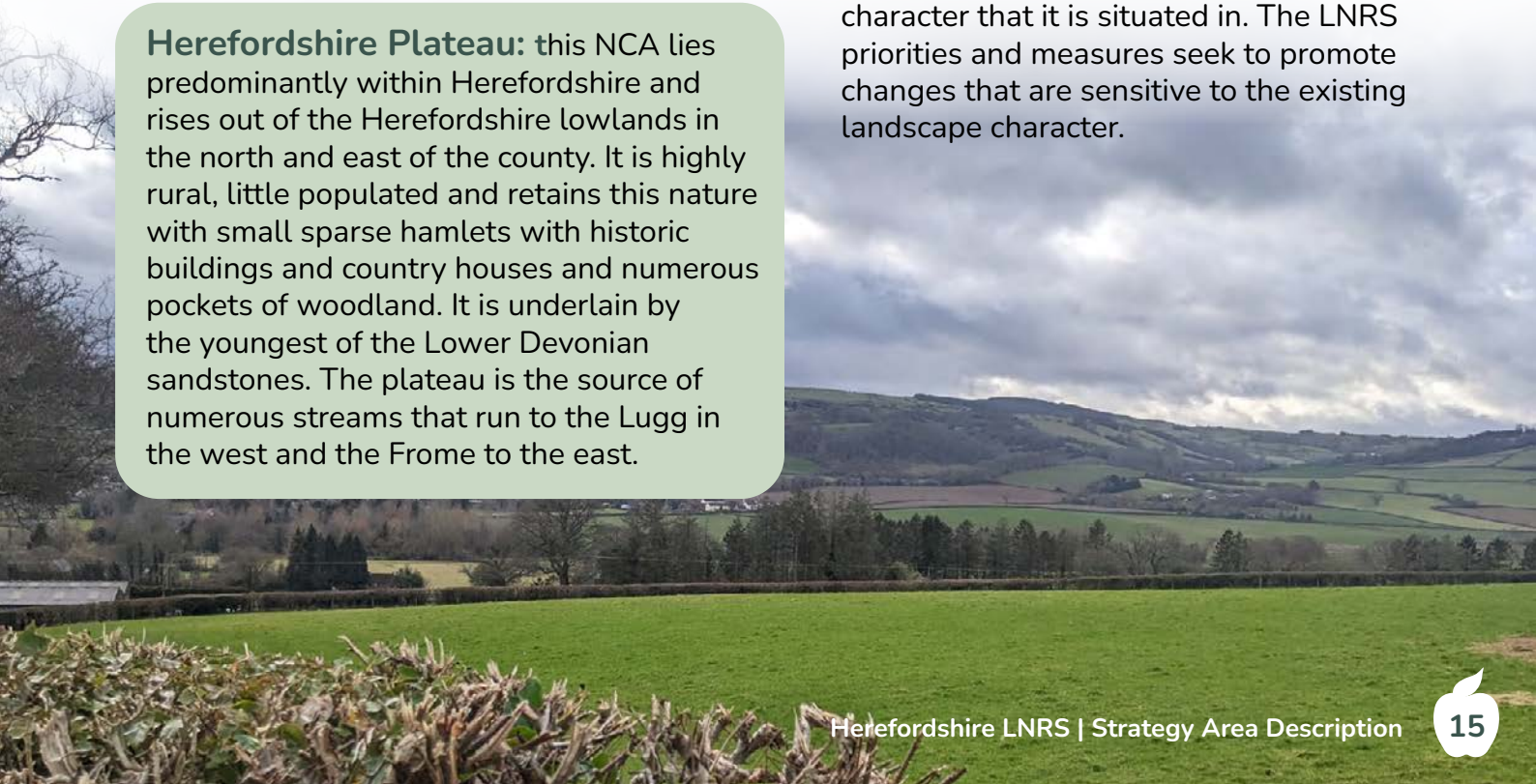
Black Mountains and Golden Valley: situated in the south-west of Herefordshire, this area has few settlements or development. However, upland areas, are suffering from fragmentation, and recreational pressure vies with the sparsely populated area. The area is underlain by Lower Devonian sandstones which are resistant to erosion.

Herefordshire Plateau: this NCA lies predominantly within Herefordshire and rises out of the Herefordshire lowlands in the north and east of the county. It is highly rural, little populated and retains this nature with small sparse hamlets with historic buildings and country houses and numerous pockets of woodland. It is underlain by the youngest of the Lower Devonian sandstones. The plateau is the source of numerous streams that run to the Lugg in the west and the Frome to the east.

Clun and North West Herefordshire Hills: an undulating and rural landscape which is divided by the river valleys of the Clun and Teme. The higher land is typically exposed heath and moorlands bordered by small irregular enclosures, which then slope down to the Herefordshire Lowlands NCA to the south-east, typically with plantation and native woodland on the hill tops and upper valley slopes. The area is underlain by Silurian limestones and siltstones.

Malvern Hills: this comprises a narrow ridge of steep-sided rounded hills, which to the west, subside to the Herefordshire Lowlands, and to the north-west subside to the Herefordshire Plateau. This NCA has contrasts between the height of the Malvern Hills, Precambrian intrusive igneous rocks and, to their west, low wooded escarpments and woodlands, ridges of Silurian limestones and intervening vales of shale.

Nature Recovery actions that are proposed in the strategy will all need to be implemented with respect to the landscape character that it is situated in. The LNRS priorities and measures seek to promote changes that are sensitive to the existing landscape character.



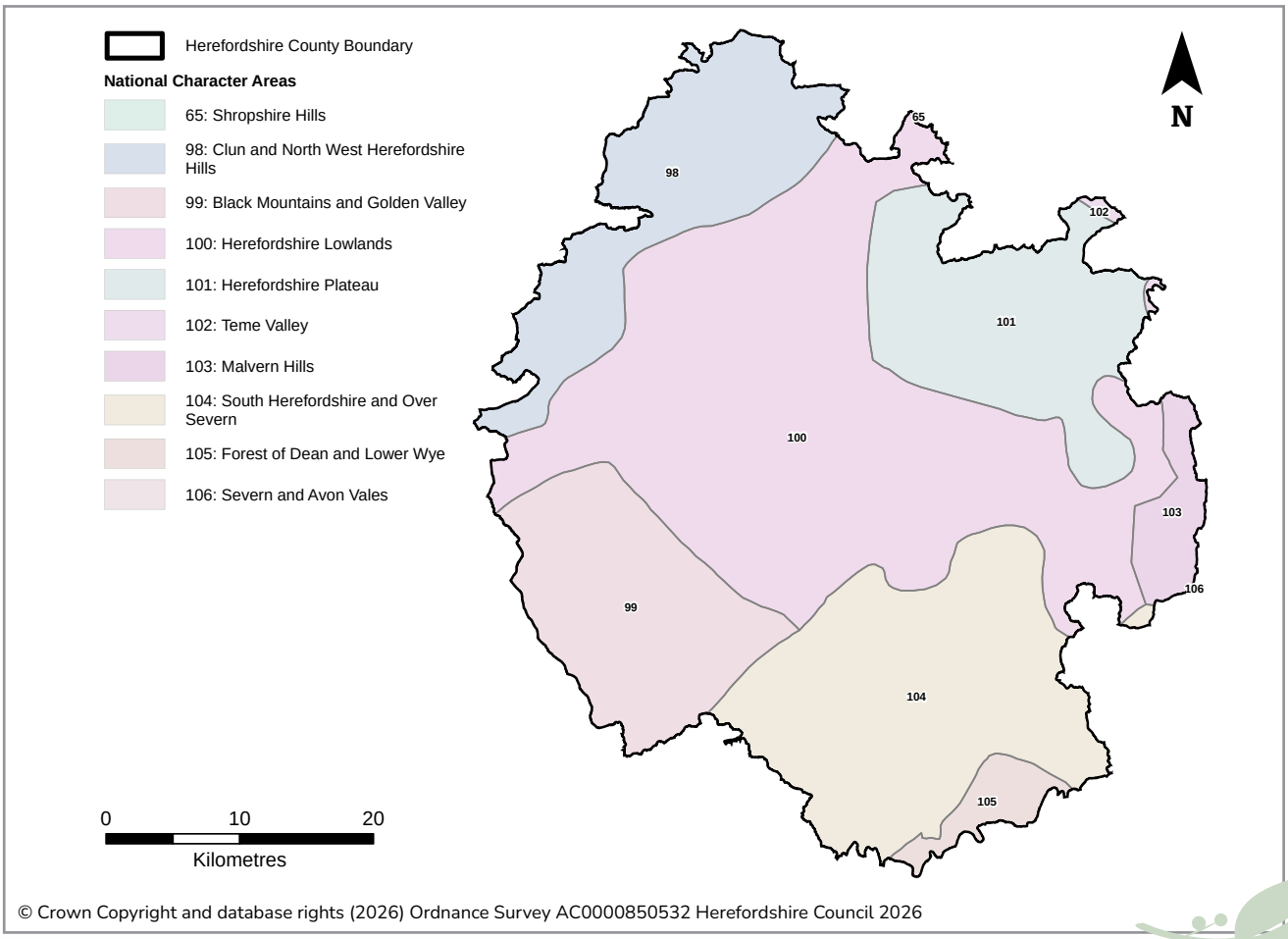


Figure 2-4: National Character areas within Herefordshire

2.3 Geology and Soils

Herefordshire is underlain by bedrocks of Late Precambrian to Triassic age (c. 705-220 million years (my): Figure 2-5). These dominantly comprise sedimentary rocks such as sandstones, mudstones and limestones but also include igneous rocks in the Malvern Hills (diorites and granites). Overlying the bedrock in some areas, especially within the Herefordshire Lowlands and Wye Valley, are much younger superficial sediments deposited during and after the Pleistocene Ice Age (<0.5my) by glaciers, and meltwater rivers. The youngest rocks in Herefordshire are tufas which form (and are currently forming) in carbonate-rich aquatic environments, with limestone deposition probably influenced by the specialised biota associated with these sites (Figure 2-6).

Bedrock and superficial lithologies shape the scenery, land use, soils and habitats of the county. The Herefordshire Lowlands are underlain by easily eroded red mudstones of the Raglan Mudstone Formation and host the main drainage rivers. The surrounding watersheds comprise harder rocks resistant to erosion, such as the Precambrian igneous rocks of the Malvern Hills and the Devonian Old Red Sandstones of the Black Hills, Herefordshire Plateau and areas SW of Ross-on-Wye. The Forest of Dean, to the south of the county, is mostly underlain by similarly resistant limestones and sandstones of Carboniferous age, best seen in the dramatic Wye Gorge which was cut during the end of the Ice Age, with further incision of the river into the bedrock during post-glacial, isostatic uplift. Layered sequences of Silurian limestones and softer mudstones, folded by tectonic activity around 290my ago, create the characteristic ridge and vale topography of the areas immediately west of the Malverns, across the Woolhope Dome and in the north west of the county.

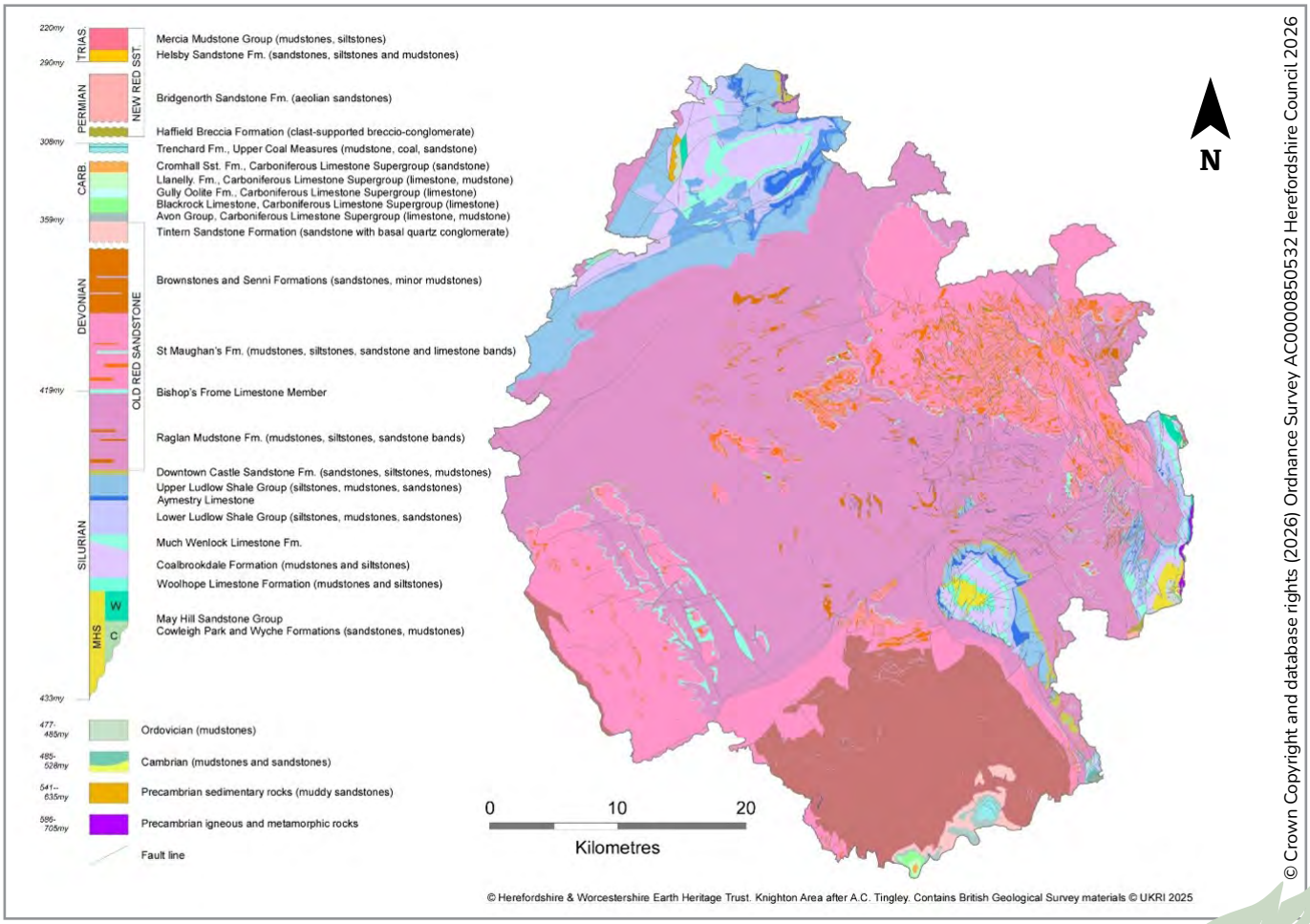


Figure 2-5: Bedrock geology of Herefordshire

Glacial superficial deposits are widely distributed through the valleys and lowland plains of Herefordshire with moraines and tills forming distinct landforms over much of the Herefordshire Plain. Ice Age ponds, and their important habitats, are associated with hummocky moraines in these areas, while peat has accumulated in areas where drainage has been restricted by glacial landforms.

Soils in Herefordshire relate closely to the underlying geology and to geomorphological setting. Slightly acid loamy and clay soils are present across most of the Herefordshire Plain, with topography controlling how well the soils are drained. Loamy, clay-rich soils are developed over the river floodplains, dominantly on superficial deposits. These soil types are generally moderate to high fertility.

Free-draining but thin, acid soils are present over the higher ground on the Malverns, while free-draining slightly acid soils are present on the Permo-Triassic sandstones south of Ledbury. Both of these soil types are of low fertility. A limited blanket bog soil area is recorded at the head of the Olchon Valley. In general, soils over limestone bedrocks support distinctive habitat types, such as calcareous grassland.

Multiple sites in Herefordshire have been designated for geological interest, including 20 SSSIs specifically designated for their geology. A total of 146 Local Geological Sites have been designated in Herefordshire covering bedrock, superficial and geomorphological interests. Of global significance, the Herefordshire Lagerstätte, is a site where remarkably preserved fossils of Silurian age have been recovered, complete with their soft body parts.

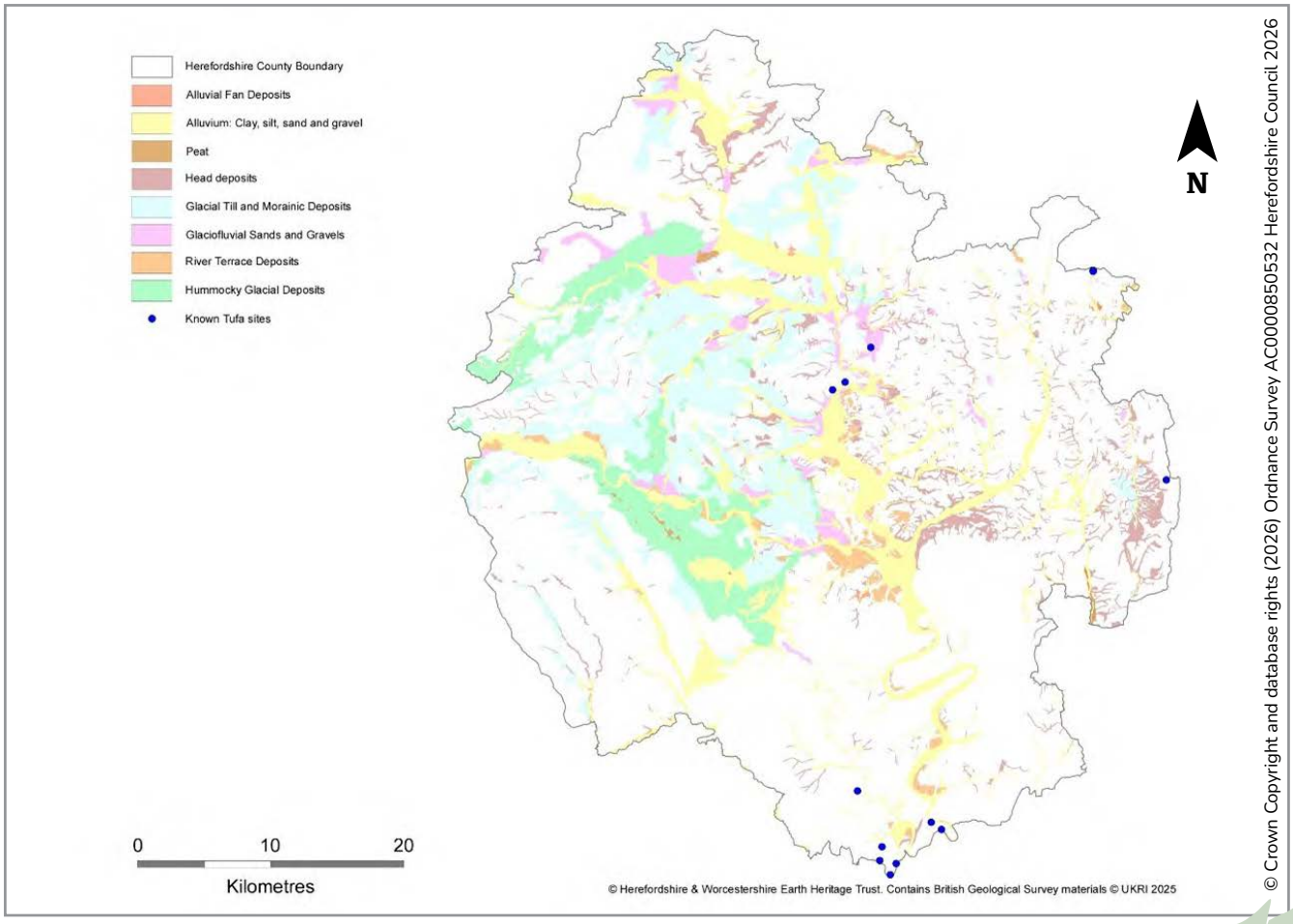


Figure 2-6: Superficial (Drift) geology of Herefordshire

2.4 Hydrology

Herefordshire's hydrology is shaped by its undulating hilly landscapes, permeable and fertile soils and its underlying bedrock geology. Most of Herefordshire lies within the catchment of the River Wye (Figure 2-7), voted the "nation's favourite river" with its ecological significance recognised by the international and national designations of SAC[3] and SSSI[4]. Both are designated for several fish species, otter (*Lutra lutra*) and white-clawed crayfish (*Austropotamobius pallipes*). The River Wye along with its tributaries, such as the Lugg, Arrow, and Frome, dominate the county's hydrological regime, and provide a wealth of benefits to nature and people, such as recreation, water supply, flood mitigation and valuable habitats.

The River Teme is, since it was diverted in the Ice Age, a tributary of the Severn and enters Herefordshire near Leintwardine, and forms part of the England-Wales border in its upper reaches north of the county. The entirety of the river is designated as an SSSI for its rare and notable flora species in its waters and along its banks.

Herefordshire's rivers experience several pressures, including excessive nutrient input and pollution from, sewage discharges and runoff from industry, infrastructure, agriculture and development. Evidence indicates that agricultural land is now the main source of nutrient pollution in the Wye catchment[5].

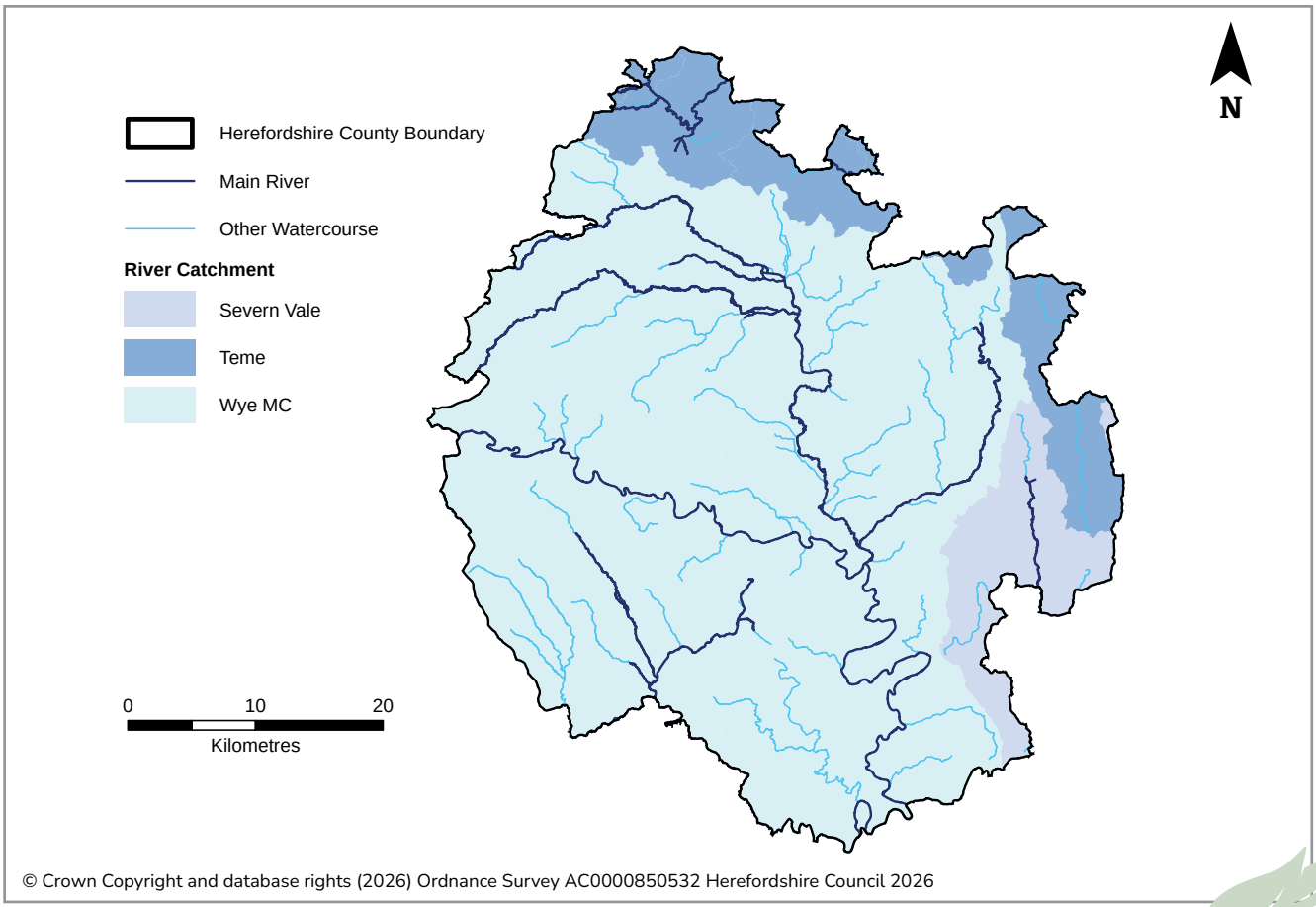


Figure 2-7: Herefordshire's river catchments

[3]Natural England (2005) Citation for River Wye SAC. [Accessed: 1/9/25].

[4]Natural England (1996) River Wye SSSI Citation. [Accessed: 1/9/25].

[5]Environment Agency (2025). Diffuse Water Pollution Plan, River Wye Special Area of Conservation. https://councillors.herefordshire.gov.uk/documents/s50131134/ [Accessed: 5th December 2025]

Regular monitoring of nutrient levels in water from the River Wye catchment has identified high levels of nutrients, particularly phosphorus, with the River Lugg part of the River Wye SAC continuing to exceed the limits set out in its designation for ecological health and chemical pollution. To address this, a significant area of the Arrow and Lugg operational catchment to the north of Herefordshire is designated and monitored for Nutrient Neutrality, meaning that all new developments must demonstrate that they are not leading to overall increases in nutrient pollution in these catchments. Climate change also poses a large threat to the county's rivers; those in the Wye catchment are particularly vulnerable to high temperatures and extremes of flows as a result of climate change.

A unique and often overlooked feature of Herefordshire's hydrological landscape are its Ice Age ponds, also known as Kettle Hole ponds. These small, circular water bodies were formed over 10,000 years ago at the end of the last glacial period and are located predominantly in the north of the county and the Wye Valley upstream of Hereford. They form when large blocks of glacial ice are buried within sediments, melt, and then leave depressions behind that then fill with water to form ponds. Ice-age ponds are biodiversity hotspots, home to rare aquatic plants, invertebrates and a variety of amphibian species. Further information can be found on the Wildlife Trust website.

Other ponds that can be found throughout the county are Dew ponds. These are within the farmed landscape and are manmade. They are often important heritage and cultural features, as for many centuries they were created with the aim of providing a place for livestock to receive water where a natural source was lacking . Dew ponds can be areas of strong biodiversity due to the variety of species that benefit from a local water source.

Throughout the county drainage ditches are widespread, initially created to aid in the removal of water from the land. Typically, this was to improve the soil for agricultural land to become more suitable for crops to be planted. The need for the creation of the ditches reflects the fact that the heavy soils and frequent springs and seepages once made the county famously wet and muddy. However their presence, while critical for continued agricultural growth, can lead to negative impacts for some ecosystems.

2.5 Historic Environment

The archaeology, history and heritage of Herefordshire is rich, varied, and diverse. It is highly valued and core to the identity of the county and its people. Every aspect of the landscape seen today is derived and created from human choice and actions over time. This extends even to those places we consider wild, pristine, natural, or untouched. These human choices and decisions are defined as the historic environment. Understanding the history of place through the historic environment record is therefore essential to anyone undertaking nature recovery work. By understanding landscape, its character, development, and history as well as its change over time better holistic decisions can be made which enrich and support both the aims of nature recovery and preserve our shared heritage for the benefit of all.

However, unlike the natural environment, the historic environment is a non-renewable finite resource – once lost it cannot be recovered, regenerated or replaced. It is gone / extinct and can never be restored. It is as much at risk from land use decisions and climate change as the natural world this policy looks to support. The historic environment has been degraded in the same way as our natural world through an ever-accelerating agricultural intensification, land-use change and development. However, by recognising and valuing this shared heritage and through considering it from the outset of any nature recovery plan or project the potential to maximise both the environmental benefits as well as the historic ones can be accommodated and achieved (a win win situation for everyone). The historic vs natural environment is a false dichotomy - it is not (and should never be considered) a binary – either / or – choice: instead, it is a decision that has the potential to exponentially enhance both.

In Herefordshire, as part of the nature recovery strategy, the historic environment should be considered within every nature recovery project. Knowing how the land has been managed in the past can inform, enrich, enhance, and support every aspect of recovery work.

The council curates a statutory historic environment record (HER) which is used to better understand the impacts of policy and development on projects and schemes across the county. The HER service combines both statutory and non-statutory heritage information to better understand and promote the heritage, history and archaeology of the county. Within the HER is information relating to sites and monuments; historic buildings; events and activities; archaeological finds and discoveries; historic mapping and aerial surveys; historic landscape characterisation data and information on historic farmsteads. Some of these sites are protected by legislation (Scheduled Monuments, Listed Buildings, Designated Parks and Gardens, Conservation Areas, or Areas of Archaeological Importance) and activities within these sites are restricted without specific consents.

Other places are covered by council policy and national guidance such as National Landscapes, non-designated parks and gardens, the settings and curtilage of listed buildings, locally listed buildings, structures, and places as well as landscapes recorded on the Select Heritage Inventory for Natural England (SHINE). Historic parks and gardens are often excellent examples of wood pasture and parkland habitat, known for their ancient and veteran trees, breeding birds, fungi, lichen, deadwood invertebrates and bats. Some examples of these in Herefordshire are listed below in section 2.6.2 Tree and Woodland Habitats. The majority of these places are located in the rural landscape and without specialist input would be difficult to identify. More information regarding the HER and the records it holds can be found on our website.

To aid and support those undertaking Nature Recovery a heritage opportunity mapping layer has been added to the LNRS mapping portal. This combines multiple sources of heritage information to create a single uniform layer to alert, support, and advise that further information and discussions are needed. In some instances, these heritage assets may constrain certain elements of nature recovery or involve additional permissions and consents with parties external to Herefordshire Council.

2.6 Countryside Access and Recreation

Providing and promoting responsible access to the countryside supports increased nature-connectedness and awareness of habitats, species, landscape, land management and farming. A number of long distance and promoted routes crisscross Herefordshire, and there are plenty of publicly accessible countryside sites, many showcasing the county's best landscapes and habitats. These all provide opportunities for engagement with the public around the value of wildlife and nature recovery as well as potential wildlife havens and corridors. This section highlights some of the routes and sites where members of the public can get out into nature to observe it first hand, learn to appreciate and understand it and develop a desire to protect and restore it.

2.6.1 The Offa's Dyke National Trail, long distance and promoted routes

National Trails are internationally recognised and publicly funded access routes designated from the same 1949 National Parks and Access to the Countryside Act as the National Parks and National Landscapes. National Trails connect people with nature and have potential to be ecological corridors. National Trails adhere to Natural England Quality Standards that set them apart from other routes, one of which states to "improve the landscape, nature and historic features within the trail corridor". The National Trails Nature Recovery Programme seeks to support National Trails in delivering on this objective, enabling the National Trails to be corridors for people and nature.

The Offa's Dyke Path is a National Trail that follows the English/Welsh border for 177 miles passing through changing landscapes offering amazing opportunities to catch a view of native wildlife. It is named after, and often follows, the Dyke King Offa ordered to

be constructed in the 8th century, probably to divide his Kingdom of Mercia from rival kingdoms in what is now Wales. The Trail, which was opened in the summer of 1971, links Sedbury Cliffs near Chepstow on the banks of the Severn estuary with the coastal town of Prestatyn on the shores of the Irish sea. It passes through no less than eight different counties and crosses the border between England and Wales over 20 times.

Other way-marked long distance routes within the county include:

- The Wye Valley Walk
- The Mortimer Trail
- The Herefordshire Trail
- The Geopark Way
- The Monnow Valley Walk
- The Ross Round
- The Bromyard Ring

In addition to these longer routes there are three promoted routes in the county designed for people with limited mobility: Cradley Miles without Stiles, Colwall Miles without Stiles and the Ross Buggy Route. In total there are approximately 3,400km of public rights of way in Herefordshire, including over 3000km of footpaths and 400km of bridleways.

Herefordshire is also popular with cyclists, due to the multitude of scenic lanes and relatively low levels of traffic. There are a number of promoted cycle routes in the county including the Hereford Leisure Ride, the Breinton Loop, the Three Rivers Leisure Ride, The Ledbury Loop, the Berrington Hall and Croft Castle Cycle Ride, the Black and White Village Ride and the Wye Valley Cycle Ride.

Paddle boarding and canoeing on the River Wye is popular with routes promoted by Go Paddling and British Canoeing and the River Lugg is also legally navigable within the county.

2.6.2 The Hereford and Gloucester Canal

The Hereford and Gloucester Canal followed a largely rural route for 34 miles from Hereford, via Ledbury and Dymock, to Gloucester. Half the canal was closed in 1881 and sections were used for the now disused Ledbury and Gloucester Railway, which itself closed in 1964. The Herefordshire and Gloucestershire Canal Trust aims to reconstruct the canal into a navigable waterway and towpath connecting rural communities and bringing environmental and economic benefits and recreational opportunities. The line of the canal is protected on local authority. Restoration of the canal would help to create an accessible wetland wildlife corridor through the farmed landscape of central and east Herefordshire with additional tree and hedgerow planting alongside.

2.6.3 National Landscapes

The two National Landscapes in Herefordshire, already mentioned in section 2.2 above, are places which attract visitors from both within and without the county and, with their focus on landscape and ecological heritage, provide a huge opportunity for public engagement and education around habitat and species conservation and recovery. The Malvern Hills National Landscape receives around 1.25 million visits each year, while the Wye Valley National Landscape records 2.3 million tourist days per annum.

2.6.4 Common Land

There are 198 (2023ha) registered commons in Herefordshire of which 113 are privately owned. The public has the right to enter all common land for open-air recreation although this is limited to access on foot unless they are using a public bridleway or byway that crosses the common. Other restrictions apply regarding activities that are permitted on common land (see https://www.gov.uk/guidance/open-access-land-management-rights-and-responsibilities#what-people-can-do-on-your-land). Many of Herefordshire's commons are, or have the potential to be, important wildlife habitats, often consisting of mosaic habitats of trees, scrub and grassland. The largest and best known of the county's commons are Lugg Meadows, Coppett Hill, Bromyard Downs, Bringsty Common, Bradnor Hill, Westhope Hill, Cefn Hill, Garway Hill and Ewyas Harold Common.

2.6.5 Other Countryside Destinations

The National Trust has four main properties (Berrington Hall, Croft Castle, Brockhampton Manor and the Weir Garden) and seven other countryside sites in Herefordshire (Midsummer Hill, Bradnor Hill, Breinton Springs, Brilley farms and woodland, Eaton Camp hill fort, Pengethley Estate and Poors Acre in Haugh Wood). Other notable estates, parks and gardens in the county that are open to visitors include Eastnor Castle, Hergest Croft Gardens, Kentchurch Estate, Hampton Court and Hellens Manor.

Queenswood Country Park and Arboretum on Dinmore Hill is one of the busiest countryside destinations in Herefordshire. It is adjacent to the main A49 trunk route and with a café and toilets is a popular stopping point for many travellers as well as local people, especially families, school groups and dog walkers. It is home to a nationally important arboretum as well as a SSSI semi-natural ancient woodland. It is managed by Herefordshire Wildlife Trust, one of over 55 nature reserves cared for by them.

Mortimer Forest is managed by Forest England and straddles the border between Herefordshire and Shropshire. It was originally made up of ancient royal chases and deer parks but was largely planted by the Forestry Commission in the 1920s and is rich in wildlife including birds of prey, small birds, deadwood invertebrates and butterflies.

The Abberley and Malvern Hills Geopark takes in parts of the five counties of Gloucestershire, Herefordshire, Shropshire, Staffordshire and Worcestershire and showcases geology that spans 700 million years of Earth's history as well as dramatic landscapes and a wealth of ecological, historical, and cultural gems.

2.7 Habitats and species

Herefordshire covers a total of 217,971 ha and is primarily an agricultural county with around 80% of land in farming use. A variety of natural and semi natural habitats also occur within Herefordshire and include woodland, wood pasture and parkland, grassland (including lowland meadows), and traditional orchard habitats – the latter of which cover nearly 2,635 ha. Smaller proportions of Herefordshire comprise habitats such as upland heath and moorland, scrub, hedgerows and boundary features, rivers and streams, ponds and wetlands. Herefordshire also has a diverse array of wildlife, including a number of protected species such as water vole, hazel dormouse and multiple bat species. Key species are highlighted alongside relevant habitats, with trends in bird species populations outlined in Section 2.7.9.

The city of Hereford and the market towns of Leominster, Ledbury, Ross-on-Wye, Kington and Bromyard provide urban habitats. Beyond this there are many villages, hamlets, isolated farms, dwellings and estates.

Whilst many local organisations and partnerships work to protect and restore nature in Herefordshire, the county's wildlife still experiences threats from numerous sources (see Section 2.7), and joined-up action at large scale, promoted by the LNRS, is one step in assisting nature's recovery. Recent success stories of conservation actions are highlighted in the sections below.

2.7.1 Species-rich grasslands

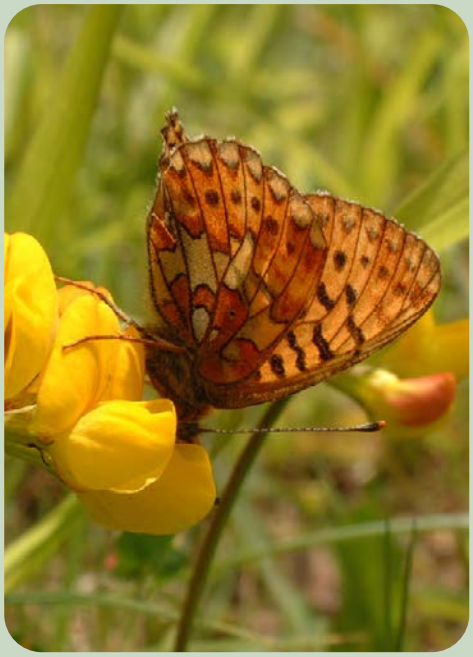
Herefordshire contains several types of species-rich grassland, predominantly acid, calcareous, and neutral grassland, and lowland meadows and pastures. Wetter grassland habitats including floodplain grazing marsh, and purple moor-grass and rush pastures are also found across the county (1,138ha/0.5%). Wet lowland meadows and pastures encompass floodplain meadows which are often used for grazing and/or hay cutting.

Devil's-bit Scabious *(Jane Tavener)*

Acid grasslands occur on nutrient poor, free-draining soils with a pH of 4-5.5. The Malvern Hills and Welsh borders have important concentrations of this habitat, and they are also found on common land such as Bircher Common, to the north of Leominster. A total of 643ha/0.29% of acid grasslands are found across Herefordshire.

Calcareous grassland is the rarest grassland habitat found within Herefordshire with only 68ha/0.03% recorded. It occurs on shallow, lime rich soil generally overlying limestone rocks, which can be found at Woolhope (south east of Hereford); at Bury Farm SSSI (north of Hereford); at Orchid Bank, Winslow Mill SSSI (east of Hereford); and Doward, south of Whitchurch, within the Wye Valley National Landscape.

Neutral grassland – which includes lowland meadows - is the most abundant grassland type in Herefordshire, comprising approximately 3,316ha/1.5% in total. Neutral grasslands can be found throughout the Herefordshire area; however, the largest area is located near the city of Hereford at Lugg Meadows. Lugg Meadows is thought to be the largest surviving Lammas meadow in the country and is an important site for ground nesting birds, particularly the endangered curlew (*Numenius arquata*) as well as the nationally rare plant species narrow leaved water dropwort (*Oenanthe silaifolia*).



Pearl-bordered Fritillary *(© HWT)*

Other examples of neutral grasslands can be found at: The Flits NNR and SSSI (west of Hereford); within the Black Mountains SSSI (south west of Hereford); at the Birches SSSI, The Sturts LWS and SSSI, Burrington Meadow SSSI (north west of Hereford); the Lugg and Common Meadows SSSI, and Common Hill SSSI (east of Hereford). The majority of these sites host a range of meadow flowers and plants, with Common Hill for example, hosting tiny adder's tongue fern (*Ophioglossum vulgatum*), common spotted orchid (*Dactylorhiza fuchsii*), yellow rattle (*Rhinanthus minor*), masses of cowslips (*Primula veris*) in spring, quaking grass (*Briza media*), common rock-rose (*Helianthemum nummularium*), wild thyme (*Thymus polytrichus*), and milkwort (*Polygala vulgaris*), as well as various insects and butterfly species including dingy skipper (*Erynnis tages*), wood white (*Leptidea sinapis*), marbled white (*Melanargia galathea*), and pearl-bordered fritillary (*Boloria euphrosyne*).

Successes

Herefordshire Wildlife Trust are restoring the Bartonsham Meadows on the banks of the River Wye back to wildflower meadows. These meadows will play an important role in natural flood management and create new habitats for rare wildlife such as skylark (*Alauda arvensis*), barn owl (*Tyto alba*), water vole, and various species of invertebrates. They also plan to restore old hedgerows and consider restoring former ponds.

Herefordshire Meadows is a new and growing charity seeking to conserve and restore species-rich grasslands. It has a proven track record having recreated over 400ha of locally appropriate species-rich grassland since 2019, well-distributed throughout the county, and is now highly-regarded even beyond the county's fringes. It has a strong membership solidly embracing the farming community, and a wider reach through social media, is active in sustainability policy, and runs a successful programme of training and educational events. Funding has been raised by Herefordshire Meadows for the conservation, restoration, and creation of flower-rich grasslands across Herefordshire as part of their 'For the Love of Meadows' campaign. The campaign has strived to deliver a series of free events, discussions, and training days hosted at meadows and restoration sites, aimed at inspiring a better understanding, management and preservation of meadows in Herefordshire.

Within the Wye and Usk catchments Herefordshire Meadows are delivering the Botanica project with the Wye and Usk Foundation which includes the creation of 60 ha of pollen-rich habitats and species-rich grassland.

The Wye Valley National Landscape has secured significant funding for meadow restoration, wetland creation, and tree planting over the next few years, supported by National Grid's Landscape Enhancement Initiative. Here, Herefordshire Meadows will be working with seven landowners to restore around 25 hectares of species-rich grassland as part of the project, with work due to commence in autumn 2025.

2.7.2 Tree, Woodland and Orchard Habitats

Tree and woodland habitats are one of the most extensive semi-natural habitats in Herefordshire and are thus an important part of the Herefordshire landscape. Herefordshire's woodlands are home to species such as hazel dormice (*Muscardinus avellanarius*), wood white (*Leptidea sinapis*) , lesser spotted woodpecker (*Dryobates minor*), nuthatch (*Sitta europaea*), pied flycatcher (*Ficedula hypoleuca*), common redstart (*Phoenicurus phoenicurus*) and treecreeper (*Certhia familiaris*). Around 65.5% of the county's woodlands are managed, either privately (52%) or by Forestry England (13.5%), with the remaining woodland classified as unmanaged. These woodlands comprise mainly of mixed deciduous woodland; wood-pasture and parkland, veteran trees; and traditional orchards. The total tree and woodland cover within the county is 19.42%, which comprises 11.69% of woodland cover (as measured with the NFI standard woodland cover) and 7.74% representing tree cover outside of woodlands (including traditional orchards).

An overview of the county's National Forestry Inventory (NFI) woodland (standard) cover can be seen in Table 2-2 below.

Table 2-1: National Forestry Inventory (NFI) woodland (standard) cover within Herefordshire (2024 data)

Woodland type	Hectares (ha)	Percentage cover of total
Broadleaved	15,324	60.12%
Conifer	5,132	20.13%
Assumed woodland	413	1.62%
Felled	1,609	6.31%
Ground prep	90	0.35%
Low density	23	0.09%
Mixed mainly broadleaved	824	3.23%
Mixed mainly conifer	1,040	4.08%
Shrub	73	0.29%
Young trees	962	3.77%
TOTAL	**25,491**	

Almost half of the woodlands in Herefordshire are recorded as ancient woodland (13,446ha/6.2%), with 55% of these woodlands recorded as plantations on ancient woodland sites (PAWS) and 45% recorded as ASNW. Ancient woodlands within Herefordshire include Haugh Wood and Lea and Paget's Wood, located in the Woolhope Dome areas in the north of the Wye Valley National Landscape. Both these ancient woodlands are also designated as SSSIs due to their national importance for butterflies and moths, with over 600 species recorded within. Ancient woodlands and orchards are a stronghold in the county for rarer bird species such as lesser spotted woodpecker (*Dryobates minor*) and marsh tit (*Poecile palustris*).

The majority of the county's woodland is classed as broadleaved woodland (15,324ha/60.12%). Broadleaved woodland can be found on a variety of soil types and provide a vast variety of habitats and niches for woodland species. Some designated woodlands in the county are classed as lowland oak or lowland beech and yew woodlands. These forests are rich in wildlife, for example, Mortimer Forest comprises lowland mixed deciduous (oak/birch and oak/beech) woodland which is home to various birds of prey, small woodland birds, butterflies, reptiles and long haired fallow deer (*Dama dama*).

One of Herefordshire's key features is the extent of ancient and veteran trees occurring in a range of settings across the county – be that parklands, churchyards, woods, fields or hedgerows. Research by Aljos Farjon for Kew Royal Botanic Gardens published in 2022, shows that Herefordshire has one of the greatest concentrations of ancient oaks (*Quercus robur* and *Q. petraea*) in England. These trees provide a high level of ecological continuity, connecting fragmented landscapes and contributing to the area's rich landscape character.

Wood pasture and parkland are also key habitats occurring in Herefordshire and are classified by a landscape consisting of large mature and/or veteran trees occurring within grazed grassland, heathland, or woodland. Many of the parks in the county date from the Norman Conquest through to the 19th century, for example Moccas Park, which hosts dense plantations of veteran chestnut and oak trees. It also supports one of the most endangered insect species in Britain, the Moccas beetle (*Hypebaeus flavipes*), known only at this location and recorded from approximately 16 of the older oak trees. This species is a saproxylic invertebrate (i.e. species dependent on dead or decaying wood), for which the county is particularly important for supporting. Wood pasture and parkland habitats are most commonly associated with large historic estates (e.g., National Trust's Croft Castle and Berrington Hall). Overall, Herefordshire holds 8,893ha/4.1% of parkland and wood pasture.

When looking at the coverage of trees outside of woodlands – which covers small woods, groups of trees and lone trees – there is a total of 16,863ha/7.8%. Of particular importance in this category is orchards, which cover 5,654ha/2.6% of the county. This cover counts both commercial and traditional orchard types. Traditional orchards are a priority habitat and are defined as groups of fruit and nut trees planted on vigorous rootstocks at low densities in permanent grassland; and managed in a low intensity way. This is in contrast to commercial orchards, which typically have higher yields, higher density of trees, and may use chemical inputs (pesticides, herbicides and fertilisers) to boost production.

Traditional orchards are of high social and ecological importance to Herefordshire particularly, with the orchards holding historic importance, traditional fruit varieties, as well as providing an important habitat for biodiversity. The mistletoe marble moth (*Celypha woodiana*) is a moth whose caterpillars feed exclusively on mistletoe (*Viscum album*), and is thus found in traditional orchards, gardens and hedgerow habitats. The species is highly localised and found only in Herefordshire and its adjoining counties.

The extensive network of tree and woodland habitats, in conjunction with hedgerows, holds potential for the spread of pine marten (*Martes martes*) into Herefordshire from existing populations across the borders in Shropshire, Gloucestershire and Wales. The Vincent Wildlife Trust's 'Martens on the Move' project, which started in April 2024, identifies Herefordshire as a potential area for pine martens to move into and is working to increase habitat suitability, install nest boxes, engage with landowners and the public and monitor the distribution of pine martens.

***Pine Marten** (Adobe Stock)*

Successes

***Ash** (Adobe Stock)*

Severn Treescapes is a Gloucestershire, Herefordshire and Worcestershire Wildlife Trusts' partnership project, working across the three counties to increase woodland connectivity at a regional scale. The project aims to halt or reverse the decline in particular wooded habitats such as traditional orchards through the creation of a resilient and connected 60-mile corridor between the Lower Wye and the Wyre Forest for trees, woodlands and their associated species The project funding has been extended to 2029 and has a new focus on deadwood habitats and species, in particular those associated with traditional orchards.

Woodlands for Water is a Department for Environment, Food & Rural Affairs (Defra), Rivers Trust, Beavers Trust and Wye & Usk Foundation project that was completed in March 2025. The project enhanced biodiversity through tree planting, wildlife corridors, and climate resilience in the Dore, Dulas and Lugg catchments.

Wye/Lugg Agroforestry Project, was introduced to establish agroforestry practices to improve water quality and riparian shading for the Lugg catchment and River Wye to benefit biodiversity in the area.

Black Poplar *(David Griffiths)*

Native black poplar (*Populus nigra*) is rare but locally characteristic of Herefordshire and work has been undertaken since the 1990s by Tree Wardens and other volunteers of the Black Poplar Project to record this iconic tree and encourage its planting throughout the county.

Recently the project has identified that there are nine different genetic clones of Black Poplar represented in the county and an arboretum of these has been planted at Oak Tree Farm Nature Reserve in the Lugg Valley to provide a 'clone bank' for future planting.

Forestry England have a number on ongoing woodland projects focused on various species restoration, including:

- **Hazel dormouse** at Haugh Wood, Wigmore Rolls, Queens Wood/ Dymock, and Frith Wood.
- Lepidoptera, with support from the Butterfly Conservation, at Haugh Wood, north west Herefordshire based around Wigmore Rolls, Michael Harper reserves, Dymock, and Queens Wood.
- Reptiles at Mortimer Forest.
- Bird box schemes at Haugh Wood, Shobdon Wood, and Wigmore Rolls.
- Bat boxes at Frith Wood.

Hazel Dormouse in monitoring box *(Herefordshire Council)*

2.7.3 Rivers, Standing Water, and Wetland Habitats

Herefordshire contains the major river catchments of the Teme and the Wye (both a part of the larger Severn River Basin District). The River Wye drains much of the county with the lower sections of the Wye designated as part of the Wye Valley National Landscape.

The Wye includes four operational catchments: Wye; Arrow Lugg and Frome; Monnow; and Wye – Ithon to Hay, and the Teme includes three operational catchments: Clun River; Teme Lower; and Teme Upper. Due to the extent of the River Wye and Lugg, a significant proportion (8%) of Herefordshire falls within an active floodplain, such as the Wye Valley Meadows. The floodplains are typically used for pasture, with tree cover present along watercourses. Seasonal flooding however has created extensive wetland habitats within these floodplains, many of which are designated locally as LWS. The Wye and its tributaries are currently suffering serious, complex, systemic problems stemming from water quality, rising temperatures and widely fluctuating water levels. The causative factors stretch back decades and will take many years to address and are impacted by factors emanating upstream outside of Herefordshire's boundaries.

Otter (*Adobe Stock)*

The Rivers Wye and Clun SACs and their tributaries support a wide range of habitats and species, including white-clawed crayfish, otter (*Lutra lutra*), water vole (*Arvicola amphibius*) and beds of the aquatic plant water-crowfoot (*Ranunculus fluitans and Ranunculus pseudofluitans*), as well as acting as important wildlife corridors between fragmented habitats. Since 2004, within Herefordshire the number of water voles have declined by 70% and water-crowfoot by 81%. White-clawed crayfish have seen population declines on a national scale due to fragmentation and pollution of the natural environment, as well as disease whereas in Herefordshire their numbers per 1km have increased by 10% from 2014-2023, in comparison to the 2004-2013 data. Some of this decline can be attributed to increased nutrient levels and pollution but is also due to the effects of climate change leading to extremes of high and low flows and subsequent scouring of habitats and Ranunculus populations as well as dangerously raised water temperatures during low flows in summer. Loss of Ranunculus leads to loss of fish populations, such as Atlantic salmon (*Salmo salar*), due to loss of refuges for fry.

In relation to water pollution, the River Clun and Lugg have been identified as 'Critical Threshold' sites for water quality, where they can no longer be maintained without the intervention of a recognised mitigation strategy.

The gap in otter distribution that once existed between the south-west, south Wales, and the Wye has now closed, indicating a recovery and reconnection of populations.

In terms of standing water (ponds, lakes and reservoirs) Herefordshire contains 82 surface water bodies which intersect or lie within the Herefordshire county boundary as classified under the Water Framework Directive (WFD). The ecological condition of these waterbodies is monitored by the EA with over half (43) classified as 'Moderate', 9 classified as 'Good', almost a third (25) as 'Poor', and 5 as 'Bad'.

The county contains an above the national average of pond density with 2.1 pond per km^2 (totalling 0.1% of the county). Around a quarter of these ponds are ice age (or kettle hole) ponds which were formed by glacial activity between 20,000 and 13,000 years ago in the last glacial maximum period, and many still survive today. The are important for biodiversity (e.g., breeding amphibians, foraging wildfowl and wading birds) and are of geological significance. They support their own characteristic range of flora and fauna, some species such as specially protected Medicinal leech and Tubular Water dropwort are largely confined to these ponds. Ice age ponds can be found mainly in the north and west of the county and regularly occur within farmland.

Herefordshire hosts other larger waterbodies at Bodenham Lake Nature Reserve, Lugg Meadows Nature Reserve, Titley Pool Nature Reserve, The Sturts Nature Reserves, and Wellington Gravel Pits, which support a variety of wildfowl and wading bird species (e.g. great crested grebe (*Podiceps cristatus*), little grebe (*Tachybaptus ruficollis*), shoveler (*Spatula clypeata*), common snipe (*Gallinago gallinago*), lapwing (*Vanellus vanellus*), goosander (*Mergus merganser*), goldeneye (*Bucephala clangula*), wigeon (*Anas penelope*), teal (*Anas crecca*) and green sandpiper (*Tringa ochropus*).

Herefordshire also supports a range of amphibian species, including common frog (*Rana temporaria*), common toad (*Bufo bufo*), great crested newt (*Triturus cristatus*), smooth newt (*Lissotriton vulgaris*) and palmate newt (*Lissotriton helveticus*). Amphibians thrive in Herefordshire's aquatic habitats, especially in ponds and wetlands.

Successes

As part of the National Highways Network for Nature programme, at Bodenham Lake 1 ha of reedbed and marginal aquatic plants were installed to create fish nurseries which in turn supports numerous wetland bird populations, and otters. An additional 2 ha of floodplain meadow grassland were created using a rare mix of floodplain grass and plant species from nearby Nature Reserves. Hibernacula were also created within Bodenham Lake to create refugia for toads on site and reduce road crossing deaths.

As part of Lugg Living Landscapes, HWT have been the leading partner, collaborating with the Wye and Usk foundation, the EA, and NE to deliver river restoration works within the River Lugg catchment.

HWT have also delivered a Restoring the Rivers project (funded by the EA) based around the Lingen and Lime Brooks, aimed at supporting river health and delivering Natural Flood Management (NFM) solutions – which utilise natural processes and ecosystems to reduce flood risks and enhance resilience against flooding - such as leaky dams and fencing off watercourses to reduce bankside erosion.

HWT have also delivered a project on Oak Tree Farm within the Lugg floodplain, involving the creation of a new wetland, permanent pond, and 7 ephemeral ponds. The project also involves the creation of 360m of hedgerow, as well as 7.69 ha of meadow restoration.

Natural flood management projects are being delivered by Herefordshire Council (funded by Defra) in partnership with other organisation including the EA and Wye and Usk foundation and Severn Rivers Trust. These projects have sought to deliver both short and long-term benefits to flood risk. The DIME project at Dulas brook, is developing an ecosystem service contract structure, identifying buyers and sellers, and producing a framework to be rolled out across the whole of the Wye. The Little Frome Wetlands Project involved the construction of a wetlands at a farm in Bromyard aimed at delivering water quality and biodiversity benefits.

Herefordshire Council and the Local Enterprise Partnership have funded Integrated Constructed Wetlands at Luston and Tarrington to demonstrate nutrient neutrality. The wetlands will address point source pollution by taking treated water from Welsh Water treatment works and diverting its flow through the wetland for Phospate removal. Together Luston and Tarrington have allowed Herefordshire Council to release Phosphate credits for trade to offset residential development in the Lugg catchment.

The ‘Conserving Herefordshire’s Ice Age Pond” project which ran between 2019 and 2022 was a partnership between the Herefordshire Wildlife Trust, the Earth Heritage Trust and the Herefordshire Amphibian & Reptile Team was involved in saving or restoring the area’s unique glacial ponds, creating trails and interpretation boards to facilitate wider understanding of this unique habitat. 26 pond management plans were written for landowners with management work being carried out at 10 sites involving 15 ponds during the project. This included 2 ghost pond restorations, one at the Sturts, East HWT nature reserve and one at Lower Blakemere on Duchy of Cornwall land. The Ice Age Ponds Project mapped 284 Ice Age Pond locations and produced detailed, on-site surveys of many of them.

The Wye and Usk Foundation delivered a Habitat Restoration Strategic Allocation Fund, an ongoing multi-year programme of projects designed to deliver significant improvements to the riparian ecosystems of the Wye and Usk catchments, including riverside boundary improvements, clearance of obstructions to fish passage and removal of debris from river courses, evaluation and removal (where possible) of weir and manmade structures, transplanting gravel and the use of lime augmentation to lower acid conditions in source areas of the upper rivers due to bog and pine forest conditions.

HWT, NE and EA delivered Restoring our Rivers project. The project focuses on habitat and biodiversity improvement through encouraging local communities and farmers to use more sustainable practices to prevent damage to rivers, in the Lugg catchment.

2.7.4 Scrub and Mosaic Habitats

Scrub and mosaic habitats often occur as small patches flanking other habitat types, such as woodland, heathland or grassland. Mosaic habitats are transitional areas where one habitat type may grade into another, for example from woodland to grassland there may be a mosaic region of small saplings and scrub within grassland. Due to their small size, they are difficult to map and assess at a county scale. Stands of bracken are included within this category and can be found largely in the south-west of Herefordshire, with bracken and scrub accounting for 9.2 ha/0.4% of habitat across the county as a whole. The pearl-bordered fritillary butterfly (*Boloria euphrosyne*) is an endangered species found in rough hillsides with bracken and woodland clearings and known from only three sites in Herefordshire. This species has declined nationally by 90% in the last 50 years and declined by 67% within Herefordshire since 2004. Wood white (*Leptidea sinapis*) favours sheltered, semi-open habitats with a mix of tall grassland, scrub, and woodland edge environments. There are around 20 major populations in Herefordshire, representing approximately 15% of the national population. Despite this, since 2004, this species has declined by 42% in the county.

Successes

In 2017 the responsibility for managing Broadmoor Common Local Nature Reserve (LNR) passed from Herefordshire Council to Woolhope Parish Council on the commissioning of a 10 year-management plan funded by the Woolhope Dome Environment Trust. The plan's implementation has been overseen by a representative Management Steering Group with the involvement of the local community through walks, talks and volunteer work parties.

The Common was designated a LNR for its species-rich grassland but also includes areas of wood pasture and fen meadow as well as scrub and a mosaic of other habitats. Notable achievements have been:

- the reduction of encroaching woodland and scrub on the species-rich grassland while maintaining good woodland edge stands of bramble and gorse
- improved grassland management through 'cut and collect' and the mowing of some areas on rotation.
- pond restoration
- selective coppicing protected by deer fencing, understorey enrichment planting, pollarding, tree veteranisation
- new interpretation board and easier access for some footpaths onto the Common

The Common has also benefited from grant funding from Wye Valley National Landscape through Farming in Protected Landscapes (FiPL).

2.7.5 Hedgerows and Boundary Features

Hedgerows are one of the iconic defining features of Herefordshire's rural landscapes, and they often contain mature or veteran trees within them. Two types of hedgerows that hold particularly high biodiversity value are ancient hedgerows and species-rich hedgerows. Ancient hedgerows are defined as hedgerows which were present before the Enclosures Act (between 1720 – 1840), and species-rich hedgerows typically contain five or more native woody species and a minimum length of 30m.

Common hedgerow species include hawthorn (*Crataegus monogyna*), blackthorn and related taxa (*Prunus spp*), and hazel (*Corylus avellana*). Hedgerows contribute strongly to the landscape character of Herefordshire, and high densities of hedges in an area can create a complex matrix of pastoral fields and narrow lanes. There is no single process of hedgerow management across the county, thus creating different character and visual effects where they have been over trimmed and/or rejuvenated. This has resulted in a range of forms, from dense and well managed, to tall and overgrown.

Hedgerows are key features that aid in habitat connectivity, as they provide linear strips of natural habitat connecting areas that otherwise may not be used by wildlife, such as large arable fields. They support birds such as dunnock (*Prunella modularis*), bullfinch (*Pyrrhula pyrrhula*), and song thrush (*Turdus philomelos*). Hedgerows are also important carbon stores and can help improve air quality and reduce flooding.

Successes

The Hedgerow Heroes Herefordshire project planted and restored over 3.7 km of hedgerows between 2024 and 2025, well above their original target of 2.5 km. The next season is now looking to target 4 km of new and restored hedgerows across the county between September 2025 and April 2026. Hundreds of volunteers were involved, with donations from the Tree Council, support from four sponsors and ran three two-day hedge laying courses run by Really Rural. The courses will be run again this season, alongside talks on the history and value of hedges and inspire young people through hands-on learning projects.

© Poppy Wilkinson

Herefordshire Council have developed a Tree and Hedgerow Code of Practice, which outlines how they intend to manage trees and hedgerows under legal responsibilities and to promote the value of hedgerows on council-owned land.

The Herefordshire Trees, Hedgerows and Woodlands Strategy also sets out a vision to create and manage a "treescape" across Herefordshire, connecting woodlands, hedgerows, orchards and parklands together. The strategy sets out an action plan for ensuring effective planting, aftercare, monitoring and management of hedgerows.

2.7.6 Upland Moorland and Heathland

A number of habitats are found in upland moorland areas. Heathland habitat contains plants such as heather and gorse of varying heights, found alongside areas of scattered trees, bare ground, wet heaths, and open water. Within Herefordshire, heathland can be found in small pockets on sites that have previously been conifer plantations such as Haugh Wood, Lea Bailey End, Mortimer Forest, and Queenswood, and overall covers 7.9ha/0.36% of the county. Heathland can be separated out into different habitat types based on species assemblage and hydrological regime, such as wet heath and dry heath.

The upland fringe or ffridd, as it is known in Wales, refers to the area between upland moorland and more intensively managed lowland. It comprises of a mosaic of scattered trees, small woodland areas, bracken, heather, grasslands and bog providing habitat to a wide range of species.

Blanket bog is a type of peatland habitat that forms in cool, wet locations where peat is able to accumulate to great depth over many hundreds of years. This habitat is dominated by *Calluna vulgaris*, Bilberry (*Vaccinium myrtillus*) and Crowberry (*Empetrum nigrum*).

Due to their peat stores, blanket bogs are valuable habitats for carbon storage and water regulation. Active bogs that are currently accruing peat have the potential to continue to sequester carbon more efficiently than other habitats. However currently the Blanket bogs found within Herefordshire are not in this state and restoration work is required to repair this important habitat.

Ling Heather *(Adobe Stock)*

Valley mires and flushes also form in upland environments: these are wet and often peaty areas along slopes where groundwater emerges to the surface, or in valley bases where water can accumulate. Sedges, rushes and moss species are abundant in these habitats.

Ravens *(Adobe Stock)*

The Black Mountains and Welsh borders are home to upland habitats, which often occur in mosaics of blanket bog, scrub, and woodland. These habitats support birds such as red kite (*Milvus milvus*), raven (*Corvus corax*), and meadow pipit (*Anthus pratensis*), reptiles such as common lizard (*Zootoca vivipara*), slow worm (*Anguis fragilis*), and grass snake (*Natrix helvetica*). Smaller areas of dry and wet heath habitat are also present across Herefordshire. Upland habitats can experience threats from excessive scrub encroachment, drainage and overgrazing. In particular, the Olchon Valley is noted for a variety of rare and important habitats and species assemblages, including those associated with fridd, scrub mosaics and headwaters, and has a number of active wilding and conservation projects.

Successes

The Black Mountains Land Use Partnership is a pioneering, cross-border collaborative partnership between local landowners, graziers and relevant regulatory bodies, including Brecon Beacons National Park Authority, Natural Resources Wales, Welsh Water and NE. It covers an area 24,600 ha and promoted the restoration and sustainable management of the Black Mountains natural resources and habitats, as well as providing a forum for discussion and collaboration on the current and future management, sustainability and conservation.

2.7.7 Farmland (Pasture and Arable)

Agricultural land in Herefordshire is strongly influenced by topography and soils, with livestock farming dominating the uplands, and mixed pasture and arable farming, commercial orchards and horticulture on the central lowland plain. An overview of the farmland areas can be seen in Table 2-2.

Agricultural land can hold value for wildlife, typically when it is managed in a sensitive, low-impact way with reduced inputs of artificial chemicals such as fertilisers and pesticides. Field margins, scrubby-corners, riparian habitat buffers, in-field trees and well-managed hedgerows are valuable for certain plants and can attract a variety of farmland birds, such as skylarks, lapwings and yellowhammers (*Emberiza citrinella*), or brown hare (*Lepus europae*) and can also help to reduce soil loss and nutrient run-off into watercourses.

Farm Type	Area (ha)
Cereals	28,804
General Cropping	38,704
Horticulture	12,836
Specialist Pigs	557
Specialist Poultry	8,060
Dairy	6,474
Grazing Livestock (LFA)	14,956
Grazing Livestock (lowland)	37,864
Mixed	31,230
Unclassified	331
Total Farmed Area	**179,817**

Table 2-2: Area (ha) of farming types within Herefordshire

Successes

The Wye and Usk Foundation have delivered the Wye-P on the Arrow project in March 2025, with funding from Defra. The project engaged with a variety of farms across the Arrow catchment and produced detailed reports on current farming practices, soil health assessments and natural capital audits. It promoted regenerative farming practices to reduce pollution and enhance biodiversity in the Arrow catchment.

The Wye Ridge to River Landscape Recovery Project is a 30-year project located in the Upper Wye Valley between Hereford and Hay-on-Wye, which aims to support long term land use change at scale, demonstrating how sustainable food production can be delivered alongside environmental benefits.

Agricultural business have greater access to advisory services, including Herefordshire Meadows, the Herefordshire Rural Hub, the Wye & Usk Foundation, Catchment Sensitive Farming, Herefordshire Wildlife Trust, and Herefordshire Council through the Greener Footprints initiative, that are supporting the agricultural sector by providing guidance on nature recovery and access to available funding.

Farms throughout Herefordshire have been working with DEFRA and other Governmental bodies to increase the uptake of sustainable and regenerative practices. Primarily these have been through action within the Environmental Land Management (ELMs) and Sustainable Farming Initiative (SFI). Plans and actions taken within these initiatives are recognised to have benefits for soil health, water quality, biodiversity and carbon.

The Farming in Protected Landscapes programme, which runs until March 2029, offers support for farmers and land managers to carry out projects that support nature recovery, mitigate the impacts of climate change, provide opportunities for people to discover, enjoy and understand the landscape and cultural heritage, or support nature-friendly, sustainable farm businesses. Examples of projects that have been approved in the Wye Valley and the Malvern Hills can be found on the Wye Valley National Landscape website and on the Malvern Hills National Landscape website.

The Rooting for Better Soils project was completed in March 2025, by EA and Herefordshire Meadows. It restored water-dependent habitats, including lowland meadows, and promotes sustainable farming practices to improve biodiversity and soil health in the Lugg catchment.

The Go Wild in the Curl project was run by Wye & Usk foundation from 2016 to 2021. It improved water quality and biodiversity in the Curl Brook catchment through sustainable farming and habitat restoration.

2.6.8 Built Environments

Herefordshire's main urban areas comprise the city of Hereford and the market towns of Leominster, Ross-on-Wye, Ledbury, Kington, and Bromyard. Many villages and hamlets are also scattered across the county. Urban environments can provide value for nature, often on smaller scales compared to the wider rural landscape. The six urban centres are identified for future growth. Growth in these places has the potential to overlap with LNRS priorities such as river corridors, traditional orchards, hedgerow networks and urban greening opportunities. Green infrastructure is the term used to describe the network of multi-functional greenspaces within a settlement. Parks, gardens, street trees and green roofs can all provide habitat for certain species, and when they are well connected, can create green corridors that aid in wildlife movement through cities and towns. This can also include verges, allotments, cemeteries and churchyards, civic space, natural and semi-natural greenspace and outdoor sports facilities.

Where new developments are planned and built, habitat creation, riparian improvements and wider water-environment measures can support future nutrient mitigation. Such measures can also be retrofitted into existing built-up areas.

House Sparrow *(Jane Tavener)*

Estates, parks and gardens are all key areas that provide spaces for wildlife such as blackbird (*Turdus merula*), blue tit (*Cyanistes caeruleus*), house sparrow (*Passer domesticus*), and starling (*Sturnus vulgaris*). There are 25 registered Parks and Gardens in Herefordshire, alongside numerous locally important parks and gardens, some of which are located within or adjacent to urban areas.

Sparsely vegetated habitats often occur on derelict land, which can support specialist species such as the grizzled skipper (*Pyrgus malvae*). This butterfly has been in decline since the 1950s and there are only three known colonies within Herefordshire. However, compared to 2004-2013 data, the population in Herefordshire has been recorded as increasing by 50% from 2014-2023.

Successes

As part of the housing development at Old Eardisley Road, a voluntary group called the Kington Pollinators was established. They work with Herefordshire Council to provide wild planting, information boards, bug houses and bird boxes in the play area and open spaces. They provide on-going maintenance of the more natural areas of the site, which provide both natural play and wildlife habitats. The Kington Pollinators actively encourage local children to play and learn about nature in this natural environment. Remaining funding will be spent in partnership with Kington Pollinators in support of providing additional experiences to the more natural play and education opportunities for children, in particular.

At King George V Playing Fields, Herefordshire Council have undertaken tree planting in February 2022. This consisted of over 25 trees of a wide range of native and ornamental species including English oak, dawn redwood, Scots pine and wingnut.

Verging on Wild was set up as a small community group in 2018 with the aim of protecting Herefordshire's best verges and raising awareness of the importance of verges for biodiversity. Using Herefordshire Council's list of lapsed Roadside Verge Nature Reserves (RVNRs), Verging on Wild surveyed the historical sites using new selection criteria developed with botanists and started to look for other species-rich verges to survey. The team works with Herefordshire Council and their contractors, 'verge guardians' and a network of supporters to ensure that qualifying verges are managed to best protect their flora and associated wildlife. The number of designated RVNRs in the county has now increased from 18 to 68 and new ones continue to be added to the list each year.

2.7.9 Bird species indicators

Barn Owl *(Adobe Stock)*

Bird populations are used to provide a good indication of the broad state of wildlife across the UK. Mirroring national trends, declines have been recorded in Herefordshire bird species. From 1968 – 2011, a number of resident species have recorded declines of between 18-80%.

As of 2017, there are several known breeding pairs of Barn Owl (*Tyto alba*) within Herefordshire. Barn owls have experienced national population decline due to habitat loss and reduction in prey availability. Similarly, there are now thought to be less than a dozen breeding pairs of curlew, all of which are found in the southern half of the county. Curlew is listed as "Amber" on the Royal Society for the Protection of Birds list of birds of conservation concern and has experienced rapid population decline since the 1990s again, attributed to loss of breeding habitat such as uplands and moorlands.

These population declines are driven by a range of different factors including habitat loss, habitat fragmentation, pressure from pollution, invasive species and urbanisation, as well as new threats like climate change. Declines based on bird groups for Herefordshire are as follows:

Farmland birds

- Tree sparrow (*Passer montanus*) – 57%.
- Corn bunting (*Emberiza Calandra*) – 80%.
- Grey partridge (*Perdix perdix*) – 53%.
- Lapwing – 20%.

Woodland birds

- Woodcock (*Scolopax rusticola*) – 46%.
- Willow tit (*Poecile montanus*) – 30%.
- Hawfinch (*Coccothraustes coccothraustes*) – 55%.

Wetland birds

- Common snipe (*Gallinago gallinago*) – 80%.
- Curlew – 18%.

Lapwing *(Jane Tavener)*

Hawfinch *(Adobe Stock)*

Common Snipe *(Jane Tavener)*

2.8 Pressures on Nature

Across the Herefordshire region there are several major pressures on the natural environment. These will vary based on the type of pressure, the type of habitat and the scale at which impacts are felt. For example, particular threats to certain habitats may act to damage them or reduce their ability to function adequately in providing niches for wildlife, or in providing ecosystem services such as flood alleviation, water quality, pollination or carbon storage that are important for society as well as nature. Different pressures and threats to nature can also build upon each other, thus exacerbating impacts even further: climate change represents an immense overarching pressure that intensifies the effect of other pressures for particular places, habitats and species.

2.8.1 Tourism, Urbanisation and Development Pressure

Broadly speaking, unsustainable development can place additional pressure on nature and biodiversity. Within Herefordshire, this may stem from multiple areas, from increased tourism, expansion of settlements and wider urbanisation.

Herefordshire's Destination Management Plan 2025-2035 identifies numerous locations that experience high or growing levels of tourism, including the Wye Valley National Landscape and the Malvern Hills used in a variety of recreational activities from hiking, canoeing, nature-watching and more. Overuse or insufficient provision of footpaths can lead to disturbance or degradation of habitats, for example through erosion and littering. In addition, insufficient transport routes or parking areas can lead to disturbance and degradation of habitats on road verges. However significant investment in the region aims to improve blue and green corridors and create more wildlife-rich and nature reserves to provide well-managed and planned spaces for recreational use of outdoor landscapes.

Whilst Herefordshire is a predominantly rural county, it is not immune to the pressures of urbanisation and settlement expansion. The latest mandatory housing targets from the government will require the delivery of additional homes (in particular, affordable homes) across the city, towns and many villages. This can place pressure on biodiversity with land converted to development, additional footfall in local nature reserves from a larger population (including more dogs) and increased levels of disturbance. The Herefordshire Council Plan 2024-28 details the Council's intention to build *"the right housing in the right place"*, and stresses how partnership working will be key to successful delivery of sustainable housing and urban development. The Council is now progressing a new Local Plan under the new plan making system that is being introduced through the Levelling Up and Regeneration Act 2023. The distribution of development has not at this stage been determined but is likely to be focused on the most sustainable locations, or where they can be made sustainable. Developments need not lead to a net loss of habitat if they are well planned and implemented; Biodiversity Net Gain is one way outcomes for nature can be improved through the planning system.

2.8.2 Agricultural Intensification

Herefordshire is known for its agriculture, which accounts for nearly 10% of employment and Gross Domestic Product, and the county is home to some of the most productive agricultural land in the country. Whilst the agricultural sector therefore has importance in contributing to national food supply and security, it also has impacts on the county's landscape and wildlife.

Herefordshire has experienced huge growth in agricultural development in the past 100 years, with the county authorising the highest number of new poultry units out of any English counties in the last 25 years. This has not resulted in a significant change in land area, but rather in land use with intensification of agricultural land management practices. The biggest impact of this has increasing the nutrient load within the river catchments through the production of chicken manure. Other types of farming such as dairy, soft fruit and arable farming have also seen intensification.

Changes in agricultural practices can threaten biodiversity in numerous ways. Expansions of field sizes with intensive management and hedgerow removal can create barriers to species movement and reduction in suitable habitats. The loss of traditional orchards through grubbing up or conversion to commercial orchards can result in reduced biodiversity and habitat for orchard specialist species, such as noble chafer beetles. Increases in cattle housing and intensive poultry units across the county can result in the potential for increased pollution of soils and watercourses through leaching of nutrients into river systems. In some farming models, careful intensification of farming practices in one location or part of the farm can then free up other land for dedicated wildlife habitat restoration or creation schemes.

Numerous projects are underway across the county to promote more nature-friendly farming practices. The Wyescapes Landscape Recovery Project aims to recover habitats and species within river corridors and the floodplain of the Wye catchment, with a joint aim of encouraging and applying sustainable agricultural practices in order to achieve this. The network of landowners will act as a valuable platform for sharing wins or successes of sustainable and regenerative farming practices.

2.8.3 Pollution

Pollution of soils and watercourses is a major threat for Herefordshire's natural environment. Sources can include sewage discharges, industrial and agricultural runoff and rural septic systems. Three main pollution types are from phosphate, ammonia and nitrogen deposition.

Excessive phosphate is a key contributor to the poor ecological condition of Herefordshire's river network. Multiple sources of phosphate loading occur in the River Wye, from effluent discharges from wastewater treatment centres and rural septic tank systems, light industrial discharges, and surface and sub-surface runoff from agricultural land, farmyards and urban areas. One example of the impact of excessive phosphate in river systems is the growth of algal blooms, which block sunlight and deplete oxygen in the water, thus severely harming aquatic life. Beyond river catchments, phosphate pollution also impacts soil health. Many farmers do play their part in improving water, soil and air quality. In 'Farming Evidence – Key Statistics' produced by Defra, it is highlighted that between 1990 and 2024 there has been a 72% reduction in manufactured phosphate fertiliser used in the UK. Furthermore, between 1990 and 2024 there has been a 45% reduction in manufactured nitrogen fertiliser used in the UK. Despite this, the long-term accumulation of surplus phosphate in agricultural soils has created a "legacy" of nutrient overload, which continues to leach into waterways.

As a result of the high phosphate levels, water quality in many areas of the catchment is failing current eutrophication control standards. A Diffuse Water Pollution Plan (DWPP) has been prepared jointly by the EA and NE the plan outlines the current condition of the River Wye SAC in England, it identifies the sources and impacts of

diffuse pollution, and sets out the strategic priorities and actions required to achieve favourable condition status.

Ammonia pollution is also high within Herefordshire. Emissions lead to higher deposition of ammonia onto habitats, soils and plants. Excess nitrogen from the ammonia deposition increases the acidity of soils and creates nutrient-rich soils that can result in a shift in plant diversity towards more fast-growing species at the expense of less nutrient-tolerant flora. This can lead to severe ecosystem imbalances and habitat degradation.

Ammonia is also an important contributor to total nitrogen deposition (alongside other sources such as transport and industry). Rates of nitrogen deposition in western Herefordshire is amongst the highest anywhere in the UK. Most areas receive nitrogen deposition in excess of 14kg of nitrogen per ha per year which is known to be damaging to a wide range of habitats. Again, these changes can lead to the decline of species adapted to low-nutrient environments and affect food webs and ecological resilience. Most protected sites now exceed their critical levels or loads for ammonia and nitrogen.

The Herefordshire Minerals and Waste Local Plan incorporated a specific policy to deal with agricultural waste as a proactive strategy to address agricultural intensification and pollution. Adopted in March 2024, a specific policy controls how agricultural waste will be required to be addressed in certain circumstances; such as incorporating waste management method statements where livestock units are proposed; anaerobic digestion proposals where the waste used is generated primarily on the agricultural unit where it is located; and finally on all proposals for livestock units, anaerobic digestion and waste management proposals, as well as demonstrating at least nutrient neutrality within the River Wye SAC or River Clun SAC. This policy is only applied where planning permission is required and is not applicable to existing development and to development proposals that are progressed under national permitted development rights.

Pollution can also occur in the form of light pollution, sometimes known as Artificial Light at Night (ALAN) pollution. This can impact on many noctural species, in particular moths and bats, as well as impacting on human health and wellbeing. For bats, artificial lighting can lead to increased predation, desertion of roost sites, becoming trapped in roosts, reduced foraging time, reduced ability to hunt and impacts on accessing water. Moths and caterpillars are drawn to artificial light which can divert them from food resources and make them more vulnerable to predation. Research by the charity Butterfly Conservation, showed that moth caterpillar numbers under LED street lights were 52% lower in hedgerow habitats and 43% lower on grass verges compared to unlit habitats. Nocturnal insects can be disoriented by artificial lights and can expend energy circling them rather than foraging or mating. Lighting in the blue – white parts of the spectrum is thought to have the highest impact with warmer, yellower colours being less disruptive.

2.8.4 Climate Change

Climate change presents a major threat to natural environments, wildlife, ecosystems, and their ability to function effectively and provide the wealth of benefits society receives from them. As with the rest of the UK, Herefordshire is already experiencing the effects of climate change and impacts are projected to intensify in future decades.

Herefordshire's Climate Change Adaptation Plan (2023-2028) outlines that the county is likely to experience increasingly unpredictable weather with hotter drier summers becoming more common, especially in urban settlements like Hereford. Under high-emission scenarios, annual temperatures may increase by up to 3.9°C by 2080. In addition, rainfall over winter months is projected to increase by up to 30%, leading to more frequent and intense flooding. The River Wye and Lugg catchments already experience flood events that damage infrastructure, houses and farmland, and are set to become more vulnerable to these events with climate change.

The likely decrease in summer precipitation, predicted to decrease by up to 40% by 2080, is likely to have extreme impacts on water availability, leading to an increased risk of drought which will affect agriculture and a variety of water-dependent ecosystems such as wetlands, woodlands and moorlands.

Climate change will also have impacts on species across the county. The changing seasons may disturb migrating birds and invertebrates, as there will be an increasing mismatch in timing of the arrival of migratory species and food sources, and species distributions may change on a national scale with those suited to hotter dryer conditions increasing

their range northwards, potentially outcompeting species with less tolerance for high temperatures. Droughts and higher temperatures have the capacity to stress woodland, heathland, and dry grassland habitats, increasing the risk of wildfires.

To address these risks, Herefordshire Council declared a climate emergency in 2019, followed by a formal commitment to accelerate reductions in greenhouse gas emissions and aspiration to become carbon neutral by 2030/1. The Council's Carbon Management Action Plan sets targets to achieve reductions in council emissions through transitions to electric vehicles and improving energy efficiency in council buildings.

However, to attempt to mitigate climate change impacts to the natural environment, ensuring habitat creation, restoration and management takes into account predicted weather and climate changes is important. HWT outline plans to incorporate nature based solutions across the county, engaging land managers and communities to build resilience and improve biodiversity, to help tackle and adapt to climate change through their "Wye Adapt to Climate Change" project.

2.8.5 Disease and high-impact invasive species

Invasive species, including **Japanese knotweed** (*Fallopia japonica*), **Himalayan balsam** (*Impatiens glandulifera*), **American skunk cabbage** (*Lysichiton americanus*) and **American signal crayfish** present a threat to native flora and fauna throughout the county. Pests and diseases of trees also cause significant impact, and include ash dieback, acute oak decline, *Phytophthora*, Dutch elm disease, horse chestnut bleeding canker, and horse chestnut leaf miner.

Herefordshire has a high number of ash trees within its woodland habitats, scoring within the top 10 counties in the UK for percentage ash within woodland canopy cover. Ash is also listed as the most dominant hedgerow tree in the county, and ash trees comprise 10% of the trees recorded in the Ancient Tree Inventory for Herefordshire. Overall, this results in a high level of vulnerability in Herefordshire's woodlands, hedgerows and ancient trees from the effects of ash dieback disease. To address this risk, Herefordshire Council have created a Ash Dieback Action Plan for the county which identifies the national and local importance of ash in the county, provides an overview of current knowledge and processes, and looks to recommend the way forward for the Council in respect of its own stock of ash trees ensuring there is no net reduction in tree numbers from ash dieback, and that Herefordshire Council can fulfil its statutory obligations and implement new processes and systems.

Grey squirrel (*Sciurus carolinensis*), and deer in particular have had negative impacts on the county's tree stocks and impact attempts both to restore and manage woodlands and increase tree cover. Grey squirrel can damage both young and mature trees by eating shoots and stripping bark. Deer can damage trees by browsing tree buds, shoots and foliage, bark-stripping and fraying and biting off or pulling up young stems. Deer also graze on woodland ground flora, leading to reductions in species such as bluebell (*Hyacinthoides non-scripta*), as well as agricultural crops. Concerns regarding the effects of deer and grey squirrels on landscape character have been cited in the Malvern Hills and Wye Valley National Landscape Management Plans.

Furthermore, the increasing incidence of pests, pathogens, and invasive species as a result of climate change may cause irreversible damage to numerous terrestrial and freshwater habitats and species, as well as creating changes in species composition (e.g. woodlands).

Ash showing signs of dieback *(Adobe Stock)*

The Wye and Usk Foundation have delivered several projects aimed at invasive species management, including the Invasive Weed Eradication based within the Wye catchment, and the Phosphates and Weeds project which will develop an approach for farm wetland design and development and aim to expand the organisation's work on invasive weed control for Japanese knotweed and giant hogweed (*Heracleum mantegazzianum*) in the Wye catchment.

3. Wider Environmental Benefits

A key part of the LNRS is the ability for actions to not only support nature recovery but also deliver a number of wider environmental benefits (WEBs). These align with the UK government's 25 Year Environment Plan (2018) and its first revision in 2023, the Environmental Improvement Plan (EIP) which sets out ten goals to help the natural world regain and retain good health (Figure 3-1). The WEBs for Herefordshire have been developed using the national Environmental Improvement Plan (EIP) goals as a framework, ensuring that they align with and support the Government's environmental objectives while delivering local priorities.

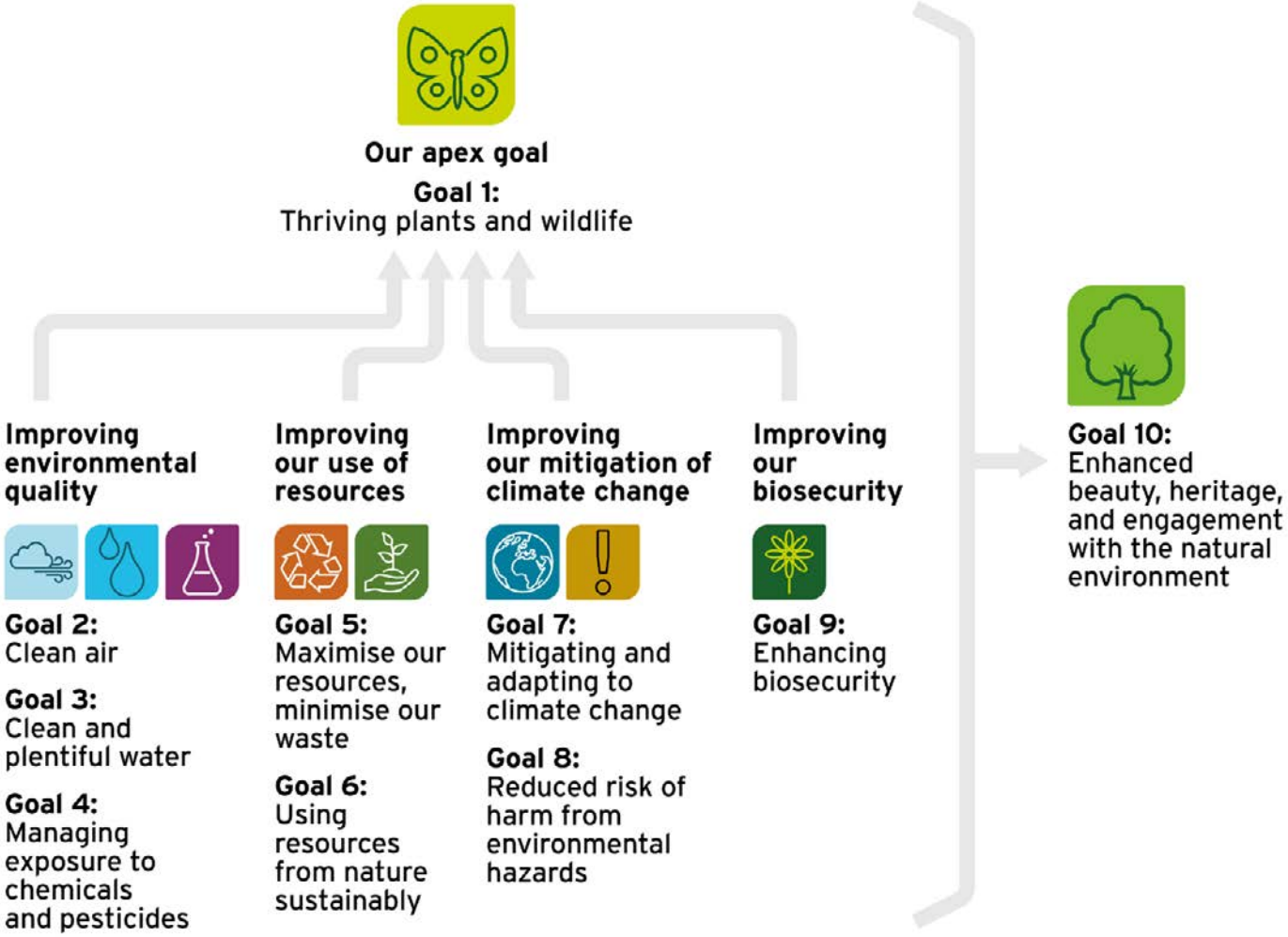


Figure 3-1: Connections between ten environmental goals of the EIP.

3.1 Herefordshire WEBs

The key WEBs for Herefordshire are outlined below and have been used to help prioritise the measures proposed in the LNRS mapping feature.

1. INCREASING WOODLAND COVER

Woodlands are a key feature of Herefordshire with an average tree canopy cover of 19%, which is above the UK average of 13%. However, there is large variability across the county from 10% or less to 35%. Increasing woodland cover across Herefordshire, particularly in those areas with lower average tree canopy cover, will provide habitat for biodiversity, increase carbon sequestration, remove pollutants, cool urban areas, reduce rainfall runoff, and can improve wellbeing. This WEB would therefore also help to contribute towards the other WEBs listed below. Woodlands can also contribute to sustainable timber production.

2. IMPROVING AIR QUALITY

Air pollution and poor air quality is recognised as a contributing factor in the onset of heart disease and cancer and can lead to a range of health impacts. The main air pollutant within Herefordshire is nitrogen dioxide, with sources largely attributed to vehicle emissions and two Air Quality Management Areas (AQMAs) declared due to nitrogen dioxide levels exceeding national standards due to heavy congestion in the Hereford and Leominster. It is therefore vital to undertake nature recovery actions to increase the number of habitats that can help to reduce air pollutants, alongside behavioural changes to travel patterns, increase active travel and improve public health across the county.

3. IMPROVING WATER QUALITY

Herefordshire's watercourses are threatened by poor water quality due to high levels of nutrients and sediment entering rivers as well as changes to the flow and temperature, that are impacted by climate change. The Rivers Wye, Frome, Lugg and Clun are currently among some of the most threatened watercourses in Herefordshire. The main water pollutant is phosphate; however, high levels of nitrates are also present within the River Clun. Habitat creation, riparian improvements and wider water-environment measures can support nutrient mitigation. Improving water quality will help to restore the natural watercourse ecosystem allowing more species to survive and their communities to become more stable. It will also contribute to enhanced recreation and tourism, improved public health for those using the watercourse for water sports and be more visually appealing contributing to the beauty of the county.

4. INCREASING FLOOD RISK MANAGEMENT

As a rural county with several watercourses across the landscape, Herefordshire is susceptible to flood events, as experienced with widespread flooding in 2024. Management of flood risks will use natural processes to hold and slow the flow of water. These natural techniques can include planting trees, creating leaky dams, scrapes and ponds and improving soil health through cover crops and contour ploughing. This will increase biodiversity and habitats, as well as restoring watercourses and floodplain functioning to reduce the detrimental impacts of flooding.

5. REDUCING CLIMATE CHANGE IMPACTS

A climate emergency was declared by Herefordshire Council on the 8 March 2019, marking the beginning of activities towards net zero and preparing for the impacts of climate change. These impacts include more intense and frequent extreme weather events (flooding, heatwaves and storms). By embedding climate change adaptation into nature recovery, the measures and outcomes will help to mitigate the impacts, reducing flooding, increasing urban cooling, improving food production resilience and providing storm breaks, as well as supporting the natural environment into the future.

6. SUPPORTING PUBLIC HEALTH AND CULTURAL SERVICES

The natural and historic environment of Herefordshire offers a valuable asset to enhance biodiversity whilst also supporting public health and providing cultural services. By increasing access and connection to nature, through recreation, education and community engagement, these habitats can contribute to improving people's mental and physical wellbeing. By understanding landscape, its character, development, and history as well as its change over time better holistic decisions can be made which enrich and support both the aims of nature recovery and preserve our shared heritage for the benefit of all.

7. IMPROVING SOIL HEALTH

As a predominantly rural county, Herefordshire is highly dependent on healthy soils to support nature and farms. Improving soil health encapsulates practices to support microbial life, as well as the wildlife we can see. It will also provide sustainable farmland, support nutrient cycling, reduce erosion and chemical inputs and enhance carbon and water storage to mitigate for climate change.

8. PROMOTING NATURE FRIENDLY FARMING

As a major land use in Herefordshire, farming and alteration to farming practices present a significant opportunity to support nature alongside successful businesses. Nature friendly farming involves a reduced use of chemicals, such as pesticides and fertilisers, and integration of habitats to the farm. For example, enhancing existing habitats or creating new habitats for pollinators and wintering birds or managing ponds, tree lines or hedgerows for biodiversity.

9. CONTROLLING INVASIVE SPECIES

Invasive species such as Himalayan balsam, Japanese knotweed, giant hogweed or American signal crayfish have potential to cause harm to our native species through disease, competition for resources, predation or hybridisation. They can also result in negative impacts on public health or infrastructure. Therefore, controlling invasive species will reduce these negative impacts and support our native biodiversity. Nature recovery using adaptable species and habitats may also contribute to controlling biosecurity, which will help to overcome the impacts of pests and disease such as ash dieback.

10. SUPPORTING FOOD PROVISION

Access to local, fresh and affordable food will help to support public health, Herefordshire's rural economy and foster a sense of community and connection with food produced in their own county. Many of the habitats created for wildlife, such as orchards or hedgerows, can also generate productive food systems and reduce diet-related illnesses.

4. Conclusion

This Strategy Area Description provides a comprehensive overview of Herefordshire's landscapes, habitats, species and the pressures they face. Herefordshire is predominantly rural and contains a diversity of habitats of value to wildlife including ancient woodlands, wetlands, moorlands, ice-age ponds and traditional orchards. Herefordshire's most important places for nature are protected by international, national and local designations such as SAC, SSSIs and Local Wildlife Sites. These locations are crucial in conserving the county's rich biodiversity, although many would profit from improved management and connectivity of natural habitats between them.

Herefordshire's habitats are home to a wide range of species, from hedgehogs and the common toad to rare invertebrates and important bird assemblages. The county's species rely on natural habitats that are in good condition and well connected in order to thrive and grow their populations. However, as with many counties across the UK, Herefordshire experiences threats and pressures on nature, that have resulted in habitat loss, degradation, pollution and species decline. Nature recovery in Herefordshire needs to be considered at a strategic level to halt and reverse these declines. Landscape-scale measures and the cumulative effects of small-scale projects will allow habitats to recover and species to return.

A key challenge for Herefordshire is that the River Wye and River Lugg are experiencing widespread environmental degradation and decline in quality. Climate change is expected to exacerbate these issues, with projections indicating hotter, drier summers and wetter winters, increasing flood and drought risks and altering species distributions.

The analysis of these baseline conditions has led to the identification of wider environmental benefits that are specific to Herefordshire and that nature recovery will contribute to. Already there are a range of organisations and groups implementing successful nature recovery and climate adaptation projects right across the county. These are delivered at a range of scales, from landscape level such as the Wyescapes Landscape Recovery Project, to efforts led by local groups to restore wildlife meadows and greenspaces in urban settings.

This Strategy Area Description outlines the state of nature within the county, identifying the pressures of habitat loss, fragmentation and degradation, climate change and pollution that have led to nature's decline and what work is underway to promote nature recovery. It provides the evidence base that, along with engagement and consultation, informed the development of the priorities, measures and habitat mapping that make up Herefordshire's Local Nature Recovery Strategy.

Appendix A: Reference List and Data Sources

Various types of reference material, datasets, case studies and information were consulted to produce the Strategy Area Description. The sources are set out below, but do not constitute an exhaustive list of information available about Herefordshire's natural environment.

A.1 Sources provided by Herefordshire Council

The following draft reports or datasets were provided by Herefordshire Council:

- Shapefile data and a Methodology Report relating to drafts of the Herefordshire Nature Recovery Network Mapping carried out by November 2024 by the Gloucestershire Centre for Environmental Records and Gloucestershire Wildlife Trust;
- The Draft Herefordshire Tree, Hedgerow and Woodland Strategy produced by LUC in January 2025;
- An internal document on air quality in Shropshire and Herefordshire;
- A spreadsheet on the coverage (ha, % county) of designated sites, HBRC Biodiversity Action Plan habitats and Priority habitat inventory data; and
- Data on farm types and their coverage across Herefordshire.

A.2 Datasets

The following datasets were shared from various stakeholders and partners:

- SSSI data (including on status of SSSI parcels) was shared by Natural England.
- Statistics on EA WFD waterbodies, their ecological and chemical statuses, and RNAGs in Herefordshire
- NRW data on WFD waterbodies
- Woodland data was provided by Forestry Commission
- Management plans were shared by the EA, including:
  - The Severn River Basin Management Plan
  - The Severn River Basin District Flood Risk Management Plan
- BTO Atlas data
- Data on species abundance changes between 2004-2013 and 2013-2024 were shared by HBRC.
- Data on species-rich grassland creation and restoration sites shared by Herefordshire Meadows

A.3 Reference List

The below references publicly available information, reports and data that was consulted for the production of this report.

Defra (2023) Engaging the land management sector in Local Nature Recovery Strategies Advice for Responsible Authorities. Defra, London.

Defra (2023) Identifying and agreeing priorities and potential measures within Local Nature Recovery Strategies. Defra, London.

Defra (2023) Relevant national environmental objectives for Responsible Authorities to seek to contribute to when developing their Local Nature Recovery Strategy. Defra, London.

Environment Agency (2025). Diffuse Water Pollution Plan, River Wye Special Area of Conservation. (Accessed: 5th December 2025)

Environment Agency & Natural England. (2019). The WYE Catchment Partnership Plan (By The Wye & Usk Foundation & Natural Resources Wales). (Accessed: 31 July 2025).

Herefordshire and Worcestershire Earth Heritage Trust (2025) Herefordshire's geology and soils (support for LNRS). Earth Heritage Trust.

Herefordshire Council (2021) Local plan 2021 - 2041, Herefordshire Council. (Accessed: 31 July 2025).

Herefordshire Council (2023). Blue and green infrastructure Strategy. Herefordshire Council. (Accessed: 31 July 2025).

Herefordshire Council (2023). Landscape character assessment. Herefordshire Council. (Accessed: 31 July 2025).

Herefordshire Council (2024) Ash Dieback Action Plan. Herefordshire Council.

Malvern Hills Area of Outstanding Natural Beauty. (2019). Malvern Hills Area of Outstanding Natural Beauty Management Plan 2019-2024. (Accessed: 31 July 2025).

Natural England. (2024). Natural England - National Character Area Profiles - National Character Area Profiles. (Accessed: 31 July 2025).

Natural Resources Wales, Environment Agency, Natural England (2021). River Wye SAC Nutrient Management Plan Phosphate Action Plan. NRW

Sustainability West Midlands (2023) Climate Change Adaptation Plan for Herefordshire 2023-2028. Herefordshire Council.

Sustainability West Midlands (2023) Climate Change Technical Report for Herefordshire. Herefordshire Council.

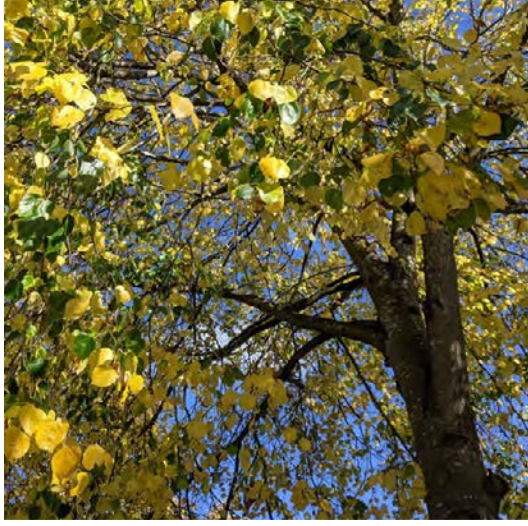
Sustainability West Midlands (2023). Severe Weather Impact Assessment for Herefordshire 2008 – 2022. Herefordshire Council.

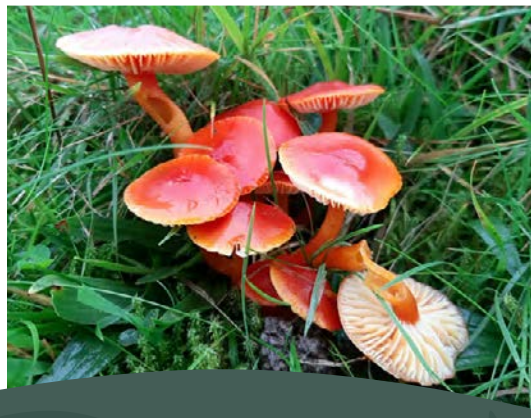
Withers, P.J., Forber, K.J. and Rothwell, S.A. (2023) Soil Phosphorus Status and Water Quality in the River Wye, Phase 2: Land Use Change and Phosphorus Balances in the Wye Catchment. Lancaster University.

Withers, P.J.A., Rothwell, S.A. and Lyon, C. (2022) Re-focusing Phosphorus use in the Wye Catchment. Lancaster University.

Wye Valley AONB Office, Webb, A., Minister for Rural Affairs and Biosecurity, Defra, Welsh Government. (2021). Wye Valley AONB Management Plan 2021-2026. (Accessed: 31 July 2025).








Find out more about making Herefordshire's nature and wildlife thrive.

Herefordshire Council
Environment Agency
Farm Herefordshire
Forestry Commission
Herefordshire Biological Records Centre
Herefordshire Wildlife Trust
Malvern Hills National Landscape
NATURAL ENGLAND
Wye Catchment Partnership
The Wye & Usk FOUNDATION
Dyffryn Gwy Tirwedd Cenedlaethol Wye Valley National Landscape

www.herefordshire.gov.uk/lnrs