Leicestershire,
Leicester and Rutland

# Local Nature Recovery Strategy

Making Space for Nature

July 2025

# Contents

# Foreword

The development of this first Local Nature Recovery Strategy for Leicestershire, Leicester and Rutland has been the culmination of almost two years of work by a wide range of people and organisations.

But the work did not start two years ago. Many people and organisations have been beavering away, sometimes in the background, for decades, if not longer, to protect the habitats, species, landscape, waters, soils and wider environmental resources of Leicestershire, Leicester and Rutland.

So, this strategy builds on their work, their efforts, their knowledge, expertise and most of all passion. Their passion for nature, be it an individual species or habitat, or a particular part of our area. It also builds on their belief that nature is important, that it provides vital eco-system services to us as humans, for our economy and for the survival of our wider society.

We started off developing this strategy because we had to. It was a new statutory duty placed on local government. We were required to work together.

But as we worked together and got to know more about the biodiversity, habitats, species and landscape of the area and learned from each other and heard how important nature was to the people of the area, how much they appreciated being in nature and recognised the health and wellbeing benefits it gave them, we more and more wanted to develop this strategy.

We have sought to develop a strategy that provides a solid foundation on which we can collectively work together for nature's recovery, knowing that this is a long-term project. We will not be able to overturn centuries of depletion and destruction of nature in 5 years, but we can together make a good start, with the opportunity to review where we are and recalibrate our approach and our efforts as needed.

This strategy sets the course for nature's recovery and wider environmental benefits for the next 30+ years. It presents a collective vision for both restoring and enhancing the biodiversity in our area and connecting to a network of ecological recovery spanning the whole of England.

We are immensely grateful for the input and collaboration of all partners, stakeholders, farmers, landowners and community members who have contributed their knowledge, expertise, and passion to this strategy. Together, we can create a legacy of nature recovery that will benefit generations to come.

Thank you for your continued support and involvement in making this strategy, and the work that flows from it, as comprehensive and effective as it can be.

Ultimately, the test of its success will be the emergence of more, better and better-connected space for nature across Leicestershire, Leicester and Rutland, and all the benefits that creates.

**Leicestershire, Leicester & Rutland Local Nature Recovery Strategy Steering Group**

# 1. Executive Summary

This first Local Nature Recovery Strategy for Leicestershire, Leicester and Rutland outlines a comprehensive strategic, landscape scale approach for enhancing and restoring biodiversity across the strategy area.

Developed in collaboration with local authorities, government agencies, environmental organisations, farmers, land managers, communities, residents, and many supporting organisations and individual stakeholders, the strategy is designed to address the urgent challenges of habitat loss, species decline, and climate change.

The Local Nature Recovery Strategy identifies key habitats and species that require immediate attention and lays out strategic aims to increase biodiversity, improve habitat quality, and create a connected and resilient landscape for wildlife, people and livelihoods.

The Local Nature Recovery Strategy ultimately serves as a call to action for all sectors of society to play a role in the recovery of nature, ensuring that the biodiversity and natural beauty of Leicestershire, Leicester and Rutland can thrive for future generations, while at the same time supporting the lives and livelihoods of the people and communities that live and work there.

**Key features of the strategy include:**

- A description of the natural and people shaped landscape of the area.
- The identification of existing areas of particular importance for biodiversity.
- The setting out of the current state of nature of the area.
- The identification of priority habitats across various landscapes, including woodlands, wetlands, grasslands, farmland, and urban environments.
- The identification of priority species and species which are known indicators of habitat quality.
- A focus on nature-based solutions to make space for nature, mitigate climate change impacts, enhance ecosystem services, and improve environmental health.
- A strong emphasis on community involvement through citizen science, partnerships with landowners and farmers, and local biodiversity initiatives.
- The identification of areas that could become of particular importance for biodiversity or where the recovery or enhancement of biodiversity could make a particular contribution to other environmental benefits. Including specific landscape opportunities for creating and expanding habitats, improving habitat connectivity, and safeguarding key species.
- A roadmap for delivery to ensure long-term success, alongside a monitoring framework to track progress and make the necessary adjustments.

# 2. Introduction

This first Local Nature Recovery Strategy for Leicestershire, Leicester and Rutland is a forward-thinking strategy aimed at addressing biodiversity loss and other ongoing environmental challenges.

By setting out a clear and structured approach, this strategy focuses on making space for nature, restoring biodiversity, improving habitat quality, and fostering greater ecological connectivity across various landscapes from woodlands and wetlands to urban green spaces and farmlands.

This strategy is structured around key principles that reflect both local and national priorities. At its core, the Local Nature Recovery Strategy is underpinned by extensive stakeholder engagement, data analysis, and alignment with over 100 existing plans and policies, including national biodiversity action plans and local conservation efforts.

The document is divided into several thematic areas, including a comprehensive area description which sets out an overview of current landscape conditions, priority habitats and species, opportunities for nature recovery, and detailed strategies for implementation.

The methodology guiding the Local Nature Recovery Strategy involved a rigorous, evidence-based process, combining local ecological data, national biodiversity datasets, and stakeholder input to identify key areas for intervention.

The strategy uses geographic information systems (GIS) to map biodiversity hotspots and wildlife corridors, ensuring that efforts are focused where they will have the most significant impact. Special attention was given to landscapes such as Charnwood Forest and the National Forest, Leighfield Forest, Rutland Water and surrounding areas, Leicester City and urban areas, the Soar and Wreake and Welland Valleys, which provide vital habitats for many endangered and priority species.

This strategy also introduces a collaborative approach to nature recovery. It integrates contributions from local communities, farmers, businesses, and non-governmental organisations (NGOs), emphasising the importance of citizen science in tracking the health of ecosystems.

In the long term, the strategy sets ambitious but achievable aims, including increasing the area of land managed for wildlife, improving the condition of priority habitats, and reinstating natural processes like floodplain restoration.

By focusing on key indicators of ecological health and leveraging the expertise of local stakeholders, the Local Nature Recovery Strategy aims to create a landscape that is more resilient to climate change, more connected for wildlife, and more accessible for the people who live and work in Leicestershire, Leicester and Rutland.

This strategy not only aims to reverse biodiversity decline but also to integrate nature into our everyday lives, ensuring a sustainable future for all.

# 3. Methodology

The development of the Local Nature Recovery Strategy for Leicestershire, Leicester, and Rutland followed statutory regulations and guidance set out by the Department for Environment, Food & Rural Affairs (DEFRA). It also sought to be an ambitious and comprehensive process designed to find solutions to the problems nature is facing and approaches to make space for nature. The following methodology outlines the processes undertaken in developing the first ever Local Nature Recovery Strategy for Leicestershire, Leicester and Rutland, from stakeholder involvement and data collection to the mapping of priority areas and the establishment of bespoke conservation measures for key species and habitats.

## 3.1 Principles

As the appointed responsible authority to lead on the development of the Local Nature Recovery Strategy, Leicestershire County Council was expected to work to the following principles:

- Transparency - be able to show how partner contributions have been considered, how decisions have been made, and what the basis for them is.
- Inclusivity - enable everyone with an interest to be involved where possible.
- Clear communication - avoid using technical terms that may not be understood by partners and end users.

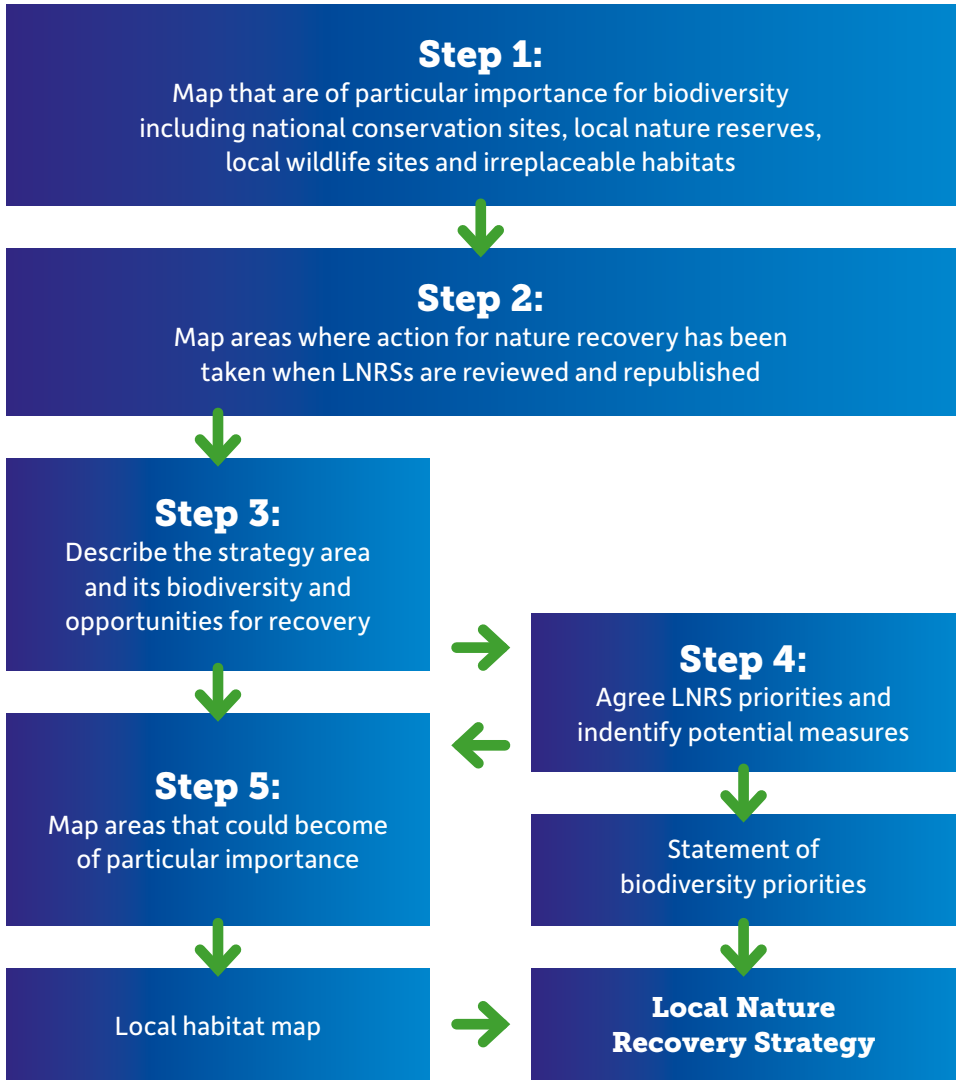
We have sought to include these principles throughout the process of developing the Local Nature Recovery Strategy, through involving as many partners, stakeholders and residents as possible, engaging with them in a variety of ways, listening to and taking on board the views and knowledge of others and being clear and transparent in communications. These principles have also been embedded into how this document has been produced in that we have sought to use clear and simple language where possible, minimise the use of technical terms and abbreviations, and placed the more technical detail in the appendices, for those that need or want to read it.

**“Nature needs a voice of its own. Too often in the past it has been taken for granted or dismissed as unimportant. I am glad that this is being introduced. It is of the utmost urgency.”**

(Residents’ survey)

## 3.2 Prescribed Process for Developing the Local Nature Recovery Strategy

The government guidance set out a prescribed process for developing local nature recovery strategies. This consisted of a five steps process as set out in Figure 1 and described in the following paragraphs.




### Step 1: Map Areas That Are of Particular Importance for Biodiversity

**Data Collection and Analysis:**

A critical component of the Local Nature Recovery Strategy was the use of the best available data to inform decision-making, prioritise areas for nature recovery, and guide the development of conservation measures.

The Local Habitat Map is the foundation of the strategy and identifies areas of particular importance for biodiversity. The local habitat map must identify:

- national conservation sites in the strategy area
- local nature reserves in the strategy area

The habitat map must also identify other areas in the strategy area, which in the opinion of the responsible authority:

- are, or could become, of particular importance for biodiversity, or
- are areas where the recovery or enhancement of biodiversity could make a particular contribution to other environmental benefits.

Its purpose is to provide a clear visual way for groups and individuals to understand the areas which are or could become of particular importance for biodiversity and the environment to target nature recovery action.

**Figure 1**: Order of steps to be followed in preparing contents of a local nature recovery strategy

**Over 1,000 residents responded to the Nature Recovery survey.**

**Data Sources:**

- Local ecological surveys: Data from recent species counts and habitat quality assessments across Leicestershire, Leicester, and Rutland.
- National biodiversity datasets: Integration of data from the UK BAP, NBN Atlas, and State of Nature Reports.
- Historic land and species records: Data from the Leicestershire & Rutland Wildlife Trust and Leicestershire and Rutland Environmental Records Centre.
- Habitat mapping: Sourced from several organisations such as Natural England's datasets, Rural Payment Agency, Environment Agency, Forestry Commission, UK CEH, National Forest Inventory 2021[1].
- Environmental conditions: Access to nature and air quality data, Environment Agency data on water quality, natural flood management and ecological status of catchment areas.

**Geographic Information Systems (GIS) for Mapping:**

GIS was employed to:

- Overlay species distribution with habitat data to identify areas of ecological importance.
- Model wildlife corridors using connectivity analysis.
- Identify areas for habitat creation based on land use and ecological significance.
- Assess land use and constraint patterns for feasible implementation.

## Step 2: (Not applicable for the first strategy)

## Step 3: Describe the Strategy Area and Its Biodiversity and Opportunities for Recovery

**Overview of the Strategy Area:**

The Local Nature Recovery Strategy focuses on Leicestershire, Leicester, and Rutland, which comprise areas that are rich in biodiversity and contain key habitats such as wetlands, woodlands, urban, farmland and grasslands. Opportunities for recovery are centred around enhancing these habitats, restoring connectivity, and addressing species decline.

**Stakeholder Engagement:**

- Interactive workshops, online maps, focus groups, and surveys were used to gather input from stakeholders, including identifying local pressures, opportunities, land use and biodiversity preferences and priorities.
- Stakeholders included farmers, tenant farmers, land managers, landowners, local government, environmental organisations, residents, and national agencies (Natural England, Environment Agency, Forestry Commission, National Forest and DEFRA).
- Engagement Phase (March – July) comprised of a stakeholder survey - 96 responses received. A public survey - 1,077 responses received. An online interactive map - 516 comments added. Stakeholder briefings/workshops - 7 online briefings for stakeholders (90) and 6 member briefings (77). In-person workshops - 4 farmer and landowner workshops (35 attendees) - 10 resident workshops (over 80 attendees). A copy of the Engagement Report including the results from the public survey can be found here: www.leicestershire.gov.uk/environment-and-planning/local-nature-recovery-strategy/lnrs-resources
- A core stakeholder advisory group was established to guide the strategy development, called the Strategic Reference Group.

[1] National Forest Inventory 2021 - provides detailed data on the extent of tree and forest cover across the country.

## Step 4: Agree Local Nature Recovery Strategy Priorities and Identify Potential Measures (Statement of Biodiversity Priorities)

**Species and Habitat Prioritisation**

**Species and habitats were prioritised based on:**

- Guidance provided by Natural England.
- Assessment of 1500 species by 40 county recorders and local species experts.
- Conservation status (e.g., Red List species, UK BAP species).
- Vulnerability to local pressures.
- Ecological importance (e.g., keystone species, pollinators).
- Stakeholder preferences for culturally or economically significant species (e.g., farmland birds, pollinators).

**Alignment with Existing Plans:**

Over 100 local and national plans were reviewed to ensure the Local Nature Recovery Strategy aligned with existing priorities, including local biodiversity action plans, local plans, blue and green infrastructure strategies, climate strategies, flood management plans, environmental organisations habitat and species best practice guides and agri-environment schemes such as the Environmental Land Management (ELM) schemes.

**Stakeholder Input on Priorities:**

Continuous feedback from stakeholders ensured that the strategy reflected local and national priorities, with particular focus on land management practices and habitat restoration.

## Step 5: Map Areas That Could Become of Particular Importance (Local Habitat Map)

**Mapping of Priority Areas for Nature Recovery:**

Areas of opportunity for habitat creation, biodiversity enhancement, and nature-based solutions were mapped. This included identifying areas critical for floodplain restoration, wetland creation, grassland enhancement, urban green and blue space protection and woodland creation and expansion.

**Criteria for Priority Area Selection:**

- Ecological important areas with high biodiversity value.
- Habitat connectivity: Locations that could enhance wildlife corridors and Nature Recovery Networks.
- Climate resilience: Areas critical for adaptation to climate change impacts.
- Feasibility of intervention: Areas with high stakeholder buy-in and suitable management practices.

**Opportunity Mapping:**

- Habitat creation example: Wetland restoration in the Soar and Wreake Valley, woodland expansion in the National Forest, Charnwood Forest and Leighfield Forest.
- Species reintroduction example: Potential areas for reintroducing species like Glow Worm, Hazel Dormouse and Water Voles.
- Nature-based solutions example: Mapping areas for actions such as floodplain restoration to deliver both biodiversity and ecosystem services.

## 3.3 Governance Structure

The development of the Local Nature Recovery Strategy was supported by a governance structure consisting of a Steering Group, in turn supported by a Strategic Reference Group and several Working Groups. See figure 2. All of which was supported by a dedicated Project Manager.

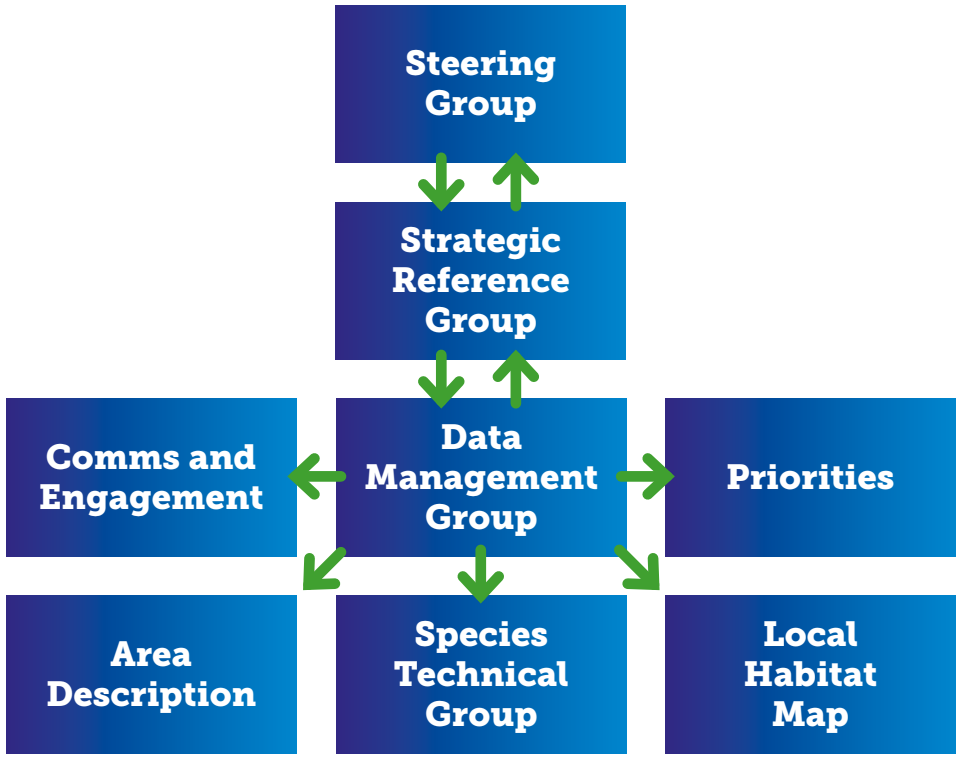



**Figure 2**: Governance structure for the development of the Leicestershire, Leicester and Rutland Local Nature Recovery Strategy.

The structure allowed the right people and organisations to be involved in the right way at the right time, to enable the most effective use of people's time, knowledge and expertise.

The Local Nature Recovery Strategy was developed through a rigorous and collaborative process, leveraging the best available data, integrating stakeholder perspectives, and aligning with over 100 existing priorities and plans. This comprehensive approach ensures that the Local Nature Recovery Strategy is both ambitious and achievable, providing a blueprint for nature recovery that will benefit biodiversity, people, and the local economy for years to come.

Further information about what a responsible authority should include in a Local Nature Recovery Strategy is found in the government's statutory guidance: (www.gov.uk/government/publications/local-nature-recovery-strategy-what-to-include)

Responsible and supporting authorities should read this guidance about what to include in a Local Nature Recovery Strategy alongside The Environment (Local Nature Recovery Strategies) (Procedure) Regulations 2023: (www.legislation.gov.uk/uksi/2023/341/made).

The regulations set out the process they must follow when they prepare, publish, review and republish their strategy.

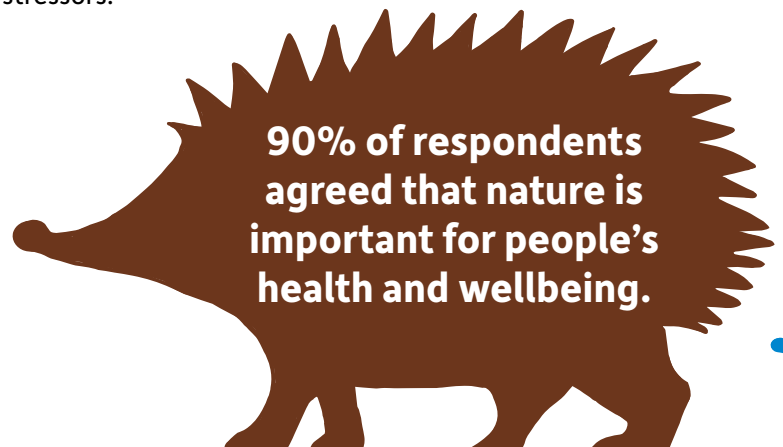
Authorities that are responsible for delivering the Local Nature Recovery Strategy will need to review the strategy and report on progress with its partners and stakeholders within 3 to 8 years of the initial strategy being approved. Thereafter, strategies are expected to be reviewed approximately every 5 years.

# 4. Strategic Aims

The Local Nature Recovery Strategy has been developed through a comprehensive review of over 100 existing plans and strategies, along with an assessment of more than 400 associated priorities against Natural England's National Environmental Objectives. This robust analysis has allowed the Local Nature Recovery Strategy to align with a wide range of national and local plans, ensuring it is not only comprehensive but also complementary to ongoing initiatives.

As the strategy focuses on nature recovery, the Local Nature Recovery Strategy plays a critical role in supporting other key strategies that address pressing environmental issues, such as flood management, climate resilience, and improvements to air and water quality. By implementing nature-based solutions, the Local Nature Recovery Strategy contributes directly to these areas, demonstrating the essential role of biodiversity and ecosystem health in broader environmental goals.

The strategic aims outlined are designed to address the specific challenges facing nature while also supporting sustainable farming practices and development objectives. Each aim has been carefully crafted to ensure that the Local Nature Recovery Strategy not only promotes biodiversity recovery but also contributes to the area's resilience to climate change and other environmental stressors.




**i. Increase the area and diversity of land and water managed for wildlife in Leicestershire, Leicester, and Rutland (make more space for nature):**

Large-scale integrated habitat creation and restoration measures/projects within both areas of existing high wildlife value, and less ecologically distinct areas to improve habitat corridors, ecological connectivity, and support natures recovery.

**ii. Increase biodiversity by improving the ecological condition (habitat quality) of existing areas for nature conservation:**

Conserve and enhance wildlife habitats, increasing the biodiversity value of protected/priority sites. Drive species recovery by targeting bespoke management in the right places to improve habitat quality. Improve ecological condition of existing habitats to support priority species.

**iii. Reinstate natural processes, make space for water and utilise Nature-Based-Solutions to support nature and climate resilience:**

Re-instate natural processes and utilise nature-based solutions to support resilience, both ecological and for projected climate change. Reconnect rivers with their floodplains, restore floodplains and reverse historic channel straightening to reduce flood risk. Plant trees and encourage natural regeneration of woodlands to draw down carbon and improve both water and air quality. Allow dynamic mosaics of habitat to develop to support biodiversity and natural succession of wildlife communities to occur.

**iv. Protect and enhance green and blue spaces within urban habitats:**

Implement green and blue infrastructure into urban design and planning, adopt management strategies that increase resilience to environmental stresses and climate change and create corridors and networks facilitating wildlife movement and ecological interactions.

**v. Promote sustainable agriculture and support local food systems:**

Encourage farming practices that enhance soil health, reduce chemical inputs, and promote biodiversity. Encourage the production and consumption of local and sustainable food that reduce food miles and promote environmentally friendly farming practices.

**vi. Improve ecological connectivity by establishing coherent and resilient ecological networks at scale:**

Create, conserve, and enhance the Nature Recovery Network by linking with existing and establishing new green/blue corridors across the strategy area and neighbouring strategy areas.

**vii. Reduce major pressures and threats to nature including Invasive Non-Native Species:**

Significantly reduce the prevalence of Invasive Non-Native Species (INNS) and its detrimental effects on native ecosystems.

**viii. Improve our understanding of the State of Nature and actively monitor habitat/species change over time:**

Engage and educate all ages about the importance of the natural world. Establish robust monitoring systems to track the effectiveness of nature recovery practices and adapt strategies as needed. Using indicator species at landscape scales develop key data to show responses to pressures and positive conservation measures. This includes using data-driven approaches to assess environmental impacts and inform continuous improvement efforts.

**“I am grateful for the natural world and love to be in it. I feel better surrounded by nature.”**

(Resident)

# 5. Area Description - Natural Landscape

## 5.1 Introduction

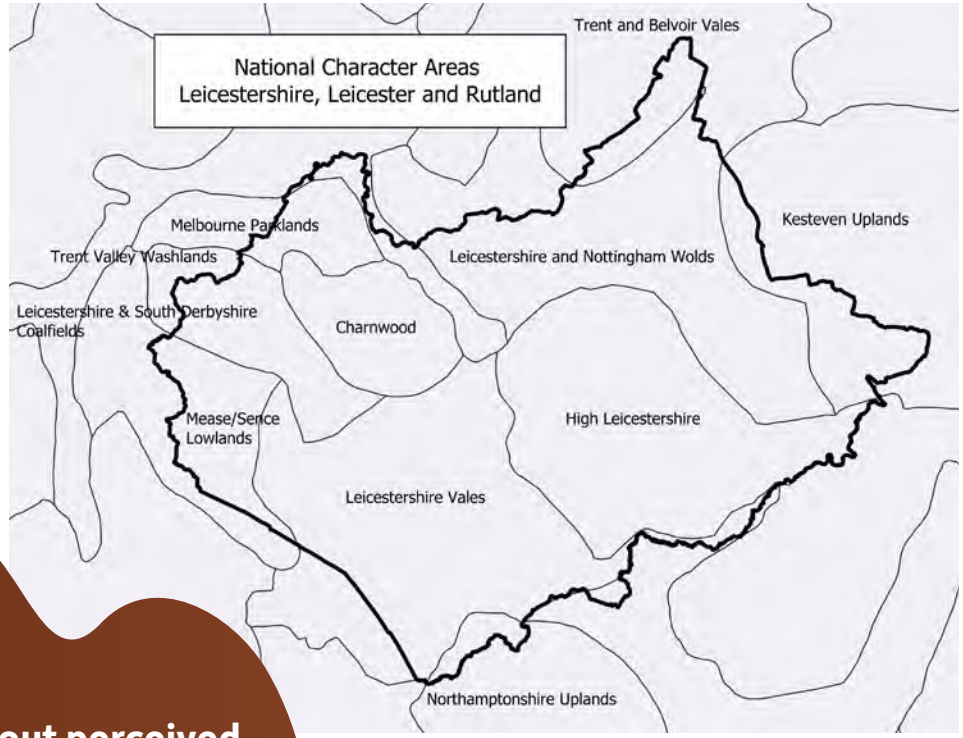
The natural landscape of the strategy area is defined by its diverse physical characteristics, which include unique topography, varied geology, and rich hydrological systems. These natural features have shaped the biodiversity and ecosystems of the part of middle England. Understanding these elements is crucial for identifying key areas for conservation and nature recovery efforts. This section explores the natural foundations that make up the distinctive character, from its national character areas to its geodiversity and hydrology.

## 5.2 The National Character Areas

There are 159 National Character Areas (NCAs) in England, each of which is distinctive with a unique 'sense of place'. These broad divisions of landscape form the basic units of countryside character, on which strategies for both ecological and landscape issues can be based.

The Local Nature Recovery Strategy area of Leicestershire, Leicester, and Rutland contains ten National Character Areas, each emphasising their unique ecological features and biodiversity. What follows is a brief overview of each of the ten areas.

**Figure 3:** Map showing the ten National Character Areas that cover the Leicestershire, Leicester and Rutland Local Nature Recovery Strategy area.

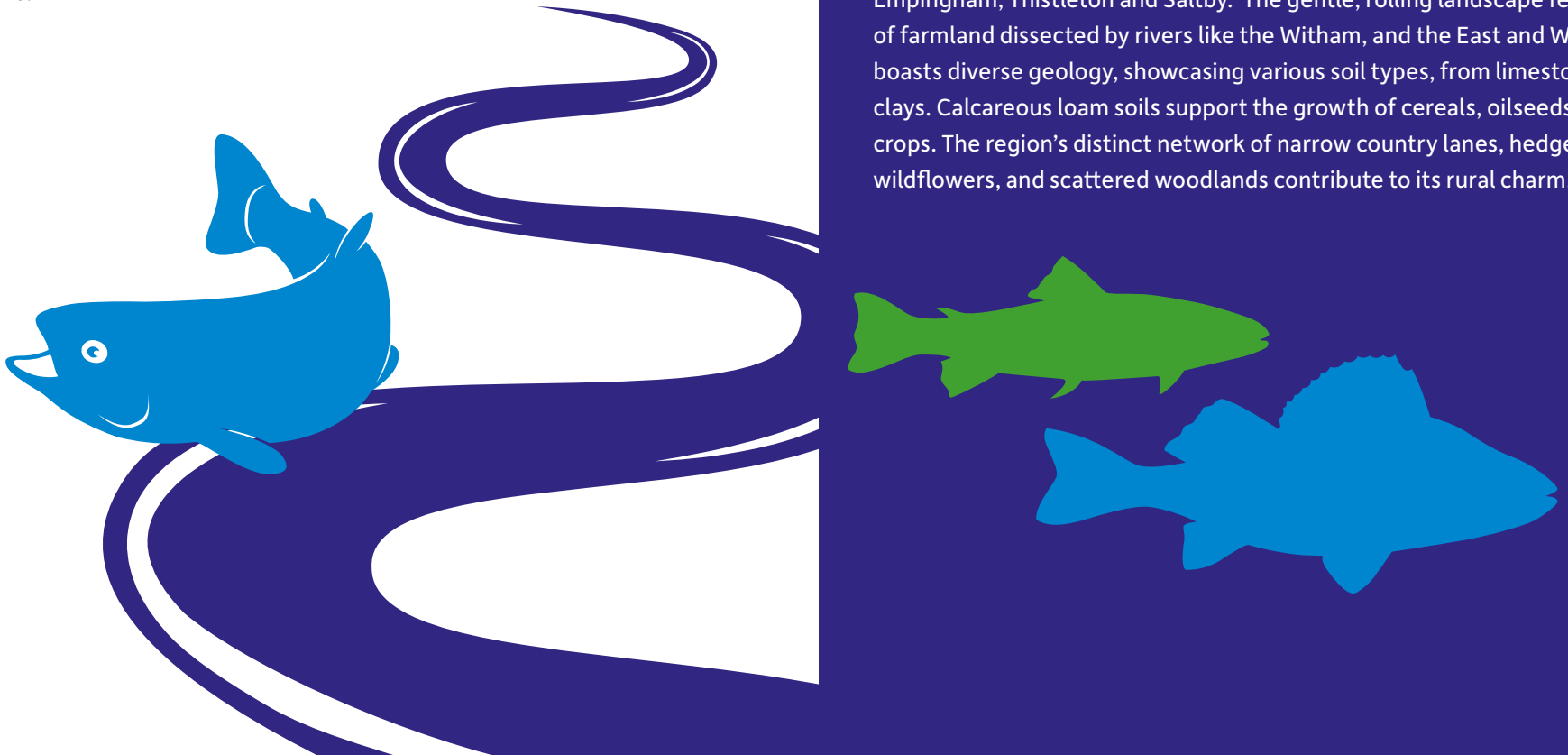



**"I am concerned about perceived separation from nature for many people, leading to less empathy."**
(Oadby and Wigston resident)

**a) Trent and Belvoir Vales National Character Area**

Characterised by undulating farmlands and rural scenery, and surrounding the **River Trent**, this character area covers a small part of the north of Leicestershire. Newark-on-Trent sits at its heart, while Grantham, Nottingham, Lincoln, and Gainsborough mark its periphery. Settlements include Bottesford, Barkestone and Hose. These low-lying landscape provide expansive open views due to its limited woodland cover.

The area's fertile soils have long-supported diverse agricultural practices, yet this has led to the loss of much semi-natural habitat. The river Trent acts as a vital biodiversity corridor, supporting various wetland habitats and serving as a significant route for wildlife movement. Notably, it also serves functions like flood storage and provides cooling water for local power stations.



**b) Leicestershire and Nottinghamshire Wolds National Character Area**

Moving eastwards towards the gently dipping Jurassic rock landscape between Nottingham and Leicester, this rural, open landscape features mixed farmlands and includes the bustling market town of Melton Mowbray. Further South the **River Eye** with its Site of Special Scientific Interest (SSSI) designation has a significant impact on the landscape. **Rutland Water** stands out as a prominent feature within this rural backdrop, offering a picturesque setting atop undulating hills.

**c) Kesteven Uplands National Character Area**

Lying at the intersection of several counties and predominantly within Lincolnshire's historic Kesteven district, this character area covers a small part of the east of Rutland and Leicestershire and includes settlements such as Empingham, Thistleton and Saltby. The gentle, rolling landscape features a mix of farmland dissected by rivers like the Witham, and the East and West Glen. It boasts diverse geology, showcasing various soil types, from limestone to heavy clays. Calcareous loam soils support the growth of cereals, oilseeds, and root crops. The region's distinct network of narrow country lanes, hedgerows with wildflowers, and scattered woodlands contribute to its rural charm.

**d) Northamptonshire Vales National Character Area**

A series of low-lying clay vales and river valleys define this character area, as it skirts along the southeast of Leicestershire and Rutland and includes settlements such as Market Harborough and Great Easton. The rivers Nene and Welland, along with their tributaries, shape the landscape, where settlements often dominate the visual landscape due to its 10 percent urban coverage. Major road networks, including the M1, A45, A6, and A5, crisscross this region, influencing its visual dynamics and land use.

**e) Leicestershire Vales National Character Area**

Adjacent to Northamptonshire Vales and extending from Hinckley to Leicester and towards Market Harborough and Lutterworth, a range of towns dot this area, with contrasting urbanisation in the north and rural tranquillity in the south. This expansive, relatively open landscape features low-lying clay vales interspersed with varied river valleys and a mix of arable and pastoral farmland.

**f) Trent Valley Washlands National Character Area**

This character area covers a very small part of northwest Leicestershire near Marston and the Kingsbury Water Park and Wanlip and Watermead Park. Comprised of river floodplains in the heart of England, it offers a distinctly narrow, linear, and low-lying landscape. Predominantly flat these washlands consist of flood plains and gravel terraces periodically flooded deliberately for flood management purposes. The geological composition and soil types greatly influence settlement patterns and agricultural land use, dividing the area into arable lands on river terraces and pastoral farming on flood plains.

**g) Charnwood National Character Area**

Situated amidst urban areas, Charnwood maintains its rural essence, with villages nestled within its bounds. Distinguished by its geology and upland qualities, this character area stands out amidst the gentle lowlands. A mosaic landscape, it comprises rivers and waterbodies, heathland, farmland, parkland, and woodland, featuring rugged, rocky outcrops owing to its underlying Precambrian geology. The region is relatively well-wooded, with mixed deciduous and coniferous woodlands providing a unique contrast to the surrounding landscapes.

**h) Leicestershire and South Derbyshire Coalfields National Character Area**

This transitioning landscape has evolved from extensive coal mining heritage to a blend of restored landscapes, woodlands, and agricultural spaces including settlements such as Ashby-de la-Zouch, Ibstock and Newbold Verdon. It spans a plateau offering panoramic views of shallow valleys and gentle ridges. An ongoing transformation aims to integrate these formerly industrial spaces into the predominantly rural agricultural scenery.

**i) Melbourne Parklands National Character Area**

Bordered to the north and west by the Trent Valley, with the Burton-upon-Trent to its southwestern arc, the area includes settlements such as Castle Donnington, Breedon on the Hill and Diseworth. Situated between ancient forests, it comprises a mix of farmland, woodlands, and grand estates. Calke Abbey, just across the Derbyshire border, hosts a Grade II listed historic park, designated as a National Nature Reserve (NNR), and boasting significant woodland cover.

**j) High Leicestershire National Character Area (includes most of West Rutland)**

Emerging from the clay of the Leicestershire, West Rutland and Northamptonshire Vales, and scattered with small villages such as Great Dalby, Tur Langton and South Luffenham, this character area rises above lowland plains and valleys. Characterised by broad, rolling ridges and secluded valleys, it exudes a quiet, remote, and rural charm. Farms dot the landscape, interconnected by a network of country lanes and footpaths. Throughout this diverse area, the delicate balance between agricultural practices, wildlife corridors, and urban settlements contributes significantly to maintaining a rich and diverse ecosystem. These landscapes offer an array of challenges and opportunities for conservation efforts and co-existence, showcasing the importance of varied ecosystems and human interaction with nature.

**k) Mease/Sence Lowland National Character Area**

The Mease/Sence Lowlands are a gently rolling agricultural landscape centred around the rivers Mease, Sence and Anker. The area extends across: Derbyshire in the north, Warwickshire in the south, Leicestershire in the east and Staffordshire in the west. With its towns lying on the fringes of the National Character Area (NCA), only a very small percentage of it is urban. These lowlands retain a rural, remote character, with small villages, red brick farmsteads and occasional historic parkland and country houses. The National Forest extends into the area north of the River Mease.

The NCA contains one Special Area of Conservation (SAC) - the River Mease, which is also a Site of Special Scientific Interest (SSSI) - and has 139 ha of nationally designated SSSI, including the Ashby Canal SSSI. Important habitats include neutral grasslands, wet meadows, parkland, wet woodlands, rivers and streams, all of which support characteristic and rare species of international importance, including the White-clawed Crayfish, the Spined Loach and the Bullhead fish.

**83% of respondents said creating new or expanding existing habitats is very important.**

## 5.3 Geodiversity

Leicestershire, Leicester, and Rutland boast a rich geodiversity that has shaped the landscapes, ecosystems, and economies of the area over millions of years. From the ancient Precambrian rocks of Charnwood Forest, Oolitic Jurassic Limestone outcrops of Rutland and the glacial deposits of the Pleistocene era, the geological make-up of the area has left an indelible mark on its character.

**Charnwood Forest** is home to some of the oldest Precambrian rocks in England. These rocks offer a glimpse into the early geological history of the region, with evidence of marine environments, volcanic activity, and ancient life forms. Additionally, the Carboniferous rocks in the west, particularly in the Leicestershire Coalfield, have played a significant role in the area's economic history, once fuelling a thriving coal mining industry.

Moving eastward, the landscape transitions to Mesozoic rocks, including Triassic, Jurassic, and Cretaceous formations. These rocks have yielded valuable insights into past environments, from arid deserts to shallow seas. The Jurassic strata, for example, are rich in fossils, providing a window into ancient marine ecosystems and the creatures that inhabited them.

Glacial deposits from the Pleistocene era cover much of the area, offering evidence of past ice ages and shaping the modern topography through processes like glacial till deposits and river erosion. These are not only of geological interest but also provide resources for construction materials, such as aggregates found in quarries throughout the region.

The use of geological resources has played a crucial role in the economic development of the area. From coal mining in the **Leicestershire Coalfield** to limestone quarrying and ironstone mining in **Rutland**, the extraction of minerals has left a lasting impact on the landscape and local communities. Distinctive building stones, such as Sandrock and Marlstone Rock Formation, have contributed to the unique architecture of the area.

The area's geological heritage has been a focal point for scientific research and education. **Fossil discoveries**, like the Rutland dinosaur Cetiosaurus and the Barrow Kipper pliosaur, have captured the imagination of researchers and the public alike, shedding light on ancient ecosystems and prehistoric life.

Image courtesy of Charnwood Forest LPS

## 5.4 Hydrology

The hydrology of Leicestershire, Leicester, and Rutland is significantly influenced by an intricate and diverse network of rivers, lakes, reservoirs, and canals - examples of the significant waterbodies can be found in **Appendix D1.a**.

These water bodies play a crucial role in shaping the landscape, supporting biodiversity, and providing essential environmental benefits. Not only vital for sustaining local ecosystems, but they also contribute significantly to regional water supply, flood management, and recreational activities.

The **River Soar** is the most prominent watercourse in Leicestershire, draining a large portion of the county and flowing into the **River Trent** and its surrounding catchment area, which covers approximately 1,380 km². It traverses both urban and rural landscapes, influencing the hydrology of Leicester City, Loughborough, and Melton Mowbray. Several stretches of the River Soar are designated as Sites of Special Scientific Interest (SSSIs), particularly where it supports rich aquatic habitats and species, including wetland areas and floodplain meadows.

The catchment faces several hydrological challenges due to urbanisation and agricultural activities. Urban areas contribute to issues like pollution, with sewage spills and plastic waste being significant problems. The rural sections, particularly around Melton Mowbray, experience pressures from agricultural runoff, which affects water quality and increases flood risk.

Physical modifications to the river, such as culverts and weirs, have altered natural flow regimes. This in turn reduces oxygen levels and negatively impacts aquatic ecosystems. Additionally, the catchment is vulnerable to exacerbate flood risks caused by climate change, impacting water resources further. Those responsible for our hydrological management, working with catchment partnerships, aim to address these challenges through initiatives like natural flood management, river restoration, and improving water quality. These projects aim to enhance the river's resilience to environmental pressures and ensure sustainable water management for the region.

Also in Leicestershire, the **River Wreake** is a significant tributary of the **Soar**, flowing through predominantly agricultural landscapes. It is known for its meandering course, which contributes to local floodplains and wetland habitats. Similarly, the **Eye Brook** and its reservoir are vital for both water storage and biodiversity, supporting a range of species, including wildfowl and aquatic plants.

The **River Welland** flows through the picturesque Welland Valley, forming a vital part of the landscape and ecology of the area. Originating in the hills of Northamptonshire, the river meanders through rural Leicestershire and Rutland before continuing its journey eastward. The River Welland plays a crucial role in nature conservation and water management efforts, with ongoing initiatives to enhance its ecological value, improve water quality, and increase resilience to flooding. The river is also a key feature in local efforts to restore wetland habitats and promote sustainable land management practices, ensuring the Welland Valley remains a thriving environment for both wildlife and people.

The **River Mease** is a lowland river of significant ecological importance, flowing through the counties of Leicestershire, Derbyshire, and Staffordshire. Recognised as a Special Area of Conservation (SAC) due to its rare habitats and species, the river is home to nationally important populations of species such as the **Spined Loach** and the **White-clawed Crayfish**. The surrounding floodplains and meadows along the river support a rich diversity of wildlife, contributing to the river's exceptional environmental value. However, the River Mease faces ongoing challenges, particularly from nutrient enrichment and changes in land use. Conservation efforts are focused on improving water quality, restoring habitats, and protecting its unique biodiversity. As part of wider environmental initiatives, the River Mease continues to be a focal point for nature recovery and sustainable water management within the region.

Rutland is home to **Rutland Water**, one of the largest artificial lakes in Europe was only created in 1976 and consequently its effect on the landscape is only in its infancy. This reservoir is fed by the Upper and Lower Gwash Rivers and several large streams playing a critical role in water supply and providing a vital habitat for birds, including Osprey and other waterfowl, making it a site of international importance for bird conservation.

The rivers and water bodies in Leicestershire, Leicester and Rutland support a variety of habitats, including wetlands, floodplains, and riparian woodlands. These areas are crucial for biodiversity, providing habitat for species such as otters, water voles, and a range of fish, including brown trout, European eel and Atlantic salmon.

Complementing the natural rivers are man-made canal systems, such as the **Ashby Canal SSSI**, **Oakham Canal** and **Grand Union Canal** including the SSSI-designated Leicester Line of the **Grand Union Canal**, once used for trade and transportation. Today, these waterways offer corridors for leisure activities and provide habitat and connectivity for a variety of species.

**Ponds**, both natural and artificial, are scattered throughout the landscape, providing connectivity and homes for mammals, birds, amphibians, insects, and other aquatic species. These changing, often temporary waterbodies play a crucial role in supporting biodiversity, particularly in agricultural landscapes where natural wetlands are scarce. Ponds, particularly in acid soils such as those around Charnwood Forest provide the acidic water vital for Leicestershire, Leicester and Rutland rarest amphibian, the **Palmate Newt**.

**Ditches**, though often overlooked, are vital components of the hydrological landscape, helping to manage water flow, reduce flooding, and support wetland habitats. These linear water features crisscross the countryside, providing connectivity and refuge for a variety of aquatic plants and animals. However, habitat loss and fragmentation and invasive, non-native species significantly disrupt these aquatic ecosystems and corridors.

The hydrology of Leicestershire, Leicester, and Rutland is not without its challenges. Urban areas are affected by polluted runoff from impermeable areas, roads, and water treatment system discharges. Poor urban drainage systems and surface water management are a cause of localised flooding and impact groundwater recharge and stream conditions. Intensive land management in the upper reaches of the Soar contributes to high levels of diffuse agricultural nutrients and sediment affecting water quality. Rivers previously adapted for these intensive agriculture and historical industrial activities, now affect natural flows and water levels.

Climate change poses additional threats, altering rain patterns and exacerbating droughts and floods. The changing climate, catchment practices and modification of river channels impact on flow levels and contribute to increased flood risk across the catchment areas.

The catchment areas also feature grasslands and agricultural fields, where traditional farming practices co-exist with efforts to conserve natural habitats. Initiatives like the creation of buffer strips along riverbanks and the restoration of wetlands help to mitigate the impacts of agriculture on local ecosystems.

The rivers are also home to several species of birds, including **Kingfishers**, **Herons**, and various species of warblers that thrive in the riparian vegetation. The presence of Invasive Non-native Species like the **American Signal Crayfish** and **Himalayan Balsam**, however, poses challenges to the local biodiversity, as these species compete with native flora and fauna.

Conservation efforts, led by local catchment partnerships, focus on improving water quality, restoring natural river functions, and enhancing habitats to support the region's rich biodiversity. These initiatives are crucial in ensuring that Leicestershire, Leicester, and Rutland's rivers continue to provide ecological, recreational, and economic benefits to the local communities.

**"Nature fills me with good feelings so there is less room for all the bad stuff."**
(Charnwood resident)

# 6. Area Description – People Shaping the Landscape

## 6.1 Introduction

Leicestershire, Leicester, and Rutland are at the heart of rural England and is characterised by a blend of lowland landscapes, rural expanses, and densely populated urban areas. Leicestershire's and Rutland's position as a key hub for agriculture, industry, and transport places significant pressure on its natural resources, making it a focal point for biodiversity action.

The rural character of Rutland, with its rolling hills, agricultural fields, and woodlands, contrasts with the more urbanised areas around Leicester City, which serves as a thriving cultural and economic heart. This mixture of urban and rural environments creates a complex ecological mosaic that presents both opportunities and challenges for nature recovery. The diversity of these landscapes, from floodplains and grasslands to ancient woodlands, supports a rich array of wildlife, though many habitats have been fragmented by urban development and intensive land use.

Human activity has significantly influenced the landscape of the strategy area over centuries, from rural farming practices to urban development. These interactions have shaped not only the physical environment but also the cultural and ecological heritage. This section examines how various human influences ranging from farming and urbanisation to the preservation of heritage sites and wildlife conservation efforts have played a vital role in shaping the landscape as we see it today.

## 6.2 Rutland

Rutland is the smallest historic county in England, located in the East Midlands region, bordered by Leicestershire, Lincolnshire, and Northamptonshire. Despite its size, Rutland is renowned for its picturesque landscapes, rich history, and vibrant community. Rutland is characterised by its rolling hills, patchwork of agricultural fields, and well-preserved rural environment. The county is predominantly rural, with much of the land used for farming and conservation. The landscape includes a mix of woodlands, meadows, and wetlands, providing diverse habitats for wildlife.

The county town of Oakham is the administrative and commercial centre of Rutland. It is known for its historic architecture, including Oakham Castle, one of the best-preserved Norman halls in England. Uppingham is another notable town, famous for its public school and its charming market square. Rutland is also dotted with picturesque villages, each with its own unique character, often featuring traditional stone-built houses and historic churches.

Rutland has a rich history that dates back to the Roman and Anglo-Saxon periods, with numerous historical sites and buildings. The county maintains a strong sense of identity and community, with local traditions and events celebrated throughout the year.

Agriculture plays a significant role in Rutland's economy, with arable farming, livestock, and sheep farming being prominent. The county has a growing tourism sector, driven by its natural beauty, historic sites, and Rutland Water, which attracts visitors for outdoor activities such as sailing, birdwatching, and cycling.

Rutland is home to a variety of wildlife, supported by its diverse habitats, including woodlands, grasslands, and wetlands. The county's natural environment is actively managed and conserved through various local initiatives and organisations. Conservation efforts in Rutland are particularly focused on maintaining and enhancing the quality of its natural landscapes and supporting biodiversity across the network of nature reserves.

Rutland may be the smallest county in England, yet it boasts one of the best nature reserves in the entire country - **Rutland Water**, the focus of much of the county's conservation efforts. For such a diverse, beautiful and excitingly wild place, Rutland Water is relatively young. The reservoir, one of the largest man-made bodies of water in Western Europe, covers over four-square miles, and the path around the edge is 23 miles long. When full, it has enough water for about three years of drought, supplying mainly the east of England.

## 6.3 Leicester City and Urban Towns and Settlements

Across the Leicestershire, Leicester, and Rutland Local Nature Recovery Strategy area, the urban environment is a complex and dynamic mosaic of built infrastructure, green and blue spaces, and natural habitats. In Leicester City and the urban towns and settlements, this mosaic provides unique opportunities and challenges for biodiversity conservation and the enhancement of ecosystem services.

Green spaces such as parks, gardens, urban woodland, and nature reserves serve as vital connections and refuges for biodiversity, supporting a rich variety of plant and animal species. These areas are essential for maintaining ecological networks within urban environments, acting as vital corridors that connect isolated patches of habitat. This connectivity is crucial for the movement of species, genetic diversity, and the overall health of urban ecosystems.

In Leicester City, for example, iconic green spaces like **Watermead Park**, **Abbey Park**, **Victoria Park**, and **Aylestone Meadows** provide not only recreational opportunities, but also important habitats for species ranging from common urban wildlife like foxes and songbirds, to fewer common species such as bats and rare invertebrates. The presence of ancient and veteran trees, wildflower meadows, woody scrub and wetland areas within these parks adds to the mosaic of habitats increasing biodiversity and opportunities for nature to flourish within the urban landscape.

Urban gardens, allotments, cemeteries and community-managed green spaces also play a crucial role in enhancing urban biodiversity. These areas often feature a mix of native and ornamental plants, which provide food and shelter for pollinators, birds, and other wildlife. Community gardens and urban agriculture initiatives contribute to local food production, reduce food miles, and support pollinator populations - essential for domestic food security. These also provide valuable opportunities for people to experience and engage with nature on their doorsteps.

Blue spaces, encompassing rivers, lakes, ponds, and wetlands, are equally significant in shaping the urban ecological fabric of Leicester City and the surrounding towns. The River Soar, flowing through the heart of Leicester, is a key blue corridor that supports a range of aquatic and semi-aquatic species. Its banks and associated wetlands are home to species such as kingfishers, otters, and various fish, aquatic invertebrates and amphibian species, which rely on the clean water and riparian habitats for survival.

In addition to the River Soar, urban water bodies such as canals, reservoirs, and artificial lakes provide critical habitats for aquatic and bird species. The Grand Union Canal, for instance, not only serves as a recreational waterway but also as a habitat corridor, facilitating the movement of species between different parts of the city and beyond. These blue spaces are particularly important for species that are otherwise isolated in urban settings.

Moreover, blue spaces contribute significantly to the overall health of urban ecosystems by regulating water flow, reducing the risk of urban flooding, and improving water quality through natural filtration processes. Wetlands and vegetated riparian zones act as natural buffers, absorbing excess nutrients and pollutants before they enter watercourses, especially crucial in urban areas.

Both green and blue spaces offer vital ecosystem services that contribute to the quality of life for urban residents. Trees and vegetation in parks and along streets help to capture carbon, mitigate the urban heat island effect[2], and improve air quality by filtering out pollutants. Similarly, blue spaces provide cooling effects and help regulate local climates, which is increasingly important in the face of climate change.

These natural areas also offer cultural and recreational services, providing spaces for outdoor activities, relaxation, and community engagement. Urban residents benefit from the mental and physical health advantages of having accessible nature close to where they live and work. The presence of water bodies and well-maintained parks can enhance property values, attract tourism, and foster a sense of place and community identity.

Despite the numerous benefits of green and blue spaces, urban areas like Leicester face significant pressures that threaten the integrity of these natural ecosystems. Urbanisation, with its associated infrastructure development, often leads to the loss, fragmentation, and degradation of habitats. This fragmentation can isolate populations of wildlife, making them more vulnerable to environmental changes and reducing overall biodiversity.

Urban areas are also hotspots for pollution, including air, water, and noise pollution, with proven detrimental effects on both human health and ecosystem functioning. Water bodies in urban areas are particularly susceptible to pollution from sewage overflows and storm water runoff, carrying pollutants from roads, gardens, and industrial areas into rivers and lakes, degrading water quality and harming aquatic life.

Climate change exacerbates these pressures, leading to more frequent and severe weather events such as heatwaves, storms, and flooding. These changes pose additional risks to both natural habitats and the built environment, requiring adaptive management strategies to ensure the resilience of urban ecosystems.

Addressing these challenges necessitates a thoughtful and integrated approach to urban planning and management. Nature-based solutions, such as the restoration of rivers and wetlands, the creation of green roofs and walls, and the expansion of urban green spaces, can enhance the resilience of urban ecosystems and mitigate the impacts of urbanisation and climate change.

In Leicester, initiatives like the High Quality Sustainable Urban Drainage Systems (SuDS) implemented in new developments helps manage storm water runoff, reducing the risk of flooding while also providing habitats for wildlife. Similarly, the redevelopment of brownfield sites offers opportunities to create new green and blue spaces that contribute to urban biodiversity and the wellbeing of residents.

Leicester City and its surrounding towns can create a more sustainable, resilient, and biodiverse urban environment, where nature and people co-exist harmoniously. This approach not only conserves and enhances the natural heritage of the area but also ensures that urban ecosystems continue to provide essential services to current and future generations.

[2] An urban heat island is a localised area of increased temperature (compared to surrounding rural areas) in a dense, urban area. It is caused by human-made structures, like buildings and roads, absorbing and retaining heat more than natural surfaces, such as grass and forests.

## 6.4 Open Mosaic Sites

Open mosaic habitats are complex and diverse habitats that emerge on post-industrial or urban land, such as former quarries, brownfields, or derelict urban areas. These habitats are characterised by a mix of bare ground and quick-to-establish plant life known as early successional communities. They include grassland, scrub and wetland areas all in close proximity. They are particularly significant for supporting a variety of species that are adapted to these unique conditions, including rare invertebrates, birds, and plants that thrive in nutrient-poor or disturbed soils.

In Leicestershire, Leicester, and Rutland, open mosaic habitats are often found in areas that have undergone industrial decline or urban redevelopment. Notable examples include parts of the National Forest and former coalfield sites, where natural regeneration has led to the development of these valuable habitats. The **Cossington Meadows** nature reserve and areas around Coalville are examples where open mosaic habitats have been allowed to develop, supporting a wide range of species, and contributing to local biodiversity.

These habitats are crucial for biodiversity because they provide niches for species that are not typically found in more stable or less disturbed environments. In Leicestershire, these areas are important for species such as the **Dingy Skipper Butterfly**, various species of bees and wasps, and pioneer plant species. The diversity within open mosaic habitats also supports a high number of invertebrate species, which in turn provide food for birds and other wildlife.

Open mosaic habitats are recognised as a priority habitat under UK conservation frameworks. In Leicestershire, they are often included within designated Local Wildlife Sites and are subject to conservation efforts aimed at preserving their unique ecological character. These habitats are particularly valued for their role in supporting species that are declining elsewhere in the landscape, making their preservation a key aspect of local biodiversity strategies.

In addition to its scientific significance, the geological diversity of the area serves as a testament to the interconnectedness of natural processes, economic activities, and cultural heritage.

Image courtesy of NatureSpot

Several quarries are particularly known for their extraction of limestone, granite, and other minerals. These quarries are typically situated in rural areas, often in proximity to key geological features. Notable examples include quarries around Mountsorrel, known for its granite, and **Ketton** in Rutland, renowned for its limestone.

**Mountsorrel Quarry**, located in Charnwood, Leicestershire, is one of the largest granite quarries in Europe. The surrounding area is characterised by nationally important woodland, heathland, and grassland habitats. **Ketton Quarry**, situated in Rutland, is a limestone quarry surrounded by arable fields, hedgerows, and small woodlands, contributing to a varied landscape. **Bardon Hill Quarry**, also in Leicestershire, lies near one of the highest points in the county, in a landscape that includes scarce and important heathland and ancient woodland.

To boost biodiversity, quarries in Leicestershire and Rutland can be transformed and managed to create a valuable mosaic of habitats once extraction ends. The steep walls and deep pits can be filled with water to create lakes and wetlands and, when properly managed, can create valuable wetland habitats for amphibians, birds, and aquatic plants. Surrounding areas can be reforested or converted into grasslands and heathlands, supporting a wide variety of species. The use of native plants in the restoration process ensures the returned land is suitable for local wildlife. Native plants help prevent soil erosion, maintain local water quality, and provide habitat and food sources for native species.

Adopting a phased approach to this restoration work means sections of the land can be returned more quickly to a natural state, allowing various habitats to recover sooner. Over time, with a well-implemented restoration plan and effective post-restoration monitoring, these transformed quarries can serve as critical habitats for wildlife, contribute to regional ecological networks, and even become important recreational and educational sites for local communities, all while enhancing landscape connectivity and resilience against climate change.

## 6.5 Cultural and Heritage Assets

The rich historical and cultural heritage of Leicestershire, Leicester, and Rutland is deeply intertwined with the natural landscape. These areas are home to numerous historic monuments, battlefields, ridge and furrow landscapes, and registered parks and gardens, each contributing to the region's unique character and biodiversity. Conserving and integrating these features into the Local Nature Recovery Strategy is essential not only for safeguarding our cultural heritage but also for enhancing the ecological value of the landscape.

Leicestershire, Leicester, and Rutland boast a wealth of **historic monuments** that reflect the region's long and varied history. These include ancient earthworks, medieval castles, historic churches, and industrial relics. Many of these monuments are designated as Scheduled Monuments, offering them legal protection due to their national importance.

These sites often serve as important habitats for wildlife, with the surrounding landscapes providing undisturbed environments that support a variety of species. For example, old stone structures can host bat colonies, while the grounds around ancient monuments often support rare plant species and invertebrates. The Local Nature Recovery Strategy recognises the need to protect these historic sites from degradation while promoting their ecological enhancement through careful management and habitat creation.

The counties are also the site of several **historic battlefields**, most notably the Battle of Bosworth in 1485, which marked the end of the Wars of the Roses and the beginning of the Tudor dynasty. The Battle of Bosworth site is registered as a Battlefield under the Historic England register, highlighting its national significance.


**Farmers and landowners also thought nature is important for our sense of heritage and identity.**

These battlefields are not only of great historical interest but also represent significant open landscapes that have remained largely unchanged for centuries. The Local Nature Recovery Strategy will consider the preservation of these battlefields as part of the overall strategy, ensuring that any interventions enhance their ecological value without compromising their historical integrity.

The **ridge and furrow** landscapes of Leicestershire, Leicester, and Rutland are some of the best-conserved examples of medieval ploughing systems in the country. These landscapes, characterised by parallel ridges and troughs, were created by the methodical ploughing of fields with oxen during the medieval period.

Today, many ridge and furrow fields have been agriculturally improved, and would benefit from efforts to restore species rich elements. Those that remained undisturbed provide valuable grassland habitats that support a wide range of species, including wildflowers, birds, and insects.

They are also a visual reminder of the region's agricultural history. The Local Nature Recovery Strategy will encourage conservation of these landscapes as part of the overall strategy to maintain biodiversity, recognising their dual value as both cultural and ecological assets.

Leicestershire, Leicester, and Rutland are home to **several registered parks and gardens**, which are designated for their historical significance and landscape design. These include grand estates, such as **Belvoir Castle** and **Bradgate Park**, **Burley on the Hill** and **Exton Park**, as well as smaller, locally important gardens.

These parks and gardens are not only of cultural importance but also serve as important green spaces that contribute to local biodiversity. Many contain ancient woodlands, veteran trees, ponds, and flower meadows, all of which provide habitats for a variety of species. This strategy promotes the continued management and enhancement of these areas to support both their heritage and ecological function.

## 6.6 Farming Landscapes

Leicestershire, Leicester and Rutland sit at the heart of agricultural England, and rightly enjoy enviable reputations as being among the leading 'foody' counties of Britain, with a profusion of specialties.

There is a huge level of diversity to Leicestershire, Leicester and Rutland's agricultural landscape, from the volcanic rock and mudstones of Charnwood Forest in North West Leicestershire, to the flat, wide plains in the centre of the county, the rolling, heavy slopes along the Leicestershire and Rutland border, to the sandstones and ironstones in the west, mudstones in the middle and Oolitic limestones in the east of Rutland, where today successful vineyards are even being established on southward facing slopes.

Therefore, Leicestershire, Leicester and Rutland sit in prime, traditional 'mixed farming' country where all manner of agricultural enterprises have the potential to thrive. Livestock farming dominates the steep, rain-soaked west while the dryer, flat arable and horticultural lands lie to the east.

### a) Soil health

England has a great profusion of soil types and Leicestershire, Leicester and Rutland are no different. The area's predominant soil type is a **loamy clay** (representative of some 20% of England). This can be considered 'slowly permeable, seasonally wet, slightly acid but base-rich', that is to say: the soils in Leicestershire and Rutland can be challenging to farm, but in a kind weather season have the potential to be fertile and productive. In a more challenging weather season, they have the potential to be very difficult indeed, with a risk of overland flow and run-off in heavy rainfall situations, if left bare.

In general, agricultural soils in Leicestershire, Leicester and Rutland are classified as '**Grade 3**' ('good to moderate') in terms of productivity. Some areas are 'Grade 2' (very good') - in particular to the south of Ashby-de-la-Zouch and between Loughborough and Melton Mowbray, while there are also some corridors and pockets of 'Grade 4' (poor) land, especially along the routes of some of Leicestershire, Leicester and Rutland's watercourses, which are often flooded.

Leicestershire, Leicester and Rutland are among the most densely cropped and most densely livestocked areas in England, reflecting its mixed farm heritage and relatively productive land.

**"If there is collaborative working with neighbouring land owners, this will develop the motivation needed to implement nature recovery strategies."**
(Farmer)

## b) Farming composition

There are **2,167 farm holdings** in Leicestershire, Leicester and Rutland (2021) covering a total of 190,000 hectares of farmed land, making the average farm size some 88 hectares (exactly matching the national average). The number of farm holdings has decreased by around 25% since 1995, reflecting the general trend towards consolidation in UK farming.

The largest single categorisation of farms in Leicestershire, Leicester and Rutland is 'lowland grazing' (40%) followed by 'cereals' (23%) and 'general cropping' (16%). However, by far the largest agricultural land use is 'cereals' (94,845 hectares) followed by 'lowland grazing' (32,489 hectares) and 'mixed' (26,701 hectares). There are some 7,500 hectares of farm woodland, with owned versus tenanted land at a roughly 2:1 ratio.

Across Leicestershire, Leicester and Rutland, there are some **295,000 sheep**, **105,000 cattle and 55,000 pigs**. There are also more than **2.5 million kept poultry**, pretty evenly split between laying hens and broiler chickens.

Around **5,300 people** are considered to be a part of the **agricultural workforce**, with 3,600 of them 'family' members working either full or part-time. Family farms are, as across the nation, the backbone of farming in Leicestershire, Leicester and Rutland.

In overview, there is a significant element of **cereal and general cropping** in Leicestershire, Leicester and Rutland (wheat being the predominant crop at some 50%), as well as beef, dairy and sheep production. There are also significant minority interests in **pig and poultry production**. There is, however, very little in the way of horticultural production, with fruit and vegetable farming occurring in better soil conditions elsewhere in the country.

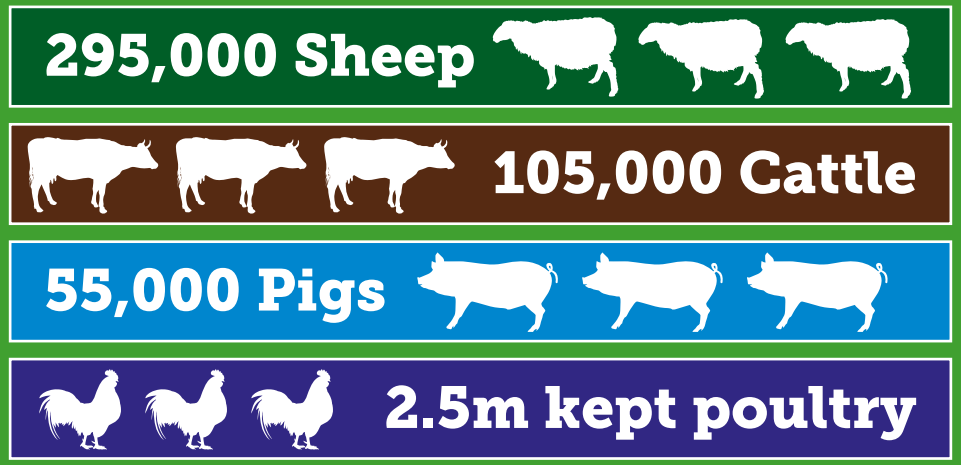
**The largest single categorisation of farms in Leicestershire, Leicester and Rutland**

| | | |
|---|---|---|
| 40% Lowland Grazing | 23% Cereals | 16% General Cropping |

**The largest agricultural land use**

| | | |
|---|---|---|
| Cereals 94,845 Hectares | Lowland Grazing 32,489 Hectares | Mixed 26,701 Hectares |

**Across Leicestershire, Leicester and Rutland there are some**



As across most of the UK, there is a wide range of farming practice in Leicestershire, Leicester and Rutland. However, in general a distinction should probably be made between those sectors (often more 'intensive') such as pigs, poultry and dairy where data, innovation and attention to detail are commonplace, and the more traditional sectors such as red meat and general cropping where practices may be much the same as in decades past.

However, in general British farmers are on a journey towards more sustainable, high welfare production (from an already high base) in areas such as soil health ('regenerative farming'), use of technology (such as drones, satellite data and AI) and generation of renewable energy on-farm, to name but three.

In the last seventy years, farming has changed significantly across the UK. As the nation seeks economies of scale in its food production, there has, in general, been a move away from smaller-scale traditional mixed farming toward mechanisation, specialisation and consolidation. In large part this has been driven by government imperatives concerning food security during and following the Second World War, with many government policies and incentives (both outside and inside the EU's Common Agriculture Policy or CAP) driving so-called 'intensification', most obviously manifested in measures such as the clearing of hedgerows to create larger, more efficient fields or the increased use of agro-chemicals and fertilisers to boost production. These policies, underpinning the cheap food culture demanded by consumers, have undoubtedly played their part in the decline of biodiversity across Leicestershire, Leicester and Rutland, as across much of the UK and the world.

However, recent decades have seen increasing efforts at reversing these trends, both from individual farmers and encouragement by EU and now UK schemes under the CAP and **Environmental Land Management** (ELM). In the 2010s around 70% of farmed English land was in some form of '**agri-environment scheme**' (AES), and although confusion in the delivery of these schemes in the late 2010s saw that number decline significantly, it is now once again on the rise.
For example, hedgerow plantings are at record levels across the country.

While farmers have always been required to respond and adhere to government policy, it must be recognised in the context of this strategy, that the production of food materials is an increasingly devalued practice, from which it is ever harder to draw a profit.

## 6.7 Leicestershire and Rutland Wildlife Trust's Living Landscapes

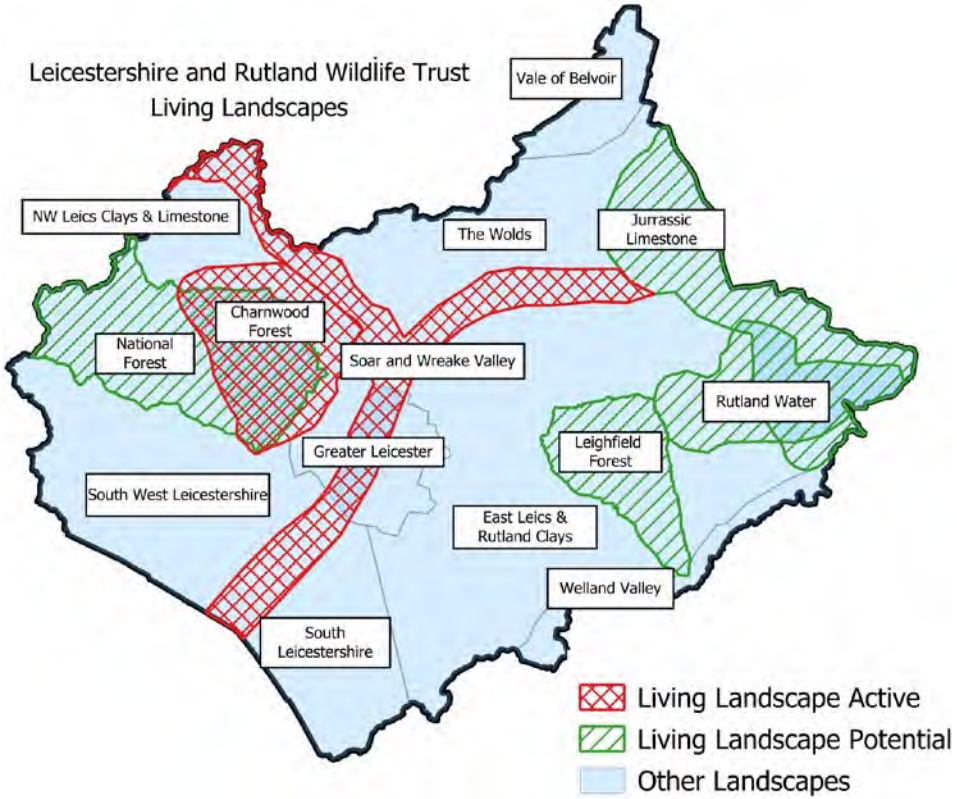
The Leicestershire and Rutland Wildlife Trust's Living Landscapes initiative has been central to conservation efforts for over 15 years. Five areas of Leicestershire, Leicester and Rutland are recognised as particularly valuable for wildlife thanks to the quality of existing habitats, the concentration of important sites and the opportunities for habitat creation within and around them.

These landscapes describe focal areas for habitat restoration, where active conservation measures have helped to maintain and enhance biodiversity, and these areas will be referred to later in the opportunities for nature recovery, section 9.

The initiative prioritises reconnecting fragmented habitats, enabling wildlife to move more freely across the landscape, and making ecosystems more resilient to the pressures of climate change and development. This approach also involves working with local communities, landowners, and partners to promote sustainable land use and ensure long-term conservation success.

By building on this foundation, the Local Nature Recovery Strategy aims to expand these efforts, creating larger, better-connected landscapes that support a wider range of species.

**Figure 4:** Map of the Living Landscapes for Leicestershire, Leicester and Rutland



## a) Charnwood Forest and the adjoining National Forest

Covering around 16,600 hectares, the **Charnwood Forest Living Landscape** is unique in the East Midlands. Craggy hilltops, dry stone walls, fast flowing streams, ancient woodlands, and open views define the area. The volcanic geology, comprising some of England's oldest rocks, combined with the dynamic relationship between people and natural forces is the key to this landscape and its wildlife.

By the late eighteenth century, Charnwood Forest probably looked like a small, wetter, version of Dartmoor. Remnants of this historic scenery are preserved at Bradgate Park, a medieval deer park. There would have been wide open spaces of rough grazing land, boggy in places, with patches of heather and bilberry. The Enclosure Act of 1808 changed the landscape, which was drained, ploughed, and replaced with small fields bounded by hedges and walls. Wildlife was still abundant but became increasingly threatened in the twentieth century by intensive land use.

The area now has the highest density of Sites of Special Scientific Interest (SSSIs) in Leicestershire and Rutland. Charnwood Lodge, Charley Woods, Ulverscroft and Lea Meadows are some of our most precious habitats in this area.

Covering 200 square miles, half of which lies in western Leicestershire, the National Forest is an ambitious project to create a new forest in the Midlands, for the enjoyment and benefit of all. Established in the early 1990s, the National Forest stretches west from Charnwood Forest to the border with Derbyshire. Public funding has seen the creation of over 8,500 hectares of forest habitats, including over 2,500 hectares of non-woodland. Forest creation continues to be a key element of the Government's approach to meeting the challenges of climate change, with funding increasing in recent years to reflect this.

## b) Leighfield Forest

The **Leighfield Forest Living Landscape** is a roughly triangular area covering the high ground straddling the Leicestershire and Rutland border between Tilton-on-the-Hill, Oakham, and Eyebrook Reservoir.

It is a well-wooded area of high nature conservation, landscape and historical importance. With 23 ancient woodlands[3] - 16 of which are Sites of Special Scientific Interest (SSSIs) - spanning 594 hectares, it is one of the prime woodland biodiversity areas in the East Midlands. The area includes the entire Eyebrook catchment, as well as lengths of the Chater and Gwash rivers, all of which feed the River Welland.

As well as its wildlife, the area has great historical value. It was once part of the Forest of Rutland - a Royal hunting area created by Henry I soon after 1100 AD. The forest originally covered the southern half of Rutland together with a small part of Leicestershire. Later, following the disafforestation of the Leicestershire portion in 1235 and most of the eastern half of Rutland in 1299, the remainder became known as Leighfield Forest. Charles I removed the Royal protection on the forest in 1630 and the land was subsequently sold. The boundaries of the historic Leighfield Forest fall within the current Living Landscape.

Factors such as changes in woodland and agricultural practice mean the level of biodiversity in the forest declined during the nineteenth and twentieth centuries. Work is taking place to better conserve the forest, for both its biodiversity and heritage interest. This work includes woodland restoration and changes in land management practices to improve the quality of the watercourses and farmland for wildlife.

[3] English Nature's Ancient Woodland Inventory - Everett and Robinson 1990

## c) Soar and Wreake Floodplain

The **Soar and Wreake Living Landscape** covers the extensive river corridors and associated floodplains of Leicestershire's two principal rivers, the Soar and the Wreake.

The River Soar rises in the south of Leicestershire and flows slowly northwards through a shallow valley. Fed by several streams and smaller rivers, it flows through the City of Leicester growing rapidly in size before joining with the River Trent on the Nottinghamshire border. The River Wreake, the main tributary of the Soar, flows from the West of Melton Mowbray towards the village of Cossington where the rivers join together, forming an extensive network of valuable freshwater and riparian habitats for the people and wildlife of Leicestershire.

The river valleys have changed dramatically over several thousand years, facing historic and modern pressures, each cumulatively contributing to an ever more degraded landscape for nature. Major issues have included canalisation, widespread dredging, increasingly intensive farming, extensive development within the floodplain and pollution, all of which have had a devastating impact on local wildlife.

## d) Rutland Limestone (Jurassic limestone Living Landscape)

The **Jurassic Limestone Living Landscape** extends along the eastern side of Rutland from Ketton in the south up towards Waltham-on-the Wolds in northeast Leicestershire. It is part of a much bigger Lincolnshire and Rutland Limestone Natural Area.

The underlying geology is 'Oolitic' limestone. This is made up of small spheres which were formed when calcium carbonate was deposited on the surface of sand grains rolled by wave action under a shallow sea during the Jurassic period.

Soils derived from this rock are lime rich and give rise to diverse grasslands with a range of characteristic plants such as Common Rock-rose and Tor-grass. This grassland is now confined to a few small remnants mainly associated with former quarries, including Bloody Oaks, Ketton and Stonesby Quarry nature reserves, as well as roadside verges – many of which are Local Wildlife Sites.

Other important habitats include arable field margins where the free draining lime rich soils are good for arable plants such as **Venus's-looking glass, Round-leaved Fluellen, and Night-flowering Catchfly**.

## e) Rutland Water

Rutland Water Nature Reserve holds significant designations, including Site of Special Scientific Interest (SSSI), Special Protection Area (SPA), and Ramsar Wetland of International Importance. It is renowned for its outstanding populations of wintering waterfowl and serves as the site of the successful Rutland Osprey Project. This project, led by Leicestershire and Rutland Wildlife Trust (LRWT) in partnership with Anglian Water, has played a crucial role in reintroducing breeding ospreys to the region, marking a key achievement in UK species recovery efforts.

The reserve regularly hosts over 20,000 wintering wetland birds, including internationally important populations of gadwall and shoveler, as well as nationally significant numbers of other ducks, grebes, and swans. The diversity of migrating waders using the reserve is particularly impressive for an inland location, while the growing numbers of breeding waterfowl, waders, and passerines are increasingly important. Additionally, large wintering gull roosts have become a prominent feature, with recent counts recording over 50,000 individuals, primarily **Black-headed Gulls**.

Owned by Anglian Water and managed alongside the Leicestershire and Rutland Wildlife Trust, the reserve features a variety of wetland habitats on the western end of the reservoir, including lagoons, reedbeds, marshlands, and wet grasslands. Other habitats such as woodlands, scrub, and species-rich grasslands also support a wide range of breeding birds and invertebrates.

Monitoring of the Ramsar, SPA, and SSSI conditions is primarily conducted through monthly Wetland Bird Surveys (WeBS), ongoing since 1975. The Reserve Management Plan outlines additional annual surveys, covering species such as ospreys, water voles, and seabirds, along with habitat-specific assessments of grasslands, trees, and invertebrate populations to ensure effective habitat management.

In summary, landscape-scale conservation efforts highlight the importance of well-managed habitats in supporting biodiversity recovery. It is crucial to examine the current state of nature across the strategy area, identifying both the challenges and opportunities for biodiversity restoration. Understanding the broader ecological context helps guide efforts to protect and enhance natural habitats across the strategy area.

# 7. State of Nature

## 7.1 Introduction

Over the past few decades, the UK has experienced a significant decline in biodiversity across most species' taxonomy groups, reflecting a broader trend of ecological degradation driven by human activity. This decline is particularly evident in mammals, birds, amphibians, invertebrates, and fish, with many species now at risk of local extinction.

The **State of Nature 2023** report reveals that over 26% of terrestrial mammals in the UK are facing the threat of extinction. Iconic species such as the **Hazel Dormouse** and the **Water Vole** are among those that have seen sharp declines due to habitat loss, predation by invasive species, and changes in land management. The **European Hedgehog**, a species once commonly found across the countryside, has declined by more than 50% in rural areas over recent decades. These declines are linked to factors such as intensive farming, the loss of hedgerows, and increased pesticide use, which reduce the availability of food and shelter.

Birds are one of the most severely impacted groups, with 43% of species facing risk of extinction. Species like the **Turtle Dove** and **Curlew** have seen catastrophic declines due to habitat destruction, agricultural intensification, and hunting during migration. The Turtle Dove population has decreased by a staggering 94% since 1995. In contrast, urban-adapted birds such as the **Peregrine Falcon** have flourished, benefiting from the availability of nesting sites on tall buildings.

Invertebrate populations have also shown worrying declines. On average, invertebrate species are found in 13% fewer places than in 1970, with pollinators like bees, hoverflies, and moths suffering even larger reductions. Pollinator species have decreased by 18% on average, while crop pest control invertebrates, such as the **2-Spot Ladybird**, have declined by more than 34%. This decline poses a serious threat to ecosystem services such as pollination and pest control.

Freshwater habitats are particularly vulnerable, with species such as the **European Eel** and **Atlantic Salmon** facing dramatic population declines. The European Eel has seen a 95% decrease in its numbers due to overfishing, habitat degradation, and migration barriers. Amphibians like the **Great Crested Newt** are similarly affected by pollution and habitat loss, exacerbating the pressures on these already fragile populations.

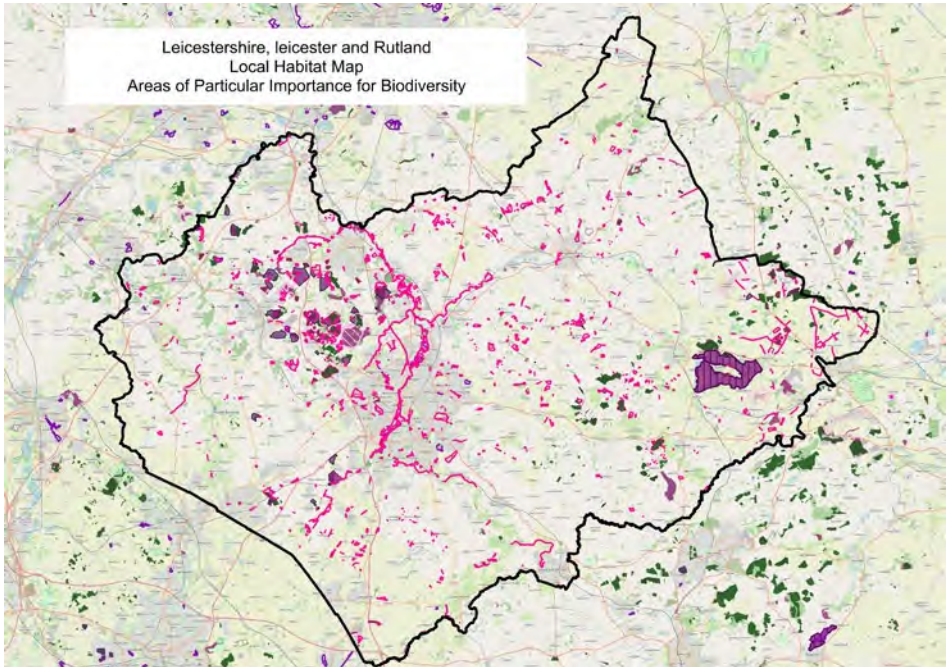
The main drivers of biodiversity loss in the UK are habitat destruction from agricultural intensification, urban development, pollution, and climate change. Unsustainable fishing practices and marine development also contribute to declines in coastal and marine species. Less than half of the UK's biodiversity remains, with only 7% of woodlands and 25% of peatlands in a healthy ecological state.

Leicestershire, Leicester, and Rutland cover over **255,000 hectares** of land. According to the most recent data provided by Leicestershire and Rutland Environmental Record Centre, approximately 7% of the land in is designated for nature conservation, encompassing around **15,000 hectares**. These areas, protected under various designations serve as critical habitats for biodiversity and include Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs), Local Wildlife Sites (LWSs), National Nature Reserves (NNRs), and Local Nature Reserves (LNRs), Regionally Important Geology Sites (RIGs) and irreplaceable habitats such as Ancient Woodland.

## 7.2 Local Habitat Map

The Local Habitat Map is a crucial component of a Local Nature Recovery Strategy, providing a detailed, visual representation of the most important areas for nature within Leicestershire, Leicester, and Rutland.

**Figure 5:** Image of Local Habitat Map showing the Areas of Particular Importance for Biodiversity




The Local Habitat Map can be viewed online: https://haveyoursay.leicestershire.gov.uk/local-nature-recovery-strategy-local-habitat-map

The map shows the existing **Areas of Particular Importance for Biodiversity (APIB)** and acts as a foundation for identifying opportunities for nature recovery. The map incorporates legally protected designated areas and irreplaceable habitats as outlined in the National Policy Planning Framework.

**Figure 6:** Table showing the number of designated sites and irreplaceable habitats, and the approximate area in hectares they cover.

| Designation Type | Count | Description | Approx Area (Hectares) |
|---|---|---|---|
| Special Area of Conversation (SAC) | 1 | River Mease | 23 |
| National Nature Reserve (NNR) | 4 | 2 ecological<br>2 ecological/geological | 593 |
| Special Protection Area (SPA) | 1 | Rutland Water | 1,225 |
| Ramsar Site | 1 | Rutland Water | 1,225 |
| Irreplaceable Habitat (Ancient Woodlands) | 500+ | Count includes existing AW and those being assessed for AW status | 2,679 |
| Site of Special Scientific Interest (SSSI) | 98 | 76 biodiversity, 14 geological, 8 geological and biodiversity | 5,136 |
| Local Wildlife Site (LWS) | 1176 | 1176 notified and 1353 candidate sites | Notified 4053 |
| Regionally Important Geological Sites (RIGS) | 60 | 60 confirmed and 10 candidate sites | Confirmed 1829 |
| Local Nature Reserves (LNR) | 26 | | 345 |
| Irreplaceable Habitat (Lowland Fens) | 254 | | 97.5 |
| Irreplaceable Habitat (Ancient Trees) | c1814 | | |

The Local Habitat Map is an essential tool for local government decision-makers, developers, farmers and landowners, and conservationists. By visualising the existing landscape, the map supports informed decision-making and fosters collaboration towards nature recovery goals.

The Local Habitat Map is a dynamic representation of the area, serving as a blueprint for restoring and enhancing biodiversity. It plays a central role in shaping the **Areas that Could Become of particular importance (ACB)** and the Priorities and Measures required to deliver the Local Nature Recovery Strategy, helping to create a more connected and resilient natural environment.

The following sections describe the different habitats and species found in Leicestershire, Leicester, and Rutland.

## 7.3 UK Habitats of Principal Importance

UK Habitats of Principal Importance, also known as Priority Habitats, are those identified as being the most threatened and in need of conservation efforts under the UK Biodiversity Action Plan (UK BAP), see Appendix C 2.a and C 2.b. Following the publication of the Natural Environment and Rural Communities (NERC) Act 2006, these habitats are legally recognised as requiring protection and restoration in England, Scotland, Wales, and Northern Ireland. The NERC Act specifically mandates public bodies and decision-makers to have due regard to the conservation of biodiversity, including these priority habitats.

There are 56 Priority Habitats in the UK, ranging from woodlands and wetlands to grasslands, heathlands, and coastal habitats. Leicestershire, Leicester, and Rutland are home to 19 of these priority habitats, supporting a wide range of species, including many that are rare or under threat. They provide essential ecosystem services such as carbon sequestration, flood mitigation, and water purification, while also contributing to human well-being and sustaining agricultural systems.

These habitats are recognised for their high conservation value, not just for the rare species they support, but for the broader ecosystem services they provide. Many of these habitats are under threat from human activities such as development, pollution, invasive non-native species, pests, disease unsustainable agricultural practices, and climate change, making their conservation a priority for biodiversity strategies at national and local levels. The protection and enhancement of pressures these habitats are key objectives within the UK's biodiversity commitments, including Biodiversity 2020 and subsequent nature recovery initiatives.

While there are 19 UK Habitats of Principal Importance present in Leicestershire, Leicester, and Rutland, the region supports a wide range of other habitats that also hold significant ecological value. These include urban environments like walls, gardens, and allotments, as well as managed landscapes such as plantations and ornamental parks. Each of these habitats, though not classified as priorities, plays an essential role in supporting biodiversity and contributing to ecological networks.

Efforts to conserve and restore these habitats involve collaboration between government agencies, landowners, conservation organisations, and local communities, all working together to ensure that these vital ecosystems can continue to thrive and support wildlife for generations to come.

For more information on these habitats see the Biodiversity Action Plan for Leicester, Leicestershire and Rutland 2016-2026 and the Biodiversity Action Plan for Leicester 2021-2031: Appendix C.

## 7.4 Freshwater and Wetland Habitats

Image courtesy of NatureSpot

Freshwater and wetland habitats of principal importance Include rivers, streams and canals, lakes and reservoirs, lowland fens, reedbeds, purple moor-grass and rush pastures, and ponds.

Rivers, canals and streams are the backbone of freshwater ecosystems. These habitats support a range of aquatic plants and animals, providing critical breeding grounds and feeding areas. The River Mease is a Special Area of Conservation (SAC) due to its importance for species like the **Spined Loach** and **White-clawed Crayfish**, both of which have experienced significant declines due to pollution and habitat degradation. Efforts to restore riparian habitats along rivers and streams have resulted in the return of species such as Otters and Water Voles to areas where they were had once previously disappeared. Exact figures for river habitats are variable, but rivers in Leicestershire, Leicester, and Rutland span across hundreds of kilometres.

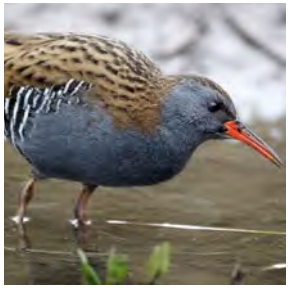
**“I survey wildlife - I’m currently trying to find habitat and traces of water vole.”**
(Leicester resident)

Image courtesy of NatureSpot

Seasonally, waterlogged grasslands found alongside rivers and streams create **floodplain grazing marshes**, also referred to as **floodplain meadows** which are valuable for both biodiversity and agriculture, supporting a wide range of wetland birds and acting as buffers for floodwaters. Important areas of floodplain grazing marsh can be found in the Soar Valley and Welland Valley, some of which are designated as SSSIs. Floodplain grazing marsh is limited but covers around **200 hectares**. Birds like the **Lapwing** and **Snipe** benefit from these marshes, as do amphibians and invertebrates such as damselflies.

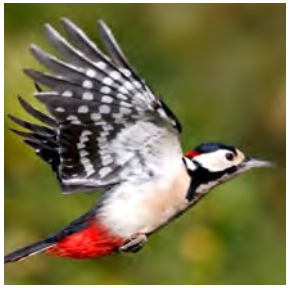
**Lowland fens** are waterlogged habitats rich in peat and organic matter. They support a variety of sedges, reeds, and mosses and are essential for flood control and water filtration. Fens can be found within designated Local Wildlife Sites (LWS) and nature reserves such as Watermead Country Park. Lowland fens are fragmented and cover relatively small areas, estimated at around **50-100 hectares**. However, they are rich and diverse in many specialist plant and invertebrate species including **Marsh Stitchwort** and **Common Cottongrass**, which are under pressure from land drainage and development.

**Ponds and lakes** are widespread, with many man-made ponds supporting significant biodiversity. They are important for a variety of species, particularly amphibians, insects, and birds. Unlike the diverse flora of the fens, **reedbeds** are dominated by **Common Reed** and provide essential habitats for birds, amphibians, and invertebrates. Huge numbers of Starlings can be seen roosting in reedbeds during winter months, although the once common murmuration's of thousands of birds, are much smaller due to population declines. One of the most notable successes has been the **Rutland Osprey Project**, which has reintroduced ospreys to England after they had been extinct in the country for over 150 years. Since its inception in 1996, the project has seen over 200 chicks successfully fledged, with the ospreys now being a well-established breeding population at Rutland Water. This reintroduction is a shining example of successful species recovery and habitat management. Reedbeds are a favourite habitat for endangered species such as **European Eel**, which have seen their numbers decline by **approximately 95%**. They also provide vital nesting sites for some of the more elusive wetland birds, such as the **Eurasian Bittern**, **Water Rail**, **Cetti's Warbler** and **Marsh Harrier**. They are particularly valuable for species that rely on aquatic vegetation.



These freshwater and wetland habitats are vital for supporting biodiversity across the region, with designated sites playing a crucial role in their conservation. However, many of these habitats face threats from land drainage, pollution, and habitat fragmentation, making ongoing conservation efforts essential for their protection.

## 7.5 Woodland, Hedgerows and Trees



Woodland habitats of principle importance include ancient woodlands, lowland mixed deciduous woodland, wet woodland, wood pasture and parkland, traditional orchards, and hedgerows. Ancient and veteran trees are not a UK habitat of principle importance but are however defined as irreplaceable habitat in the National Planning Policy Framework. They are also recognised in the Local Nature Recovery Strategy as priority habitats due to their importance for providing habitats for rare invertebrates, Bat roosts and nesting cavities for Owls and Woodpeckers.

Woodland habitats play a crucial role in the ecological landscape of Leicestershire, Leicester, and Rutland, encompassing a diverse array of forested areas that provide vital habitat for wildlife and contribute to the region's biodiversity, ecological and cultural significance. A table showing examples of important woodlands in the strategy area can be found in **Appendix C**.

Image courtesy of Charnwood Forest LPS

Ancient woodlands, remnants of historical forest cover, provide important habitats for biodiversity. Existing woodlands, including **Charnwood Forest** and **Leighfield Forest**, are areas that have been continuously wooded for over 400 years and offer valuable ecosystems and corridors for wildlife. New plantations, established through sustainable forestry practices, contribute to flood management, carbon capture and storage and resource management.

In urban environments, trees play crucial roles in air quality improvement and urban heat island mitigation. Urban forests, consisting of street trees and green spaces, are integral to urban ecosystem services and public wellbeing. Ancient trees, such as oaks and yews, serve as notable landmarks and repositories of ecological history.

Canopy cover across the area varies, with efforts underway to increase tree cover through planting initiatives and woodland restoration. However, threats such as habitat loss, disease, and climate change pose challenges to tree health and forest resilience.

[4] Designated as Ancient Semi-Natural Woodland (ASNW) or Plantations on Ancient Woodland Sites (PAWS)

Images courtesy of Charnwood Forest LPS

Existing woodland cover within the Local Nature Recovery Strategy area accounts for approximately 6% of the total land area, equivalent to 15,822 hectares. Trees outside woodland including orchards account for another 11,569 hectares taking the total tree canopy cover to 27,391 hectares and 10.74% of the total land area. This area is low compared to the national average of around 13% (Woodland Trust, 2021). This woodland cover comprises a variety of woodland types, with broadleaf woodland dominating at 65% (10,075 hectares), followed by coniferous woodland at 1,024 hectares, mixed woodland at 800 hectares, and the remaining hectares comprise of active management such as recently planted young trees.

Among the woodland habitats, **ancient woodland** stands out as irreplaceable, covering approximately 3,025 hectares within the Local Nature Recovery Strategy area. These ancient woodlands[4] represent ecosystems with high conservation value due to their long-term ecological continuity and unique variety of species. However, the management status of these habitats varies, with 36% of designated plantations on ancient woodland sites and 64% of ancient semi-natural woodland sites currently under management. Efforts to improve the management of these irreplaceable habitats are crucial for safeguarding their ecological integrity and enhancing biodiversity conservation.

Plantations on Ancient Woodland Sites (PAWS) are ancient woodlands that were replanted, often with non-native species like conifers. These sites are now undergoing restoration to reintroduce native species and return the habitat to its original state. PAWS offer great restoration opportunities, where native species like Oak and Hazel can be re-established. This creates a habitat for birds such as the **Wood Warbler** and mammals like the **Pipistrelle Bat**. As native trees return, the restoration of PAWS also enhances habitats for species such as **Purple Hairstreak Butterflies**, which depend on native oak trees for their life cycle.

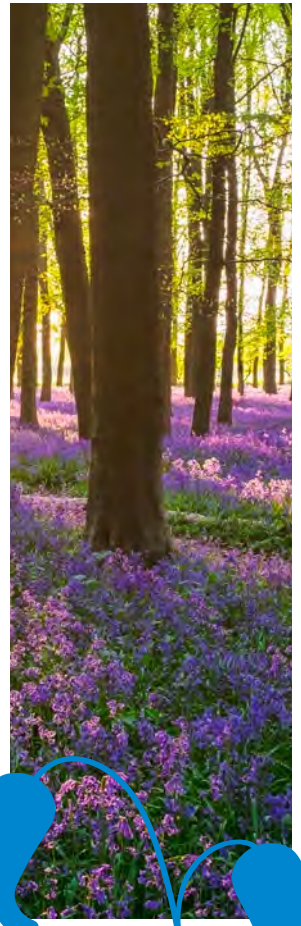
Leicestershire, Leicester and Rutland boast a significant amount of **priority woodland habitat** compared to other habitat types within the Local Nature Recovery Strategy area. **lowland mixed deciduous** woodland, covering **9,894 hectares**, stands as the most extensive priority woodland habitat in the area, while **wet woodland** is a scarce and fragmented habitat, covering approximately 60 known sites and about **300 hectares** of land, it is primarily associated with floodplain wetland.

Image courtesy of NatureSpot

Notably, Leicestershire, Leicester and Rutland also feature **4,500 hectares** of **parkland**, an estimated **20,000 mature trees**, including **1,800 ancient trees** and more than **17,000 km** of **hedgerow**, further enhancing the green infrastructure, and providing valuable ecological benefits and wildlife corridors which enable species movement and connections between woodlands and other priority habitats.

Woodlands are among the most biodiverse ecosystems, offering stable habitats for rare species. The **Willow Tit** dependent on wet woodland, has suffered a dramatic 94% decline due to habitat loss and competition from other species. The **Marsh Tit**, reliant on diverse woodland structures, has also experienced a 68% decline.

The **Hazel Dormouse** is extremely rare in the strategy area and has become a priority species for reintroduction. For its survival it requires well-managed, dense woodland but faces challenges from habitat fragmentation. The **Black Hairstreak Butterfly** found in **Blackthorn** scrub, is threatened by changes in scrub management, while the **White-letter Hairstreak** has been impacted by the loss of **Elm Trees** due to Dutch Elm Disease.



Woodland plants such as **Bluebell** and **Wood Anemone** thrive in undisturbed ancient woodlands but are vulnerable to habitat degradation and fragmentation.

Woodland habitats have been affected by agricultural expansion, urbanisation, **Deer** and **Grey Squirrel** pressures, invasive non-native species, disease, such as Ash Die-back. A decline in woodland management practices has led to darker and more simply structured woodlands which therefore support less biodiversity and provide fewer niches for specialised species.

Efforts to conserve and restore woodland habitats include the planting of new woodlands and the restoration of ancient woodlands. Initiatives such as the National Forest aim to expand woodland cover, while targeted management like coppicing helps preserve species diversity. Hedgerow restoration also enhances connectivity between fragmented woodlands.

**85% of respondents would like to enjoy or access nature more often.**

## 7.6 Grassland, Heathland and Shrub Habitats

Grassland habitats of principle importance comprises lowland calcareous grassland, lowland dry acid grassland, neutral lowland meadows and floodplain grazing marsh.

Grasslands are a vital component of the landscape in Leicestershire, Leicester, and Rutland, supporting a rich diversity of species and contributing significantly to the area's ecological health. The grasslands in these counties can be broadly categorised into neutral, acid, calcareous, and other specialised types such as lowland meadows and floodplain grazing marsh. These habitats are crucial for biodiversity, providing essential services such as pollination, carbon capture and storage, and serving as breeding grounds for a variety of fauna.

A table showing examples of important grasslands in the strategy area can be found in Appendix D.

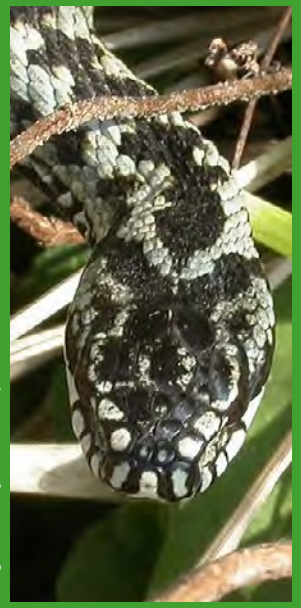


Image courtesy of NatureSpot

Neutral grasslands are typically found on soils with a neutral pH, supporting a diverse array of plant species. These grasslands are most prevalent in traditional hay meadows and pastures across Leicestershire, Leicester, and Rutland. The Biodiversity Action Plan (BAP) data from 2016 indicates that approximately **2,550 hectares** of neutral grassland of UK BAP quality remain, although this has been in decline, especially outside protected sites. The loss of these grasslands underscores the importance of conservation efforts to protect and restore these valuable habitats.

Acid grasslands and heathlands are associated with poorer, more acidic soils, such as those found in Charnwood Forest. These habitats support a range of specialised flora and fauna adapted to the challenging ground conditions such as Adders and Palmate Newts. The area covered by acid grasslands and heathlands is less than **500 hectares**, primarily within the Charnwood Forest, and is also in decline. The importance of these habitats is recognised in their designation as Sites of Special Scientific Interest (SSSIs), particularly due to the presence of unique species like Heather and Bilberry.

Image courtesy of NatureSpot

Calcareous grasslands, which develop over limestone and other calcium-rich substrates, are particularly notable in the eastern parts of the region, such as Rutland and around Ketton Quarry. These grasslands are among the most species-rich, supporting a variety of wildflowers, including orchids and **Rockrose** and rare butterflies such as **Grizzled Skipper** and **Dark Green Fritillary**. However, they are now largely confined to small patches, often on roadside verges and in quarries. The estimated extent of calcareous grasslands in the region is under **200 hectares**, highlighting the urgent need for targeted conservation.

Lowland meadows, characterised by their species-rich grasslands managed traditionally as hay meadows, are also present across the area, particularly in the Leicestershire Vales and the floodplains of the River Soar. These meadows are significant for their biodiversity, supporting a variety of invertebrates, birds, and wildflowers. The restoration and expansion of these meadows are critical for maintaining their ecological value, especially in the face of pressures from agricultural intensification and development.

Image courtesy of NatureSpot

Other grasslands such as floodplain grazing marshes are areas of periodically submerged grassland along rivers and streams, important for both agriculture and wildlife. In Leicestershire, the Soar Valley is a key area for these habitats. These marshes support a range of species, including waders like **Curlew** and **Lapwing** and contribute to flood management and water quality improvement. Efforts to restore and connect these habitats are vital for enhancing their ecological function and resilience.

Grasslands in Leicestershire, Leicester, and Rutland are under significant threat, with many types in decline due to changes in land use and agricultural practices. There is urgent need for protection, restoration, and connectivity of these habitats. For instance, targeted actions such as appropriate grazing regimes, invasive species control, and habitat creation are crucial for preserving these landscapes. The integration of these efforts into broader conservation strategies will help ensure the long-term survival of these vital ecosystems.

**74% of respondents were concerned a great deal about access to green spaces and nature.**

## 7.7 Urban

Image courtesy of NatureSpot

Urban areas, though often heavily modified by human activity, provide a mosaic of habitats that can support a surprising range of wildlife. Large parks such as Watermead Park, Bradgate Park, Abbey Park, and Burbage Common offer green oases for wildlife. These areas support **Hedgehogs**, **House sparrows**, and **Starlings**. Nationally, Starlings, once abundant, have seen a **66% decline** and House Sparrows have seen a **71% decline** since the 1970s, though urban populations are relatively stable compared to rural ones, likely due to the availability of food and nesting sites in cities.

Private spaces such as gardens and allotments provide significant biodiversity benefits, particularly for pollinators like bees and butterflies. Species such as the Hedgehog, which is now classified as vulnerable to extinction, and birds like the **Swift (which has declined by 58% since 1995)** benefit from urban gardens where food sources, shelter and nesting sites can be found. Gardens are also critical for invertebrates such as moths and butterflies, with urban areas now being hotspots for species like the **Holly Blue**.

Image courtesy of NatureSpot

Street trees and roadside grass verges provide important habitats for species such as **Glow Worms**, **Ox-eye Daisy**, and **Bird's-foot Trefoil** (an important plant for species such as **Common Blue Butterflies**. Although difficult to quantify, the 2016 Biodiversity Action Plan estimates there are over **100km of verge** with a Wildlife Site designation, designated since 2000, and 4km designated as SSSI, providing a network of green corridors, which contribute to wider environmental benefits such as rainwater storage, pollination and buffering and protecting neighbouring habitats from run-off from vehicle pollution. In turn, street trees help moderate temperatures in urban heat islands, hold water in the soils, capture carbon, improve air quality and provide nesting sites for urban-adapted species.

Watercourses in urban areas, like the River Soar and the Oakham Canal, provide feeding and breeding sites for species such as Kingfishers, dragonflies, and Water Voles. Efforts to improve water quality and restore riparian vegetation through initiatives like river restoration, Natural Flood Management and Sustainable Drainage Systems (SuDS) are crucial for maintaining these habitats.

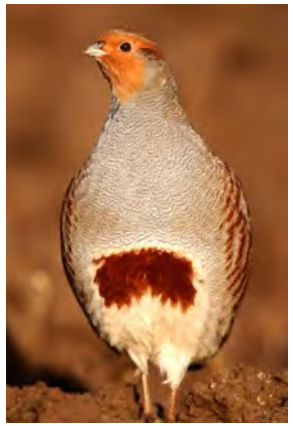
**68% of respondents were very interested in helping wildlife in their garden.**

Additionally, former industrial sites or disused land, often found along these watercourses (known as open mosaic habitats), support rare and specialist species like **Black Redstarts**, which have found new nesting opportunities in the post-industrial urban landscape. These areas often support rare plants and invertebrates, contributing to biodiversity even in heavily urbanised areas.

Churchyards and cemeteries are often undisturbed spaces can provide homes for species such as **Foxes**, Bats, internationally important lichens such as **Lasallia Pustulata** which can be found on gravestones and old buildings. These green pockets in the urban landscape can be extremely important for pollinators where they provide a rich diversity of wildflowers. The presence of mature trees in these areas enhances their value as biodiversity hotspots in urban landscapes.

Urban wildlife faces threats from habitat fragmentation, pollution, and development. However, there are growing opportunities to enhance urban biodiversity through green and blue infrastructure initiatives, wildlife-friendly gardening, and the expansion of urban trees and green spaces.

## 7.8 Farmland



Farmland in Leicestershire, Leicester, and Rutland is a dominant land use and plays a vital role in supporting wildlife. Key farmland habitats include arable field margins, hedgerows, and traditional farm ponds. These habitats are crucial for sustaining biodiversity, particularly in areas of intensive agriculture.

Arable field margins consist of uncultivated strips of land between fields and hedgerows, providing shelter and food for a range of species. They are particularly important in intensively farmed landscapes where other natural habitats may be limited. These habitats are often part of Environmental Stewardship schemes, though they are rarely designated as standalone protected sites. Exact data on field margins is difficult to calculate, but they exist across hundreds of hectares within farming areas. Species benefiting from field margins include the **Grey Partridge**, **Skylark**, and **Yellowhammer** farmland birds that have seen dramatic declines in recent decades. Insects, such as bumblebees and butterflies, also use field margins for foraging, particularly wildflower-rich margins.

Hedgerows are critical wildlife corridors, allowing movement between fragmented habitats. They provide shelter, food, and nesting sites for many species, as well as acting as barriers that prevent soil erosion and support biodiversity. Many hedgerows in Leicestershire and Rutland are classified as important under the Hedgerows Regulations 1997, with some forming part of Local Wildlife Sites (LWS). There are an estimated **17,000 km of hedgerows**, forming an extensive network across farmland. Hedgerows support **Hazel Dormice**, **Brown Hares**, and birds like the **Linnet** and **Tree Sparrow**. Insects such as the **White-letter Hairstreak Butterfly** also rely on hedgerows, particularly Elm-dominated ones.

Recent data estimates there are around **13,000** ponds across Leicestershire, Leicester, and Rutland. Farm ponds though small in size, are essential freshwater networks for supporting amphibians, invertebrates, and wetland plants, although many have been lost due to agricultural intensification, those that remain can be key biodiversity hotspots. Ponds on farmland are often included in agri-environment schemes but are rarely designated as protected sites unless part of a wider reserve. Farm ponds cover a small area, though they are widely scattered across the agricultural landscape. Ponds support species such as the Great Crested Newt, a priority species in the region, as well as amphibians like **Common Frogs** and **Common Toads**, and numerous invertebrates, including **Ruddy Darter Dragonflies** and **Banded Demoiselle Damselflies**.

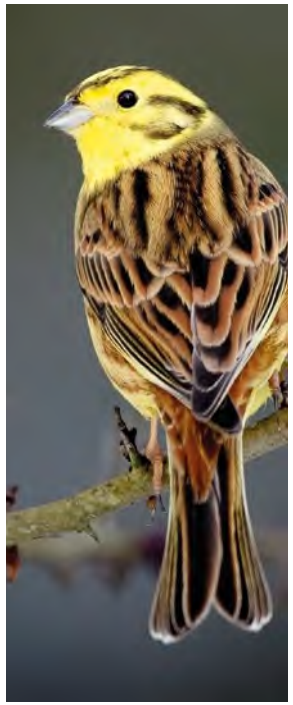
**“Its important to educate people, young and old about the value, intrigue and beauty of nature, and how to help it.”**

(Charnwood resident)

Lowland meadows and pastures cover approximately 2550 hectares, with good management they can become species-rich meadows which are vital for plants, pollinators, mammals, and birds. Traditional hay meadows and pastures, though in decline, support rare species such as the **Great Burnet** and **Green-winged Orchid**. Nationally, lowland meadow habitats have decreased significantly, and their restoration is a priority for enhancing biodiversity. In areas like the Soar Valley, floodplain grazing marshes are important habitats for wetland birds such as **Lapwings** and **Snipe**. These wetlands cover approximately **107 hectares** and provide flood mitigation services and support a large number of invertebrates and amphibians.

Small patches of woodland within farmland are critical for species such as woodland plants, beetles, fungi, amphibians’ birds and bats. The woodland edges are particularly important for species that require mixed habitats. Farm woodlands also contribute to the overall ecological network, improving landscape connectivity for wildlife.

**The main concerns of farmers and landowners were the increase in extreme weather events, the increase in pests and diseases and soil degradation.**



Farmland species have been among the most severely affected by agricultural intensification. The Farmland Bird Index shows that populations of key farmland birds have declined by **57% since 1970**. However, agri-environment schemes such as the Environmental Land Management (ELM) provide opportunities for farmers to adopt wildlife-friendly practices, including reduced pesticide use, wildflower planting, and the restoration of field margins and hedgerows.

The future of farmland habitats lies in sustainable farming practices that balance agricultural productivity with the needs of wildlife. By encouraging diverse crop rotations, hedgerow management, and the protection of semi-natural habitats, farmers can play a keyrole in biodiversity conservation.

# 8. Key Environmental Considerations

## 8.1 Introduction

The health and resilience of natural environments are heavily influenced by a range of interconnected environmental factors. As we look toward the future, it is crucial to anticipate and address the growing pressures that threaten habitats and biodiversity in Leicestershire, Leicester, and Rutland. This section explores key environmental considerations that will shape the success of nature recovery efforts, including anticipated pressures such as climate change, land-use changes, and pollution. Additionally, it considers broader environmental issues like habitat fragmentation, invasive non-native species, and the implications of national and global environmental policies. Understanding these factors is essential for developing effective strategies to safeguard ecosystems and promote long-term sustainability.

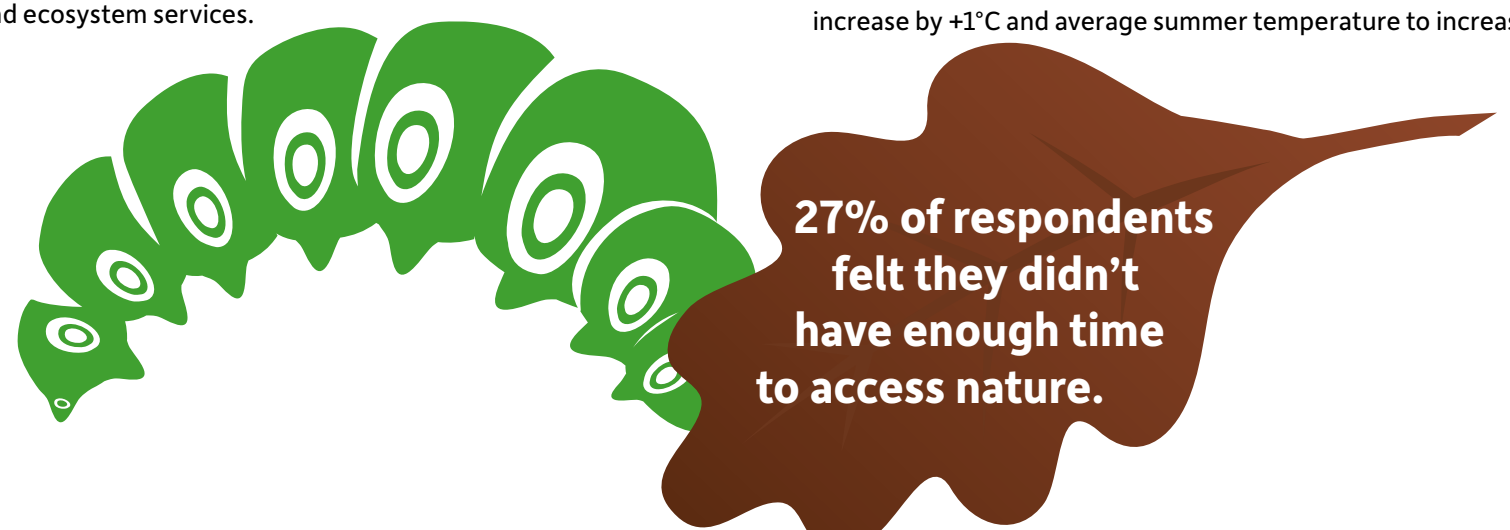
## 8.2 Anticipated Future Pressures

As Leicestershire, Leicester, and Rutland look to the future, several pressures are expected to impact species, habitats, and ecosystems. These pressures primarily arise from climate change, infrastructure developments and intensive farming, all of which could alter the natural landscape, affecting biodiversity, habitat connectivity, and ecosystem services.

**Climate change** is expected to intensify existing threats such as habitat fragmentation, degradation, and loss. Extreme weather events including floods, droughts, wildfires, and storms pose a significant risk to ecosystems by disrupting ecological processes and escalating biodiversity loss, altering habitats, and impacting agricultural productivity.

Changes in temperature and precipitation patterns will directly affect habitat suitability for many species. For instance, warmer temperatures could enable the expansion of thermophilic species, potentially outcompeting native species adapted to cooler conditions. Shifts in rainfall patterns may further impact freshwater ecosystems by altering hydrology, affecting the distribution of aquatic species, and leading to changes in ecosystem dynamics.

The recent Met Office climate report for the area predicts that the area, assuming a 1.5°C increase in average global temperatures, is likely to see an increase in the number of summer days where the daily maximum temperature is above 25°C (from 23 to 26) and above 30°C (from 3 to 4). The amount of winter precipitation (mm/day) is likely to increase by 4%, while average winter temperature is likely to increase by +1°C and average summer temperature to increase by +1.4°C.



**Ongoing and future developments**, such as urban expansion and infrastructure projects, are poised to exert further pressure on biodiversity. Housing developments and commercial projects contribute to habitat loss and fragmentation, especially in areas of high ecological value. Converting natural habitats for residential and industrial purposes reduces habitat availability for native species and weakens ecological connectivity. See Appendix D 2.d Accessible Greenspace Standards (ANGSt).

Additionally, linear infrastructure developments like road and railway expansions create physical barriers that hinder wildlife movement. Such barriers fragment populations, isolate species, and disrupt genetic flow, potentially increasing vulnerability to local extinctions. Construction activities often degrade habitat quality through soil compaction and pollution, further stressing wildlife and natural systems.

**Intensive agriculture** and certain farming methods pose significant pressure on habitats and biodiversity in Leicestershire, Leicester, and Rutland, particularly through habitat loss and fragmentation. Intensive farming practices, including monoculture cropping, contribute to a loss of habitat complexity, limiting resources for wildlife and increasing vulnerability to pests and diseases. This decline in biodiversity also impacts key ecosystem services such as pollination and soil health, vital for both natural systems and agriculture itself.

In addition to habitat loss, agricultural intensification leads to soil degradation and water quality issues. The heavy use of fertilisers and pesticides results in nutrient runoff, causing eutrophication in nearby rivers and wetlands, harming aquatic ecosystems. Water extraction for irrigation, coupled with the drainage of wetlands, depletes freshwater habitats, and disrupts natural flood mitigation. Moreover, agriculture is a significant contributor to greenhouse gas emissions, exacerbating climate change, which in turn creates additional pressures on land use, driving further intensification and habitat loss. Sustainable farming practices are critical to mitigating these pressures and preserving biodiversity in agricultural landscapes.

## 8.3 Wider Environmental Issues

The broader environmental challenges facing Leicestershire, Leicester, and Rutland extend beyond localised habitat pressures. These challenges include issues related to water quality, flood risk management, and climate mitigation and adaptation, all of which require coordinated action to ensure the long-term sustainability of ecosystems and communities.

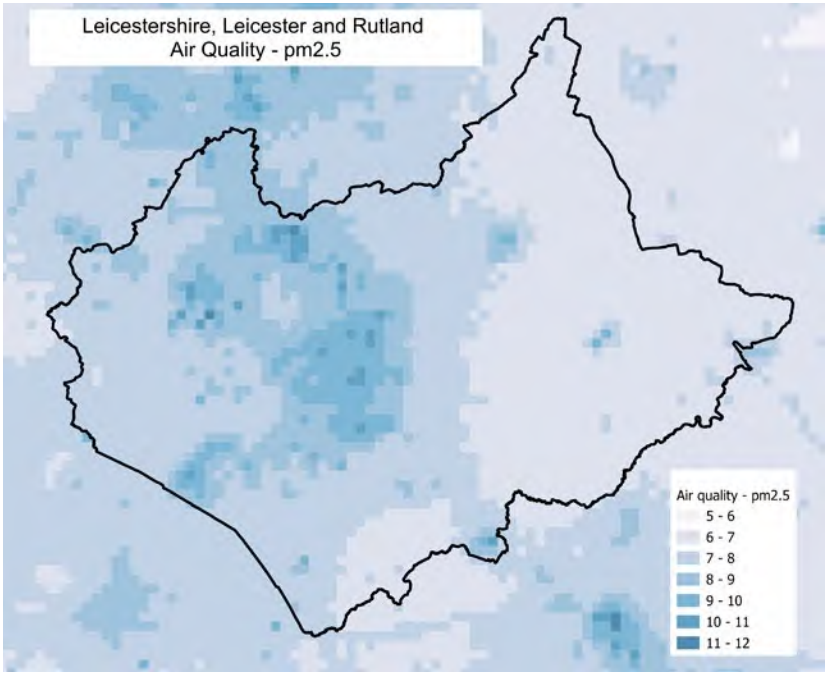
**Water quality** is threatened by sewage, agricultural runoff, urban pollution, and industrial discharges, which lead to issues like eutrophication and habitat degradation. These impacts result in biodiversity loss, particularly in freshwater ecosystems. The latest available figures for 2019 showed that 9.4% of Leicestershire rivers were in good ecological status, below the England average of 14%. While none were in good chemical status. See Appendix D 2.e Ecological Status of Catchment Map

To address these concerns, it is essential to implement sustainable land management practices such as establishing riparian buffer zones, restoring wetlands, and reducing chemical inputs. These actions will help mitigate pollution and improve the resilience of aquatic ecosystems, benefiting both biodiversity and human health.

**Flood risk** is a pressing concern for the area, exacerbated by the increased frequency and intensity of extreme weather events such as heavy rainfall and storms. Urbanisation and changes in land use have altered natural drainage patterns, leading to higher surface runoff, and contributing to more frequent and severe flooding in low-lying areas. Implementing natural flood management techniques such as floodplain restoration, tree planting, and Sustainable Urban Drainage Systems (SuDS) can help alleviate these risks by slowing floodwaters, improving water filtration, and promoting natural flood mitigation processes.

**Poor air quality** from vehicle emissions, industrial activities, and agriculture contributes to health issues in both humans and wildlife, as well as global warming. Fine particulate matter (PM2.5) and nitrogen oxide (NOx) are concerns around urban areas like the M1 corridor and Leicester City. The latest available figures for 2023 showed that the average annual mean for the amount of PM2.5 in the area was 9.2 µg $m^{-3}$ (ranging from 8 µg $m^{-3}$ in Rutland to 11 µg $m^{-3}$ in Leicester). While the average annual mean for the amount of nitrogen oxides in the area was 20 µg $m^{-3}$ (ranging from 8 µg $m^{-3}$ in Rutland to 37 µg $m^{-3}$ in Leicester)[5]. Enhancing urban green and blue infrastructure to reduce air pollution by planting trees and creating green spaces will filter pollutants and contribute to cleaner air. See Appendix D 2.b Air Quality Maps.

**Figure 6:** Leicestershire, Leicester and Rutland air quality - PM2.5




[5] Source: https://uk-air.defra.gov.uk/compliance-data

> **"I am 71. I cannot think of a more important social and political issue. The fact that nature gets far less attention than it merits saddens me for those yet to live their lives in an ever-degrading world."**
> (Resident)

**Disturbance** from people, traffic and aircraft, along with artificial lighting, can disrupt wildlife behaviours, including breeding, migration, and predation. Disturbance can interfere with communication in birds, while light pollution impacts nocturnal species. It is important where appropriate to establish "quiet zones", and "keep out zones" and reduce noise and disruption in sensitive wildlife areas. Implementing dark-sky initiatives and use shielded lighting to minimise light pollutions will benefit nocturnal wildlife.

The spread of existing and new invasive non-native species (INNS), pests, and diseases often worsened by climate change and human activity threatens native species and ecosystems. Managing invasive species through control programs and promoting biosecurity measures and supporting research into disease-resistant species will help to mitigate threats to biodiversity.

As it stands there are over 2,000 plants and animals introduced to Britain, of these several are of particular concern in Leicestershire Leicester and Rutland, such as **Himalayan Balsam**, **Floating Pennywort**, **American Mink**, **American Signal Crayfish, Grey Squirrel** and non-native deer species such as **Muntjac**.

# 9. Opportunities for Nature Recovery

## 9.1 Introduction

We have been guided by the 'Lawtonian' principles of bigger, better, and more joined up, as well as our additional local principle of nature being more protected. These have guided the recommended priorities and measures captured in this strategy.

To make space for nature, this Local Nature Recovery Strategy identifies areas that hold the greatest ecological value, and the measures needed to achieve the greatest benefits for nature, to achieve bigger, better, and more joined up habitats that are protected, robust, resilient, and rich in biodiversity.

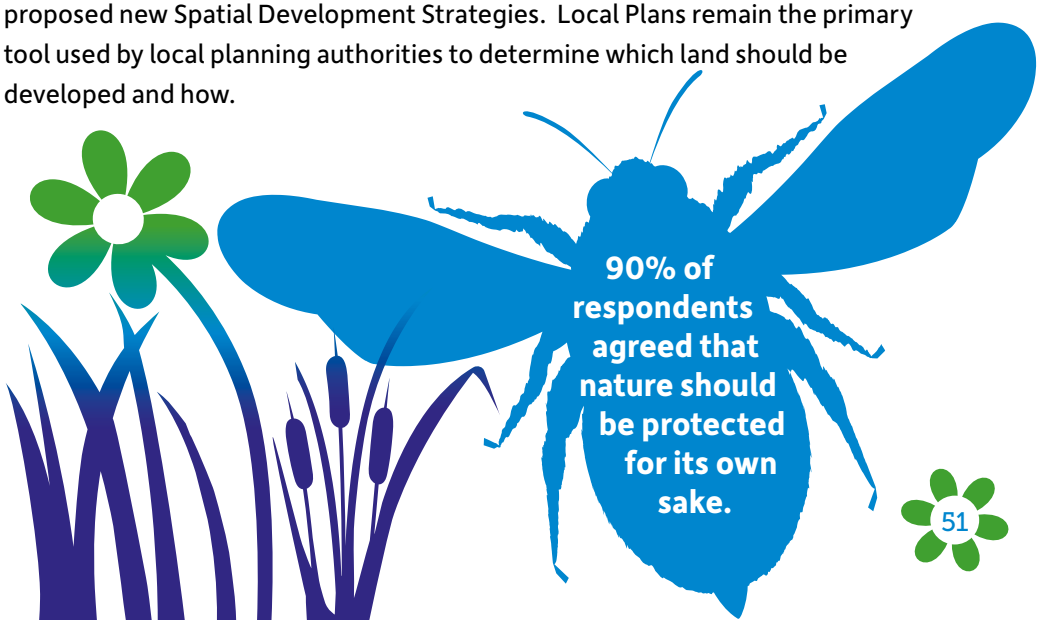
Here, we set out key opportunities for nature recovery across the strategy area, focusing on priority habitats and species. These opportunities can be realised by delivering the priorities and measures set out in section 9.3.

Achieving these benefits will be a collective effort, with various partners working collaboratively to create new, expand and connect priority natural habitats. The role of partnerships, individual actions, and funding mechanisms all present exciting and important opportunities to help us create space for nature that is bigger, better, connected and protected.

This section presents the key findings from ecological modelling conducted by a professional GIS consultant, highlighting strategic opportunities for nature across Leicestershire, Leicester and Rutland. By identifying spaces for nature while considering constraints such as development, food production, and historical sites, the findings reveal valuable prospects for habitat creation and connectivity. Key areas of opportunity include flood zone 3[6], suitable agricultural lands (Grade 4, 5, and where appropriate, 3b), and historic railway lines, which offer significant potential for ecological enhancement. Additionally, improvements to habitats along existing railways, road verges, hedgerows and canals, including expanding habitats into adjacent land have been identified as promising opportunities. This work also factors species movement across core woodland, grassland, and urban areas, identifying strategic areas for habitat creation and buffering to expand and connect fragmented habitats, and establish a more resilient ecological network.

### Planning status

Local Nature Recovery Strategies (LNRS) are not intended to provide red line boundaries preventing or placing new restrictions on land use which may be changed either through development or in taking advantage of new opportunities identified through the strategy. This has been established by national guidance. LNRS's are an additional evidence base to inform Local Plans, and other elements of the formal Development Plan which include Neighbourhood Plans and the proposed new Spatial Development Strategies. Local Plans remain the primary tool used by local planning authorities to determine which land should be developed and how.




[6] Flood zone 3 includes land that has a 1 in 100 (1%) or greater annual probability of river flooding, or a 1 in 200 (0.5%) or greater annual probability of flooding from the sea.

## Relationship with the legal protection and designation of land

The LNRS is a guide for nature recovery across Leicestershire, Leicester and Rutland. It does not provide any new protection, designation or restrictions on how land can be used or managed or any other kind of legal designation. LNRS's provide data to inform opportunities for nature's recovery. Whether those opportunities are acted on is entirely a decision for individual landowners.

### 9.1.1 New Bigger Areas for Nature

Creating new bigger areas for nature is a vital strategy for reversing biodiversity loss, increasing wildlife populations, and enhancing ecosystem resilience to climate change. A network of bigger, contiguous habitats and well-connected smaller, currently isolated habitats will benefit the local area, and contribute to national environmental objectives.


Additionally, bigger, better, more joined up and protected spaces for nature offer benefits that extend far beyond enhancing biodiversity. Increasing natural areas improves air and water quality, as woodlands and wetlands play a critical role in carbon sequestration, runoff reduction, and pollutant filtration. These habitats contribute to flood risk management by enhancing natural water retention and slowing surface runoff.

The creation of natural areas also offers significant societal benefits. Enhanced ecosystem services, such as carbon storage, water purification, and soil stabilisation, contribute to overall environmental and physical human health. Access to larger, well-managed natural areas promotes mental and physical wellbeing by providing opportunities for recreation, education, and a deeper connection with nature. Moreover, protecting and enhancing these areas can boost local economies through nature-based tourism, generating income and job opportunities for local communities, while also preserving the cultural heritage associated with traditional landscapes and rural livelihoods.

Flood zone 3 and grade 4 and 5 and where appropriate grade 3b agricultural lands are highly desirable and incredibly suited for creating new bigger, and more connected areas for nature. Their ecological potential, natural flood management capabilities, and the lower economic costs make these areas extremely attractive. Creating new areas for nature and connecting priority habitats through these landscapes can create rich habitats that support biodiversity, improve water quality, mitigate climate change, and provide valuable ecosystem services.

What follows are opportunities for creating bigger areas for nature within the aforementioned land types.

## a) Flood Zone 3 - Key Opportunities

**Opportunity: Floodplain grazing marsh**

Creating new floodplain grazing marshes and increasing the size of these areas means more flood defences and more extensive habitats for wetland species such as **Curlew** and **Lapwing**. Rivers, streams, and wetlands connected to floodplain grazing marshes support rich biodiversity, including water voles, otters, and a wide variety of aquatic plants and invertebrates.

Floodplains naturally have rich, fertile soils deposited by floodwaters. Their diverse range of plant species attracts a variety of wildlife, making these areas prime areas for nature recovery.

**Opportunity: Riparian and Catchment Woodland**

Establishing new riparian woodlands along riverbanks can significantly enhance flood resilience by slowing down water flow, reducing erosion, and stabilising riverbanks. These woodlands also act as natural buffers, filtering pollutants from surface runoff before they reach waterways. Creating woodland in the wider catchment can help slow water flow, reduce soil erosion, improve water quality, and provide critical wildlife habitats, contributing to flood resilience and broader ecosystem restoration. Moreover, they create critical habitats for a wide range of species, including birds, insects, and mammals, while providing shade that helps regulate water temperature, fostering healthier aquatic ecosystems.

**Opportunity: Wetland Creation and Reedbeds**

Floodplains are typically well-supplied with water, essential for sustaining wetland habitats, supporting aquatic life, and fostering plant growth. This abundance of water resources creates ideal conditions for restoring and creating wetlands, ponds, reedbeds and other aquatic habitats.

## b) Agricultural Land - Key Opportunities

**Opportunity: Woodland**

Grade 4, 5, and 3b agricultural lands offer excellent opportunities for woodland creation, particularly for the development of priority habitats like Lowland Mixed Deciduous Woodland and Wet Woodland. These woodlands can provide critical habitats for species such as bats, woodland birds, and invertebrates, while also acting as natural flood defences. By stabilising soil and reducing surface water runoff, they contribute to improved water management and increased carbon sequestration, making them valuable for both biodiversity and climate change mitigation.

**Opportunity: Grassland**

The conversion of these agricultural lands into grasslands can support the creation of priority habitats like Lowland Meadows and Calcareous Grasslands. These habitats are essential for a wide variety of plant species, pollinators, and ground-nesting birds such as Skylarks. Grassland restoration can also enhance soil health, improve water retention, and support grazing management strategies that contribute to sustainable land use.

**Opportunity: Wetland**

Flood-prone grade 4, 5, and 3b lands are ideally suited for the creation of priority wetland habitats such as Reedbeds, Floodplain Grazing Marsh, and Fens. These wetlands support a wide array of species, including amphibians, wading birds, and invertebrates, while improving water quality and acting as flood storage areas. Wetland creation can also contribute to the recovery of species like Otters, Water Voles, and Herons, offering a rich and dynamic landscape for nature recovery.

### 9.1.2 Better Quality Areas for Nature

Good quality habitats are just as crucial to nature recovery as habitat expansion. High-quality natural areas provide the necessary conditions for a diverse range of species to thrive and maintain healthy populations.

Healthy ecosystems perform a range of functions that are essential for both biodiversity and human wellbeing. These include nutrient cycling, water filtration, carbon sequestration, and pollination. High-quality habitats and ecosystem functions are fully operational and resilient to pressures including pollution, overgrazing, disturbance from human activities, and encroachment by invasive species.

Healthy habitats support greater levels of biodiversity, characterised, by a broad variety of physical features within an ecosystem, such as vegetation layers, water bodies, and terrain – known as structural diversity. This provides a range of niches and microhabitats that support different species with varying requirements. For example, a well-managed woodland might include a mix of mature trees, understory shrubs, deadwood, and open glades, each of which offers habitat for different birds, insects, mammals, and plants.

Creating high-quality habitats for nature involves a multifaceted approach that integrates:

- effective management and monitoring,
- thoughtful design and planning, and
- robust protection measures, particularly in urban areas.

To achieve better-quality habitats, this strategy identifies the following approaches:

#### a) Opportunity: Better habitat management

Management planning for nature conservation sites is very important and should include best practice guidance. Embracing the approaches recommended in best practice guidance for habitat restoration, maintenance, and monitoring is the starting point for creating higher quality habitats. These emphasise the importance of activities such as grazing and mowing regimes in grassland habitats, woodland management, natural flood management, invasive species management, and habitat connectivity. Proper management ensures that habitats remain suitable for native species, supports ecological balance, and enhance the resilience of natural areas against environmental changes.

With approximately 80% of the strategy area classified as agricultural land, nature-friendly farming is essential for enhancing habitat quality and supporting biodiversity on agricultural land. It involves practices that balance food production with conservation, such as creating wildlife corridors, maintaining hedgerows, and using less intensive farming methods to reduce pollution and habitat destruction. The implementation of Sustainable Farming Incentives (SFIs) under the UK's Environmental Land Management scheme (ELM) offers a practical framework for achieving this balance. SFIs encourage farmers to adopt environmentally beneficial practices, including improving soil health, reducing pesticide use, and enhancing water management. By integrating these measures, farmers can promote biodiversity, increase pollinator populations, and restore habitats such as wetlands, woodlands, and grasslands, ultimately leading to more resilient ecosystems and agricultural landscapes. These initiatives are pivotal in ensuring that agriculture contributes positively to nature recovery and the broader aims of the Local Nature Recovery Strategy.

Links to management plans and good practice guides can be found in Appendix G.

## b) Opportunity: Natural flood management

Natural Flood Management (NFM) techniques work by restoring or mimicking natural hydrological processes to reduce flood risk, while also offering significant benefits to wildlife. Below is a list of Natural Flood Management techniques, and their impact on both flood management and benefits to nature.

**Wetland Creation and Restoration:** Highest impact for flood management and biodiversity.

**Floodplain Restoration and Reconnection:** Significant dual benefits for nature and flood control.

**Tree Planting (Riparian and Upland):** Long-term benefits for flood risk reduction and wildlife.

**Leaky Dams and Woody Debris Dams:** Strong benefits for aquatic life and slowing water flow.

**River Re-meandering:** Medium impact on flood management, but excellent for riverine species.

**Peatland Restoration:** Important for flood risk in specific areas, with significant wildlife gains.

**Gully Blocking:** Focused on upland water flow control and habitat restoration for specialised species.

**Buffer Strips and Grassland Management:** Smaller flood impact but important for biodiversity in agricultural landscapes.

## c) Opportunity: Design and planning - better green and blue infrastructure

Thoughtful design and planning are key to creating high-quality habitats. This includes integrating green (vegetation-based) and blue (water-based) infrastructure into urban and rural landscapes. By designing spaces that prioritise natural elements like parks, rivers, canals, gardens and street trees, planners can create interconnected habitats that support wildlife movement, improve water quality, and provide essential ecosystem services. Green roofs, sustainable urban drainage systems, permeable surfaces, and urban forests are examples of how urban areas can incorporate nature into their infrastructure, promoting both biodiversity and human wellbeing.

## d) Opportunity: Better protection - especially around urban areas

Urban expansion often threatens natural habitats, making protection efforts critical. Implementing and enforcing conservation policies that protect green and blue spaces and prevent habitat fragmentation are vital, particularly in and around cities and other built-up areas. Strategies might include establishing protected areas such as Local Wildlife Sites (LWS) and Local Nature Reserves (LNR), creating wildlife corridors, and enforcing policy that limit development in ecologically sensitive regions. Engaging local communities in conservation efforts and raising awareness about the importance of conserving and enhancing natural habitats can help ensure that these areas are valued by those living nearby and so more likely to be protected for future generations.

### 9.1.3 More Joined Up Areas for Nature

Connecting habitats contributes to landscape-scale conservation. This approach recognises that biodiversity conservation cannot be achieved in isolated pockets. Instead, it requires assessing the entire landscape, including how different habitats and land uses interact. By integrating conservation efforts across agricultural lands, urban areas, woodlands, rivers, and wetlands, we can create a network of connected habitats that support biodiversity at a larger scale.

This approach often involves collaboration between multiple stakeholders, including farmers, landowners, conservation organisations, and local communities. Working together to identify and protect key habitats and wildlife corridors, can create a more connected and resilient landscape that benefits both wildlife and people. Connecting fragmented habitats to form new networks of continuous natural spaces is crucial for supporting biodiversity because it allows species to move freely across landscapes, maintain genetic diversity, and adapt to changing environmental conditions.

As climate change alters habitats and environmental conditions, species need to move to new areas where conditions are more suitable for their survival. For example, as temperatures rise, some species may need to move to cooler, higher altitudes or migrate northward. However, if their habitats are fragmented, they may be unable to make these necessary migrations, leading to local extinctions.

Joined-up areas for nature are critical for enabling species to adapt to climate change. By creating corridors and steppingstones that connect different habitats, we provide pathways for species to migrate and shift their ranges in response to changing conditions. This connectivity is essential for building resilience into ecosystems.

There are several barriers to connectivity which can be addressed through various solutions, creating a more cohesive landscape that supports wildlife movement and genetic exchange.

The two main opportunities for connectivity arise from corridors and steppingstones.

#### a) Opportunity: Corridors

A corridor is a continuous strip of natural habitat that connects different ecosystems, allowing wildlife to move freely between areas, which supports species migration, dispersal, and genetic diversity.

**Hedgerows and trees:** Planting and maintaining mixed hedgerows and tree networks of optimal conditions provides essential wildlife corridors, supports a wide range of species, and increases landscape connectivity.

**Rivers:** Taking a catchment-based approach to the protection and restoration of river habitats, to provide vital connections across landscapes, linking urban and rural areas (business, farming, and leisure), whilst enhancing different ecosystems, providing healthy natural corridors, facilitating the movement of species, and supporting biodiversity.

**Riparian buffers:** Planting native vegetation to create riparian buffers along streams and rivers. These buffers connect different water bodies and provide important habitats for wildlife.

**Agricultural field margins:** Enhancing field margins by planting native wildflowers, grasses, and shrubs provides important habitat for pollinators and other wildlife, creating a network of stepping-stones across agricultural lands.

**Canals:** Enhancing canal corridors, including a 20 metre buffer either side, by restoring adjacent wetland habitats, enhancing and connecting hedgerows and conserving native aquatic vegetation to create continuous green and blue corridors for wildlife.

**Railway networks:** Managing railway corridors, including a 20 metre buffer either side, adjacent land with native plants, wildflowers, ponds to create linear habitats that support pollinators and other wildlife while improving ecological connectivity.

**Road verges:** Restoring roadside verge grassland into biodiversity hotspots by allowing wildflowers to develop and thrive; reducing mowing frequency to support pollinators and small mammals.

**Cycle network:** Integrating green infrastructure along cycle networks by planting native trees and shrubs, creating shaded pathways that also serve as wildlife corridors.

**Public rights of way:** Planting hedgerows and wildflower borders, enhancing biodiversity and providing vital habitat connectivity across the landscape.


## b) Opportunity: Steppingstones

A steppingstone is a small, isolated patch of habitat that provides refuge and resources for species, allowing them to move between larger habitat areas, even if the patches are not directly connected.

**Ditches:** Managing drainage ditches for biodiversity and water management, maintaining a balance between regular clearance to prevent blockages and allowing vegetation to thrive. This encourages diverse plant and animal habitats, enhances water filtration, and reduces flood risk while supporting ecological health.

**Pond networks:** Establishing and restoring pond networks provides vital water sources that act as stepping-stones, allowing species to move, enhancing biodiversity and ecosystem resilience across the landscape.

**Private gardens:** Supporting local communities to adopt wildlife friendly gardening approaches and create a network of microhabitats such as bug hotels, hedgehog highways, natural planting that feeds pollinators, and small garden ponds that support aquatic life and amphibians. Prioritising best practices to design garden connectivity (including hedgerows, open spaces, and corridors) via the planning process, so they are inbuilt in new developments enhancing the environment for biodiversity and residents.

**Pocket parks:** Developing small parks in urban areas that provide green space and habitat for wildlife. These parks can be planted with native vegetation and designed to support local fauna.

**Green roofs and walls:** Installing green roofs and living walls on buildings. These features provide habitat for birds, insects, and plants, acting as vertical stepping-stones in dense urban environments. They also contribute to mitigation against urban heat islands.

**Street trees:** Planting Street trees provides habitat for birds, insects, and plants, as well as stepping-stones for species movement. They also contribute to cleaner air, water management and climate adaption and mitigation.

**Community gardens:** Encouraging the establishment of community gardens with dedicated areas for native plants and species provides important refuges and stepping-stones for urban wildlife.

**Agroforestry strips:** Integrating strips of trees and shrubs, and isolated field trees into agricultural fields supports biodiversity by providing corridors and steppingstones, while also benefiting crop production.

**Woodland glades and clearings:** Creating small clearings or gaps within woodlands and forests promotes the growth of diverse understory plants. These clearings provide habitats for species that require open spaces within woodland environments and provides links through the sites and to the wider landscape.

**Edge habitats:** Enhancing the edges of forested areas with a mix of native plants creates rich transitional zones that support a variety of wildlife. These edges act as stepping-stones connecting larger forest patches.

**Wildflower patches:** Planting small patches of wildflowers within grasslands and meadows. These patches support pollinators and other insects, providing food resources and habitat connectivity.

**No-mow zones:** Changes to mowing regimes in public parks, golf courses, and along roadsides. These areas serve as refuges for wildlife and connect larger grassland habitats, as well as being popular with many members of the public.

**Vegetated road verges:** Enhancing Road verges with native vegetation adds linear habitats and stepping-stones for species moving through fragmented landscapes.

**Golf courses:** The creation of diverse habitats such as wildflower meadows, native woodlands, and wetland areas around ponds and water features provides valuable resources for pollinators, birds, and amphibians. Careful management practices like reducing chemical use, implementing no-mow zones, and maintaining natural rough areas further enhances biodiversity.

**Fisheries:** Well managed fisheries support wildlife by maintaining varied aquatic vegetation, offering shelter and breeding grounds for fish and invertebrates, as well as feeding areas for birds. Creating buffer zones of native plants around water bodies reduces runoff pollution and provides additional habitat for terrestrial species. Additionally, enhancing the structural diversity of the water's edge with logs, stones, and shallow margins supports amphibians, reptiles, and insects.

**Schools:** Establishing outdoor learning environments such as native plant gardens, pollinator habitats, and small wetlands can create microhabitats that support birds, insects, and small mammals. These green spaces not only enhance biodiversity but also serve as living classrooms where students can engage directly with nature, something actively encouraged by the public. Implementing green roofs or walls, rain gardens, and tree planting projects further increases the ecological value of school grounds.

**Larger campuses:** A similar approach can be taken, alongside best practice management of existing natural areas such as woodlands or grasslands to enhance their biodiversity and the wider learning environment. Maintaining and restoring these areas with native species, creating wildlife corridors, and establishing no-mow zones supports a diverse array of species. Campuses can also integrate sustainable water management practices, such as bioswales and permeable surfaces, to benefit both the environment and local wildlife.

**Cemeteries:** Managed into havens for nature by adopting a more naturalistic approach to grounds management. Allowing grass to grow longer in selected areas, planting native wildflowers, and preserving mature trees and shrubs creates a mosaic of habitats that support a wide range of species, from pollinators and small mammals to birds. By reducing the frequency of mowing and limiting chemical use, cemeteries can develop into rich ecological sites that also offer a peaceful, reflective space for visitors.

**Allotments:** Inherently diverse landscapes that can be further enhanced to support biodiversity. Encouraging the planting of native hedgerows, maintaining wildflower borders, and installing ponds or water features that are beneficial to insects, birds, and amphibians. Allotment plots can serve as miniature wildlife reserves, where the cultivation of a variety of crops alongside wild spaces creates a patchwork of habitats. Compost heaps, log piles, and bug hotels can provide shelter and breeding grounds for invertebrates and small animals, making allotments not just productive spaces for people but also vital refuges for wildlife.

**Corporate green spaces:** Promoting the development of green spaces around corporate buildings and industrial areas.

### 9.1.4 More Protected Areas for Nature

Gaining and enforcing the right protection for priority areas is crucial for biodiversity, safeguarding ecosystems, and mitigating the effects of climate change.

This approach emphasises the need to protect, often through legal status, the network of important habitats to ensure that diverse habitats, species, and geological features are conserved and enhanced.

The four types of protections the Local Nature Recovery Strategy seeks to increase are:

#### a) Opportunity: Local nature reserves (LNR)

Establishing new nature reserves is essential. These protected spaces offer opportunities to conserve large, contiguous areas that can support viable populations of plants and animals, maintain ecological processes, and provide refuges for species affected by habitat loss elsewhere. These reserves also serve as important sites for research, education, and eco-tourism, fostering a deeper understanding of natural ecosystems and generating support for conservation efforts.

#### b) Opportunity: Local wildlife sites (LWS)

Like nature reserves, local wildlife sites (LWS) are areas recognised for their biodiversity value at a local level. Identifying and protecting more local wildlife sites is important because they often represent the remaining fragments of semi-natural habitats within developed landscapes. The ongoing monitoring and provision of management advice for LWS's is crucial. These sites provide essential ecological functions, such as serving as steppingstones for species dispersal, contributing to habitat connectivity, and maintaining genetic diversity within populations. Protection of local wildlife sites is especially crucial in urban and peri-urban areas, where they often represent the only green spaces available for both wildlife and people. Any development proposal impacts on LWS's should be minimised and carefully mitigated in line with the Local Nature Recovery Strategy.

### c) Opportunity: Regionally important geological sites (RIGS)

Regionally important geology sites (RIGS) also known as geosites, are designated areas that protect significant geodiversity sites. These sites are important not only for their scientific and educational value but also for understanding the geological history and processes that shape landscapes. Protecting regionally important geology sites helps preserve unique landforms, fossil records, and mineral deposits, which are essential for geoscientific research and education. Additionally, these sites contribute to biodiversity conservation by maintaining natural habitats associated with specific geological features, such as cliffs, caves, and karst systems.

### d) Opportunity: Statutory designated sites

Statutory designated sites, such as Sites of Special Scientific Interest (SSSIs), Special Areas of Conservation (SACs), and Special Protection Areas (SPAs), are legally protected areas recognised for their outstanding natural value. These sites are often part of national or international conservation networks and are selected based on their importance for specific species, habitats, or ecological processes. Expanding the number of designated sites is critical for ensuring that representative examples of all ecosystems are protected and that the conservation of key species and habitats is legally enforced. Designated sites play a crucial role in meeting national and international biodiversity targets.

## 9.2 Areas that Could Become of particular importance (ACB)

### 9.2.1 Introduction

This section outlines the Areas that Could Become of particular importance (ACB) and the key opportunities for nature recovery and habitat conservation across the various landscape areas. It focuses on creating bigger, better, and more connected habitats while ensuring the long-term protection of existing biodiversity hotspots. Each landscape presents unique opportunities to create and restore priority habitats, enhance habitat quality, and strengthen ecological networks.

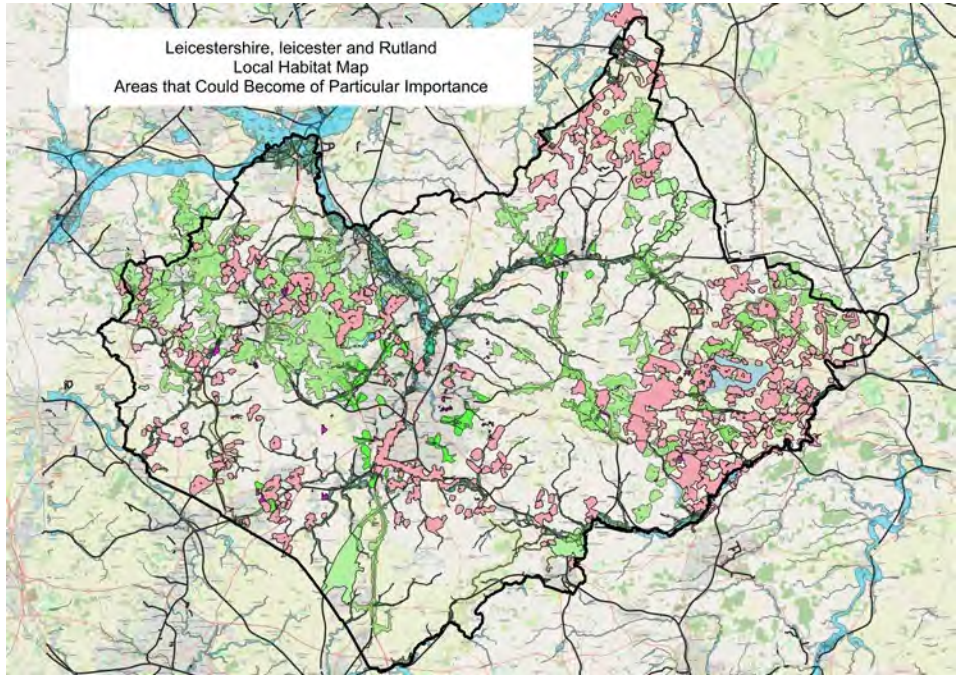
The Areas that Could Become of particular importance (ACB) have been identified and mapped using professional ecological modelling techniques and contributions from many stakeholder groups, government agencies and decision makers.

To view the Areas that Could Become of particular importance (ACB) , visit the online map here: https://haveyoursay.leicestershire.gov.uk/local-nature-recovery-strategy-local-habitat-map

### 9.2.2 Mapped Areas that Could Become of particular importance (ACB)

What follows are details of the opportunities for targeted nature recovery action within the areas that could become of particular importance, aligned mainly to Leicestershire & Rutland Wildlife Trust's Living Landscapes.

**Figure 7:** Showing the Areas that Could Become of particular importance (ACB).




### a) Charnwood Forest

Charnwood Forest presents significant opportunities for expanding ancient woodlands, restoring heathlands, and improving habitat connectivity to support key species and enhance ecosystem resilience.

**Opportunity:** Charnwood Forest offers significant opportunities to expand ancient woodlands, particularly lowland mixed deciduous woodland, wet woodland, and ancient woodlands. These expansions will benefit species like the Hazel Dormouse, Willow Warbler, and Barbastelle Bats, and contribute to carbon sequestration, flood regulation, and ecosystem resilience.

**Opportunity:** Restoring degraded heathlands will expand priority habitats, such as lowland heathland, for species like Adders and Common Lizards.

**Opportunity:** Enhance grasslands and heathlands by reducing nutrient inputs and managing deadwood, which supports species like the Lesser Stag Beetle and Wood Warbler.

**Opportunity:** Enhance habitat connectivity by creating ecological corridors (hedgerows, wildflower strips, riparian buffer zones), aiding species like dormice, bats, and woodland birds.

**Opportunity:** Protect ancient woodlands such as Swithland Wood SSSI and The Outwoods. Additional protections could focus on lowland heathland sites and significant geological features in Charnwood Forest, given its potential as a UNESCO Geopark. Protecting Biodiversity Action Plan habitats like lowland mixed deciduous woodland will also be crucial.

## b) Soar Valley and Wreake

The Soar Valley and Wreake landscape offers valuable opportunities to restore floodplains, enhance riparian woodlands, and create wetland networks to support biodiversity and improve natural flood management.

**Opportunity:** Restore floodplain meadows and create larger meadows to support species like Devil's-bit Scabious, Ragged-Robin and Meadow Buttercup.

**Opportunity:** Remove barriers to fish migration and improve habitats for key fish species such as salmon.

**Opportunity:** Enhance riparian habitats by planting native vegetation along riverbanks, controlling invasive species, and improving water quality.

**Opportunity:** Create a connected network of wetlands, supporting species like water beetles, newts, and dragonflies.

**Opportunity:** Protect existing habitats like Cossington Meadows, focusing on floodplain grazing marshes and riparian woodland. Further protections should target wetland Biodiversity Action Plan habitats, such as reedbeds, and riverside habitats for species like water voles and otters.

## c) Rutland Water and Surrounding Landscape

Rutland Water and its surrounding landscape provide prime opportunities to restore grasslands and wetlands, enhance riparian buffer zones, and protect habitats for breeding and migratory birds and other species.

**Opportunity:** Restore species-rich meadows, hay meadows, and calcareous grasslands to support species like skylarks, brown hares, and orchids.

**Opportunity:** Establish large buffer zones to protect migratory bird populations and improve water quality.

**Opportunity:** Link woodlands, grasslands, and wetlands through green corridors, supporting species like bats, badgers, and butterflies.

**Opportunity:** Existing protections for Rutland Water should be expanded to include surrounding calcareous grasslands and ancient woodlands. These areas could support additional priority habitats, such as lowland meadow and wet woodland.

## d) National Forest and Leicestershire Coalfield

The National Forest and Leicestershire Coalfield landscape offer large-scale opportunities for woodland creation and the restoration of former industrial sites to support diverse species and improve habitat connectivity.

**Opportunity:** The National Forest offers significant opportunities to create large-scale woodlands to support species like woodpeckers, bats, and butterflies, while enhancing ecosystem resilience.

**Opportunity:** Deliver River Mease restoration projects.

**Opportunity:** Restore former coal mining areas by planting native vegetation and creating ponds and grasslands for species like Common Lizards and pollinators.

**Opportunity:** Restore hedgerows and develop green corridors to connect fragmented landscapes, facilitating species movement.

**Opportunity:** Protect existing ancient woodlands within the National Forest, such as Martinshaw Wood and areas of reclaimed industrial land. Additionally, protect former industrial sites that have been restored into key habitats for species such as bats, reptiles, and invertebrates.

## e) East Leicestershire and Rutland Clays

East Leicestershire and Rutland Clays present opportunities to convert arable land to species-rich grasslands, create and restore hedgerows, and enhance riparian buffers to improve biodiversity and water quality.

**Opportunity:** Restore low-productivity arable lands into species-rich grasslands to benefit species like Barn Owls, shrews, voles and wildflowers.

**Opportunity:** Create and restore hedgerows and plant native trees in the right places to improve habitats for farmland birds and pollinators.

**Opportunity:** Establish riparian buffer zones to improve water quality and support species like Brown Trout and Water Voles.

**Opportunity:** Focus on protecting areas of restored grasslands and riverside habitats. Ancient hedgerows and nearby priority habitats, such as arable field margins and lowland meadows, should be prioritised for protection.

## f) Jurassic Limestone Area - Rutland, East Leicestershire, and Adjoining Lincolnshire

The Jurassic Limestone landscape across Rutland, East Leicestershire, and adjoining Lincolnshire provides a unique opportunity to enhance calcareous grasslands, woodlands, and species-rich meadows. This area supports rare chalk-loving flora, important pollinators, and farmland birds, while also offering potential for carbon sequestration and soil restoration.

**Opportunity:** Restore and expand calcareous grasslands to support priority species such as chalk hill blue butterflies, pasqueflowers, and pyramidal orchids. This will also improve soil health, reduce erosion, and enhance carbon storage.

**Opportunity:** Protect and connect fragmented limestone grasslands by establishing habitat corridors and buffer zones between existing sites, increasing biodiversity and ecological resilience.

**Opportunity:** Enhance and restore species-rich hay meadows and wildflower pastures, supporting pollinators such as bumblebees, solitary bees, and butterflies, as well as ground-nesting birds like skylarks and yellowhammers.

**Opportunity:** Promote regenerative agricultural practices on limestone soils to improve soil quality, water retention, and carbon sequestration, while reducing chemical runoff into watercourses.

**Opportunity:** Protect and enhance ancient woodland remnants while providing habitat for woodland birds, bats, and invertebrates.

**Opportunity:** Improve water quality and restore natural hydrology in limestone stream catchments by implementing buffer zones, wetland creation, and reduced nutrient pollution to benefit aquatic species.

## g) Welland Valley

Welland Valley offers opportunities to restore meadows and wetlands, enhance grasslands, and create riparian woodland and buffers to improve habitat connectivity and flood resilience.

**Opportunity:** Restore floodplain meadows and wetlands to support species like Curlews, Snipes, and Scarce Chaser dragonflies.

**Opportunity:** Manage existing grasslands to promote wildflower growth, supporting invertebrates and small mammals.

**Opportunity:** Establish riparian buffers and create woodland along the River Welland to cool the river, support aquatic species and link fragmented habitats.

**Opportunity:** Expand protections around the Welland Valley floodplain meadows and River Welland itself. Designate new Local Wildlife Sites focused on priority habitats such as wet woodland and lowland meadows.

**“Beekeeping directly connects you to nature. Positively improving the environment and helping nature.”**
(Blaby resident)

## h) Melton and Vale of Belvoir

Melton and the Vale of Belvoir offer opportunities for grassland restoration, hedgerow management, and pond creation to support farmland wildlife and improve landscape connectivity.

**Opportunity:** Create new woodlands in the right places and expand hedgerows to increase habitats for woodland species and support wider environment al benefits such as carbon sequestration, water storage and improved air quality.

**Opportunity:** Restore arable land to species-rich grasslands to support species like Linnets, Brown Hares, and pollinators.

**Opportunity:** Expand woodland and wildflower meadows to create connected habitat corridors along the historic railway line between Melton to and Nottingham.

**Opportunity:** Restore and optimise hedgerows and improve grasslands to benefit pollinators, farmland birds, and small mammals.

**Opportunity:** Landscape scale river restoration and sediment management projects in the Wreake below Melton Mowbray.

**Opportunity**: Landscape scale river restoration and sediment management projects in the Eye north of Melton Mowbray.

**Opportunity:** Protect and restore the area's ancient woodlands like Barkestone Wood and hedgerow networks, alongside designating important stream and pond habitats, especially those supporting priority species.

## i) Leighfield Forest

Leighfield Forest presents opportunities for woodland expansion and connectivity, improving habitat quality and supporting woodland species such as dormice and bats.

**Opportunity:** Enhance and expand woodland, hedgerows, and wildflower-rich habitats along the historic railway line between Loddington and Melton.

**Opportunity:** Improve woodland conditions by managing deadwood and controlling deer and invasive non-native species.

**Opportunity:** Connect isolated woodlands through creation and management of new hedgerows, wood pasture and grassland networks to support species like Bluebell, Wood Anemones and Daubenton's Bats.

**Opportunity:** Focus on protecting existing ancient woodlands in Leighfield Forest. Designate new Local Wildlife Sites to protect ancient woodland and woodland priority habitats like lowland mixed deciduous woodland.

## j) South and South West Leicestershire

South and South West Leicestershire offers significant opportunities for woodland creation, hedgerow expansion, and riparian woodland management to enhance biodiversity and ecosystem services.

**Opportunity:** Create new woodlands in the right places and expand hedgerows to increase habitats for woodland species and support wider environment al benefits such as carbon sequestration, water storage and improved air quality.

**Opportunity:** Restore grasslands, wildflower meadows, and scrubland along the disused railway line and the M1 corridor, between Ullesthorpe and Leicester City to improve connectivity for species between urban and rural areas.

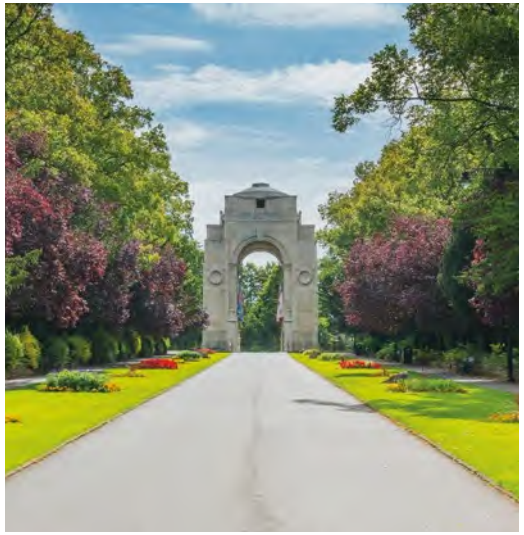
**Opportunity:** Deliver River Anker restoration including barrier mitigation and longitudinal connectivity in Upper Anker which forms part of the Leicestershire County boundary near Atherstone.

**Opportunity:** Expand and enhance riparian woodlands and improve water quality through natural flood management.

**Opportunity:** Connect grasslands through wildflower margins and pond networks to support pollinators and amphibians.

**Opportunity:** River Avon (border between Leicestershire and Northamptonshire) has the potential for future Natural Flood Management delivery.

## k) Urban



Urban landscapes provide opportunities to expand green and blue infrastructure, enhance habitat quality in green spaces, and create steppingstones for wildlife in built environments.

**Opportunity:** Expand and create new urban green and blue spaces like pocket parks, sustainable urban drainage solutions, and community gardens to support urban wildlife.

**Opportunity:** Create new species rich habitats in 'Green Wedge Areas' and 'Areas of Separation', conserve natural habitats, provide recreational opportunities, support sustainable land use, and help mitigate climate effects in urban areas. Deploy exemplary urban/landscape design and biodiversity enhancement to sustain nature connectivity and mitigate any new development proposal impacts.

**Opportunity:** Enhance urban green spaces by planting native species and reducing mowing.

**Opportunity:** Create steppingstones for wildlife in urban areas, such as wildflower verges and hedgehog highways.

**Opportunity:** Designate existing urban green spaces, including brownfield sites, historic railway lines and canal corridors, as Local Wildlife Sites to protect their biodiversity potential.

**Opportunity:** Enhance and improve the blue green infrastructure of existing parks and gardens for the benefits of people and wildlife.

## 9.3 Habitat Priorities and Measures

### 9.3.1 Introduction

The Local Nature Recovery Strategy identifies a range of priority habitats that are essential for supporting biodiversity and ecosystem services. Each of these habitats play a crucial role in maintaining ecological balance, supporting species, and providing environmental and social benefits to our communities. Our approach focuses on protecting, creating and enhancing, managing and connecting these habitats to ensure their resilience and sustainability for future generations.

The strategic priorities outlined in this Local Nature Recovery Strategy were meticulously developed through a comprehensive and inclusive process. To ensure alignment with both local and national environmental objectives, existing plans and strategies, including Biodiversity Action Plans (BAPs) and Local Plans were thoroughly assessed (See Appendix G). This extensive review produced over 400 potential priorities, each of which was evaluated against the specific criteria of the Local Nature Recovery Strategy as well as the National Environmental Objectives.

All these were then systematically categorised and organised into a long list of priorities, forming the foundation for an extensive consultation process. Key partners, including those on our Steering Group, Strategic Reference Group, farmers, landowners, community groups, and residents, were engaged to provide feedback and insights. Through this collaborative approach, both the long list of priorities and the specific measures required to deliver them were carefully refined. This ensured that the resulting set of strategic priorities and associated actions not only aligned with broader environmental goals but also reflected the needs and aspirations of stakeholders.

The guiding principles for this work were identifying the priorities most important in achieving bigger, better, more joined up, and protected spaces for nature, as well as ensuring conservation and enhancement of our most precious irreplaceable habitats, threatened species and vulnerable ecosystems.

These selected priorities will guide our efforts to enhance and protect biodiversity, support sustainable land management, and contribute to the overall resilience of our natural environment.

The tables that follow pull together the sum of the work set out above, and show the ‘habitat-focused’ priorities, opportunities and measures that have been mapped on the Local Habitat Map and should be adopted by anyone contributing to the delivery of the Local Nature Recovery Strategy. The codes shown against each measure are there for cross referencing measures with the ACB map.

To view the priorities and measures for the Areas that Could Become of particular importance (ACB), visit the online map here:

https://haveyoursay.leicestershire.gov.uk/local-nature-recovery-strategy-local-habitat-map

**85% of respondents agreed that nature is important for tackling climate change.**

### 9.3.2 Habitat Priorities and Measures

#### Woodland

Woodlands are vital ecosystems that support a rich diversity of species and provide essential services such as carbon capture and storage, water management, air purification, and recreational spaces for communities.

Protecting and enhancing, creating, and expanding, and connecting woodland habitats will not only improve biodiversity but also contribute to climate change mitigation and adaption, and enhance the wellbeing of residents by providing accessible natural spaces for relaxation and recreation.

| Priority | Measure | |
|---|---|---|
| **Protection and expansion:** Ensure existing woodlands are protected and conserved, and new woodlands are established to increase overall forest cover. | WD001 | Buffer and connect ancient and priority habitat woodlands to reduce fragmentation and create wildlife corridors. |
| | WD002 | Restore plantation on ancient woodland sites (PAWS) to native broadleaf species composition. |
| | WD003 | Manage ancient and veteran trees, including identification of successors to ensure habitat continuity. |
| | WD004 | Expand woodland cover through a range of establishment methods and using a diverse mixture of tree species. |
| | WD005 | Increase structural diversity of woodlands to support a diverse range of flora and fauna. |
| **Connectivity:** Develop and maintain wildlife corridors that link fragmented woodlands, promoting biodiversity and ecosystem health. | WD006 | Create and maintain wildlife corridors linking woodlands with other habitats, promoting biodiversity, and facilitating species movement. |
| | WD007 | Increase transitional habitats around and between woodlands to increase ecotones and establish wildlife rich dynamic mosaics. |

| Priority | Measure | |
|---|---|---|
| **Management and Resilience:** Implement sustainable management practices to enhance woodland health and resilience against climate change and pests. | WD008 | Increase and implement sustainable woodland management practices to enhance biodiversity and bring all woodlands into good ecological condition. |
| | WD009 | Enhance resilience of new and existing woodland through the creation of diverse, mixed species stands using tree species best suited to individual site characteristics, and future climate projections. |
| | WD010 | Restore woodlands impacted by ash dieback, target management actions to diversity species compositions to aid ecological and climate resilience. |
| | WD011 | Follow best practice to control invasive non-native plant species and minimise the risk of introducing pests and diseases within woodlands. |
| | WD012 | Control and monitor deer and grey squirrel populations, especially in sensitive priority habitats and ancient woodlands. |
| | WD013 | Manage water levels within wet woodlands to maintain suitable hydrological conditions for associated species. |
| | WD014 | Buffer priority wet woodlands with appropriate vegetated habitats to reduce incursion of pollutants. |

## Freshwater

Freshwater habitats, including rivers, canals, lakes, and wetlands, are critical for supporting aquatic life and providing clean water for human use. These habitats also play a key role in flood regulation and water purification. By protecting, enhancing, and connecting freshwater habitats and wider catchment habitats, we will improve water quality, increase resilience to flooding, and support a diverse range of species, while also ensuring that local communities have access to clean water and recreational opportunities.

| Priority | Measure | |
|---|---|---|
| **Natural Flood Management:** Implement natural flood management techniques to reduce flood risk, enhance water quality, and support biodiversity. | FW001 | Connect rivers to their floodplain and utilise wetlands for natural flood management. |
| | FW002 | Create and maintain new floodplain meadows to manage excess water and provide priority habitat for species. |
| | FW003 | Implement other natural flood management techniques to reduce flood risk and improve water retention. Such as re-meandering rivers, woodland and scrub planting, leaky dams, buffer strips, gully blocking and pond and scrape creation. |
| **Protection and Restoration:** Safeguard freshwater habitats and restore them to achieve favourable ecological status. | FW004 | Control and manage invasive species in freshwater habitats. |
| | FW005 | Promote the better management of soils and use of fertilisers on farmland to reduce sediment and phosphate entering rivers and damaging water ecology. |
| | FW006 | Take a catchment-based approach to the protection and restoration of river habitats, recognising the unique features of the river system at every stage, from headwater to confluence with other waterbodies. |
| | FW007 | Safeguard freshwater habitats and restore them to achieve favourable ecological status. |
| | FW008 | Restore rivers in rural areas that have been artificially widened and straightened to support improved water quality and increased habitat. |

| Priority | Measure | |
|---|---|---|
| **Protection and Restoration Cont'd** | FW009 | Restore rivers that have been heavily modified in urban areas to improve water quality and habitat. |
| | FW010 | Manage water levels within wetland habitats to maintain suitable hydrological conditions. |
| | FW011 | Enhance fish habitat through gravel bed restoration and instream structures. |
| | FW012 | Restore riparian habitats along waterbodies. |
| **Creation and Connectivity:** Enhance connectivity between freshwater bodies to strengthen ecological resilience and create new freshwater associated habitats to facilitate species recovery and movement. | FW013 | Create and manage wetland habitats to support diverse aquatic and semi-aquatic species. |
| | FW014 | Create new pond networks and restore existing ones to increase habitat and prevent pollution. |
| | FW015 | Connect waterbodies with other priority habitats, creating resilient networks of ecologically favourable habitats. |
| | FW016 | Improve fish and other aquatic life passage by removing barriers like dams and weirs. |

## Grasslands

Grasslands are home to a variety of plant and animal species, many of which are rare or endangered. These habitats are important for pollinators, soil health, and carbon storage. Protecting and enhancing, creating and expanding, and connecting important grassland habitats will boost biodiversity, improve agricultural productivity through better pollination services, and contribute to carbon sequestration. Moreover, well-managed grasslands provide beautiful landscapes for public enjoyment and promote cultural and historical connections to the land.

| Priority | Measure | |
|---|---|---|
| **Protection and Expansion:** Conserve and enhance existing grasslands and create new ones to expand these vital ecosystems. | GL001 | Protect and restore species rich grassland. |
| | GL002 | Create new or expand existing species rich grassland. |
| **Connectivity:** Establish networks of grasslands to improve habitat connectivity and support diverse wildlife populations. | GL003 | Connect areas of priority grassland with other habitats to support diverse species populations, facilitate movement and build resilience to pressures. |
| | GL004 | Create new heath grassland habitats to increase connectivity and create wildlife corridors. |
| **Management and Resilience:** Apply best practices for grassland management to boost their ecological health and resilience. | GL005 | Implement appropriate management and grazing regimes to maintain habitat structure. |
| | GL006 | Manage water levels and drainage within grasslands to maintain suitable conditions. |
| | GL007 | Control invasive plant species and encroaching scrub in grasslands. |

## Urban

Urban habitats, including parks, gardens, and green roofs, are increasingly important as cities expand. These habitats provide essential green spaces for urban wildlife and enhance the quality of life for residents by offering recreational spaces and reducing the urban heat island effect. Protecting, enhancing, and connecting urban habitats will support biodiversity within cities, promote mental and physical health among residents, and contribute to climate resilience by managing stormwater and reducing temperatures. Retaining existing green and blue habitats in urban areas also contributes to the national environmental objective that everyone in England lives within a 15-minute walk of woodlands, wetlands, parks, canals, and rivers.

| Priority | Measure | |
|---|---|---|
| **Protection and Enhancement:** Conserve and enhance green spaces within urban areas to support biodiversity and provide ecosystem services. | UB001 | Protect brownfield sites with habitats that that support important biodiversity, including the International Union for Conservation of Nature's (IUCN) Red List of Threatened Species and locally important species. |
| | UB002 | Protect, restore, and enhance existing green and blue spaces into favourable ecological conditions. |
| | UB003 | Increase the urban tree canopy by planting native and climate-resilient tree species in streets, parks, and other public spaces to provide habitat, reduce urban heat islands, and improve air quality. |
| | UB004 | Protect and enhance urban rivers and their riparian boundary recognising their key role in supporting nature in towns and cities. |
| | UB005 | Create new green and blue spaces and manage them to keep them in favourable ecological conditions. |
| **Connectivity:** Create green and blue corridors and networks to link urban habitats, facilitating wildlife movement and ecological interactions. | UB006 | Connect existing green and blue spaces with other habitats (urban, sub-urban and rural) through best management practices, protection, and design of urban green corridors. |
| **Management and Resilience:** Implement urban habitat management strategies that increase resilience to environmental stresses and climate change. | UB007 | Manage habitats within buildings (including roof spaces) when considering energy retrofits, change of use or new build; and use of appropriate mitigation measures. |
| | UB008 | Create and manage high quality sustainable urban drainage systems (SuDS) based on urban design expertise and following the Leicester City Technical Guidance (2021). |
| | UB009 | Integrate biodiversity into urban planning and development processes and promote sustainable urban design practices that incorporate green spaces. |

## Agricultural

Agricultural habitats, vital for food production, also have the potential to support a wide range of wildlife through sustainable farming practices. Protecting, enhancing, and connecting agricultural habitats can increase biodiversity on farmland, improve soil health, and support pollinators, essential for crop production. In addition, promoting sustainable agriculture can enhance food security and provide economic benefits to local communities.

| Priority | Measure | |
|---|---|---|
| **Sustainable Food Production:** Promote sustainable and viable food production practices that increase biodiversity and improve soil health. | AG001 | Promote suitable Agri-environment schemes that incentivise nature-friendly farming practices. |
| | AG002 | Implement sustainable farming systems that enhance soil health, improve water management and quality, and increase and supports biodiversity. |
| **Habitat Management:** Manage agricultural landscapes to support biodiversity, including the conservation and enhancement of hedgerows, field margins, and wetlands. | AG003 | Implement appropriate management and grazing regimes to maintain habitat structure. |
| | AG004 | Manage water levels and drainage within agricultural land to maintain favourable conditions. |
| | AG005 | Control invasive plant species on agricultural land. |
| **Priority Habitat Creation:** Develop and maintain priority habitats on agricultural land to support key species and enhance ecosystem services. | AG006 | Create and manage priority wildlife habitats in agricultural landscapes. |
| | AG007 | Create and manage priority habitat connections between existing habitats. |

## Open mosaic habitats

Open mosaic habitats on previously developed land are characterised by a mix of bare ground, grassland, scrub, and wetland, providing unique opportunities for colonising species and biodiversity. Protecting, enhancing, and connecting these habitats will help to sustain rare and specialist species, improve landscape diversity, and contribute to the ecological recovery of degraded lands. These habitats also offer opportunities for community engagement in restoration projects and can serve as unique recreational spaces.

| Priority | Measure | |
|---|---|---|
| **Protection and Expansion:** Ensure existing important open mosaic habitats are preserved and new open mosaic are established to increase transitional habitats between priority habitats and species populations. | OM001 | Protect existing important open mosaic habitats and associated species in a manner consistent with national planning policy to make effective use of brownfield land. |
| | OM002 | Create new or expand existing open mosaic habitats. |
| **Connectivity:** Develop and maintain wildlife corridors that link fragmented habitats, promoting biodiversity and ecosystem health. | OM003 | Connect important open mosaic habitats with other priority habitats. |
| **Management and Resilience:** Implement sustainable management practices to enhance open mosaic habitats and resilience against climate change and pests. | OM004 | Implement appropriate management regimes to maintain habitat structure. |
| | OM005 | Manage water levels and drainage within open mosaic habitats to maintain suitable conditions. |
| | OM006 | Control invasive plant species in open mosaic habitats. |

## Green and blue corridors

Sometimes referred to as Nature Networks, green and blue corridors, such as hedgerows, railways, road verges, canals, rivers, and streams, are crucial for connecting fragmented habitats and allowing species to move freely across the landscape. Protecting, improving, and connecting these corridors will enhance ecological connectivity, support species migration, and increase resilience to climate change. Additionally, these corridors provide scenic routes for walking and cycling, promoting outdoor activities and enhancing the wellbeing of local communities.

| Priority | Measure | |
|---|---|---|
| **Protection and Expansion:** Ensure existing important green and blue corridors are conserved and enhanced and new habitats are established. | NN001 | Protect existing hedgerows and promote the planting of new native hedgerows. |
| | NN002 | Manage and enhance biodiversity along railway corridors with native vegetation. |
| | NN003 | Create wildlife-friendly road verges with native wildflowers and grasses. |
| **Connectivity:** Develop and maintain wildlife corridors that link fragmented habitats, promoting biodiversity and ecosystem health. | NN004 | Use hedgerows to create wildlife corridors. |
| | NN005 | Restore, enhance and manage Local Wildlife Sites to recognise their ecological value and strengthen their role as stepping stones across the wider ecological network. |
| | NN006 | Enhance ecological value of canal paths, cycle networks and public rights of way as green infrastructure corridors. |
| | NN007 | Recognise the value of watercourse in urban spaces as unique connected habitats and manage them to keep them in favourable ecological conditions. |
| | NN008 | Create green and blue corridors and networks to link urban habitats, facilitating wildlife movement and ecological interactions. |
| | NN009 | Utilise railway lines (operational and disused) to create new bigger, better habitats, connecting existing priority habitats at landscape scale. |
| **Management and Resilience:** Implement sustainable management practices to enhance green and blue corridors and resilience against climate change and pests. | NN010 | Encourage traditional hedgerow management techniques. |
| | NN011 | Enhance biodiversity along green corridors with native vegetation and wildflower meadows. |
| | NN012 | Promote pollinator-friendly habitats along networks. |
| | NN013 | Control invasive plant species along networks. |

## Geodiversity

Geodiversity, encompassing the variety of rocks, minerals, soils, and landforms, underpins the health of all other habitats. Protecting, enhancing, and connecting geodiversity sites will help to maintain soil health, support unique ecosystems, and conserve geological heritage. This also provides educational opportunities and promotes tourism, which can bring economic benefits to local communities.

The development of the Charnwood Forest Geopark provides an opportunity to deliver the priorities and measures within this habitat.

| Priority | Measure | |
|---|---|---|
| **Protect and Manage:** Protect important geological sites and implement sustainable management practices to conserve and enhance these sites. | GE001 | Promote geoconservation through the protection and management of important geological sites, such as National Nature Reserves, Sites of Special Scientific Interest, Local Nature Reserves, Regionally Important Geological Sites, Geological Conservation Review sites. This includes work to prevent human actions that may damage geoheritage, as well as measures to mitigate erosion and vegetation growth, where appropriate. |
| | GE002 | Through collaboration with Natural England, academia, voluntary groups, and others, ensure that geoheritage sites are adequately monitored. |
| | GE003 | Seek to safeguard new sites of geological significance where necessary to ensure representative sections of Leicestershire, Leicester, and Rutland's geodiversity are conserved. |
| | GE004 | Integrate geodiversity data, including bedrock, superficial, and soil information, into biodiversity assessments, nature recovery plans, and special planning processes to inform integrated nature-based policy. |
| | GE005 | Improve geodiversity public engagement by increasing public awareness of geodiversity, both for its inherent value and the vital role to biodiversity, through activities such as in-situ interpretation, guided tours, and educational materials. |
| | GE006 | Promote soil conservation practices that enhance fertility, reduce soil erosion, and increase carbon sequestration. |
| **Create and Connect:** Transform quarry and mineral sites into thriving natural habitats that enhance biodiversity and support sustainable ecosystems. | GE007 | Follow best practices for Phased Restoration. |
| | GE008 | Use native plants, with ability to thrive on existing soils - connectivity to other habitats. |
| | GE009 | Water to be properly managed to fit with character of area and to provide important wetland habitats. |

## 9.4 Species

### 9.4.1 Introduction

Species are the building blocks of our natural world, each playing a unique and irreplaceable role in the intricate web of life. In Leicestershire, Leicester and Rutland, our diverse array of species ranging from the smallest invertebrates to the largest mammals contributes not only to the health and functionality of our ecosystems but also to the richness of our cultural and natural heritage.

Every species has intrinsic value, meaning it is valuable in and of itself, regardless of its utility to humans. The mere existence of a species, with its own unique evolutionary history and ecological role, is a testament to the complexity and beauty of life on Earth. Protecting species is an ethical obligation, reflecting our responsibility to conserve the diversity of life for its own sake and for future generations.

Species are deeply intertwined with human culture, art, and inspiration. Throughout history, the natural world has been a source of fascination, creativity, and spiritual fulfilment. From the songs of birds inspiring music to the beauty of wildflowers influencing art and poetry, species have always been integral to human expression. In Leicestershire, Leicester and Rutland, our local species contribute to a sense of place and identity, connecting communities to the landscapes around them.

Species are not isolated entities; they are integral components of ecosystems, interacting with one another in complex and dynamic ways. These interactions such as pollination, seed dispersal, and predation are vital for the functioning of ecosystems. Healthy, biodiverse ecosystems are more resilient to environmental changes, such as climate shifts and invasive non-native species, and are better able to provide essential natural services like clean air, water purification, and soil fertility. Every species, no matter how small, has a role and contributes to the stability and productivity of the ecosystems that humans depend on for survival.

The presence of a rich variety of species is crucial for maintaining environmental balance. For example, bees and other pollinators are essential for the reproduction of many plants, including those we rely on for food. Trees and plants not only provide habitat for wildlife but also sequester carbon, helping to mitigate climate change. Predator species help control populations of other animals, preventing overgrazing and maintaining vegetation diversity. In this way, species help sustain the environment that sustains us.

Species have inspired countless scientific discoveries and innovations. The study of wildlife behaviour, physiology, and ecology has led to advancements in medicine, agriculture, and technology. Biomimicry, where nature's designs inspire human innovation, is just one example of how species can influence new ways of thinking and problem-solving. Conserving the diversity of species is therefore not only an environmental imperative but also a source of potential future innovations.

Species also provide significant economic and recreational value. Ecotourism, birdwatching, fishing, and other wildlife-related activities generate income and employment for local communities. Moreover, the presence of diverse species enhances the beauty and appeal of natural landscapes, drawing visitors from near and far and contributing to local economies. Additionally, many species play a role in agriculture and horticulture, whether as pollinators, pest controllers, or sources of genetic diversity for crops.

Given their intrinsic and practical values, the protection and restoration of species in Leicestershire, Leicester, and Rutland is a cornerstone of our Local Nature Recovery Strategy. By focusing on species conservation, we not only safeguard the biodiversity that makes our strategy area unique but also ensure the continued health of the ecosystem services that support our own wellbeing. Protecting species is about more than conservation; it is about conserving the fabric of life that sustains our planet and enriches our human experience.

### 9.4.2 Priority Species and Measures

Priority species refer to species that are identified as being of principal importance for biodiversity conservation. These species are typically selected based on their conservation status, ecological importance, and vulnerability to habitat loss, climate change, and other environmental pressures. The designation of priority species helps focus conservation efforts and resources on those species most in need of protection and recovery.

In developing the Local Nature Recovery Strategy, we have identified a range of priority species requiring targeted conservation action. However, nature is dynamic, and as ecosystems change due to climate shifts, habitat restoration, and rewilding efforts, we must also recognise the importance of naturally colonising species. Species such as the Eurasian Beaver, once extinct in England, are beginning to re-establish populations through both natural dispersal and reintroduction projects. These species can play a crucial role in ecosystem restoration, enhancing biodiversity, water retention, and flood mitigation. The strategy must therefore take a flexible, forward-looking approach, ensuring that conservation efforts support not only existing priority species but also create resilient landscapes where species can return, thrive, and contribute to ecosystem recovery.

Key rational for selection of the Priority Species:

**Legislative Basis:** Priority species lists are often derived from statutory designations, such as the UK Biodiversity Action Plan (UK BAP) or the species listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. These species are of principal importance for conserving biodiversity at the national level.

**Habitat-Specific Needs:** Priority species are typically associated with specific habitats, such as ancient woodlands, wetlands, or grasslands. For example, species like the **Adder**, which depends on undisturbed acid heath grasslands, and the Curlew, which relies on open wet grassland, are often listed as priority species due to their specific habitat requirements.

**Vulnerability and Decline:** These species are often experiencing significant population declines or are at risk of local extinction due to habitat degradation, pollution, climate change, or other anthropogenic pressures. Protecting and restoring the habitats these species depend on is central to their conservation.

**Ecological Importance:** Priority species often play critical roles in their ecosystems, such as pollinators (e.g. **Grizzled Skipper Butterfly**) or apex predators. Protecting these species helps to maintain healthy and functional ecosystems.

**Targeted Conservation Actions:** Local Nature Recovery Strategies typically suggest bespoke measures for priority species, which may include habitat restoration, species reintroduction programs, and specific management practices to improve population resilience. These measures are designed to be locally specific, addressing the unique needs of the species in the context of the surrounding landscape.

The health of priority species populations is often seen as an indicator of the overall health of the ecosystem they inhabit. If priority species are thriving, it is usually a sign that the habitat is in good ecological condition.

Priority species lists help conservation practitioners and policymakers prioritise limited resources. These lists inform decisions on where to focus habitat restoration efforts, species reintroduction projects, and land management practices.

While many priority species are identified at the national level, the Local Nature Recovery Strategy enables these species to be contextualised for local landscapes, ensuring that actions are relevant to the specific ecological needs of Leicestershire, Leicester, Rutland, or any other area under the strategy.

In total 113 species were identified against the criteria. These are species which require bespoke action to protect and enhance their populations. The list is made up of **1 amphibian (Palmate Newt), 1 reptile (Adder), 12 birds (including Turtle Dove), 1 crustacean (White-clawed Crayfish), 6 invertebrates (including Glow worm), 3 fish (Including Brown Trout), 6 mammals (including Hedgehog), 77 rare vascular plants (including Purple Milk Vetch) and 6 lichen (including Lasallia pustulata).**

In summary, priority species within a Local Nature Recovery Strategy framework are those species most in need of focused conservation action due to their ecological importance, vulnerability, and the role they play in maintaining local biodiversity.

**The full priority species list, including distribution maps and proposed conservation measures can be accessed in Appendix C.**

### 9.4.3 Indicator Species

The **100 Indicator Species** have been carefully selected to serve as vital tools for monitoring the health of the environment across Leicestershire, Leicester, and Rutland. Representing a range of taxonomic groups, including mammals, birds, invertebrates, amphibians, plants, and fungi, these species are distributed across all major habitats, from woodlands and grasslands to freshwater ecosystems and urban areas.

The concept behind indicator species is straightforward: they are representatives of habitats in good ecological health. When these species thrive, it suggests that their ecosystems are functioning well, and when their populations decline, it signals environmental stress or degradation. Therefore, tracking the trends in the populations of these species provides valuable insights into the state of biodiversity and ecological balance within the area.

Chosen for their relative ease of identification and their broad appeal to citizen scientists and conservationists, these species are not rare but are known to be in decline. This makes them reliable indicators of changing environmental conditions. Their population trends can help detect issues such as habitat loss, climate change impacts, pollution, and other pressures on biodiversity.

It is our hope that this list will be adopted in future initiatives, helping to create a unified approach to monitoring the state of nature in Leicestershire, Leicester, and Rutland. By tracking these indicator species over time, we can more effectively assess the success of conservation efforts and make informed decisions to support the recovery of local ecosystems.

Species selected are based on the following criteria:

- association with quality habitats (including species found in multiple habitats)
- firmly established in the Local Nature Recovery Strategy area but have declined or maintained a low base level over the last 10 years.
- recorded sufficiently frequently to provide adequate data for analysis.
- can be seen without specialist sampling and be identified without detailed examination.
- Come from a wide range of taxon groups.

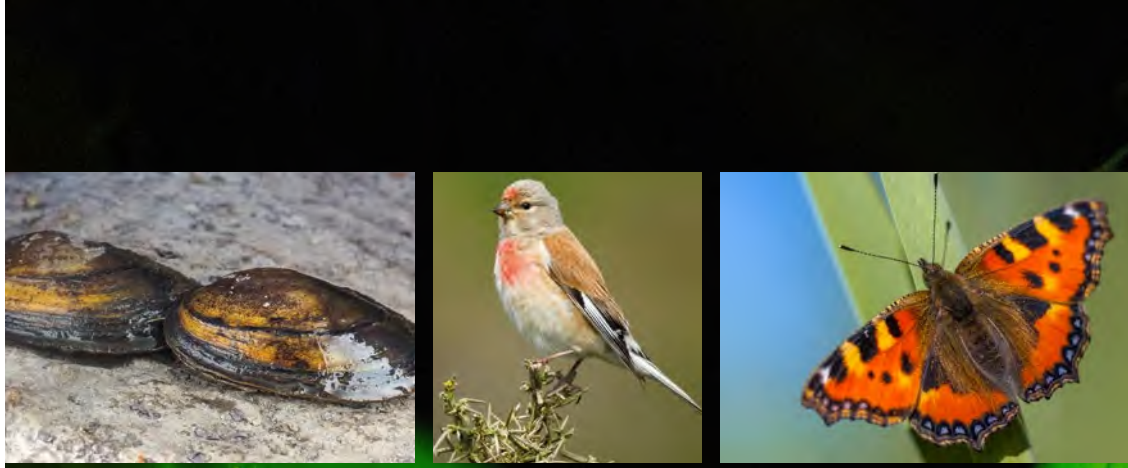
The Indicator Species list includes species such as **Small Tortoiseshell Butterfly**, which are found in nettles and gardens; **Lesser Stag Beetle**, the largest beetle found in Leicestershire, Leicester and Rutland and is a good indicator of healthy woodland understorey; and, **Glow-Worm**, found in healthy species rich grassland, and can thrive along roadsides and many local wildlife sites.

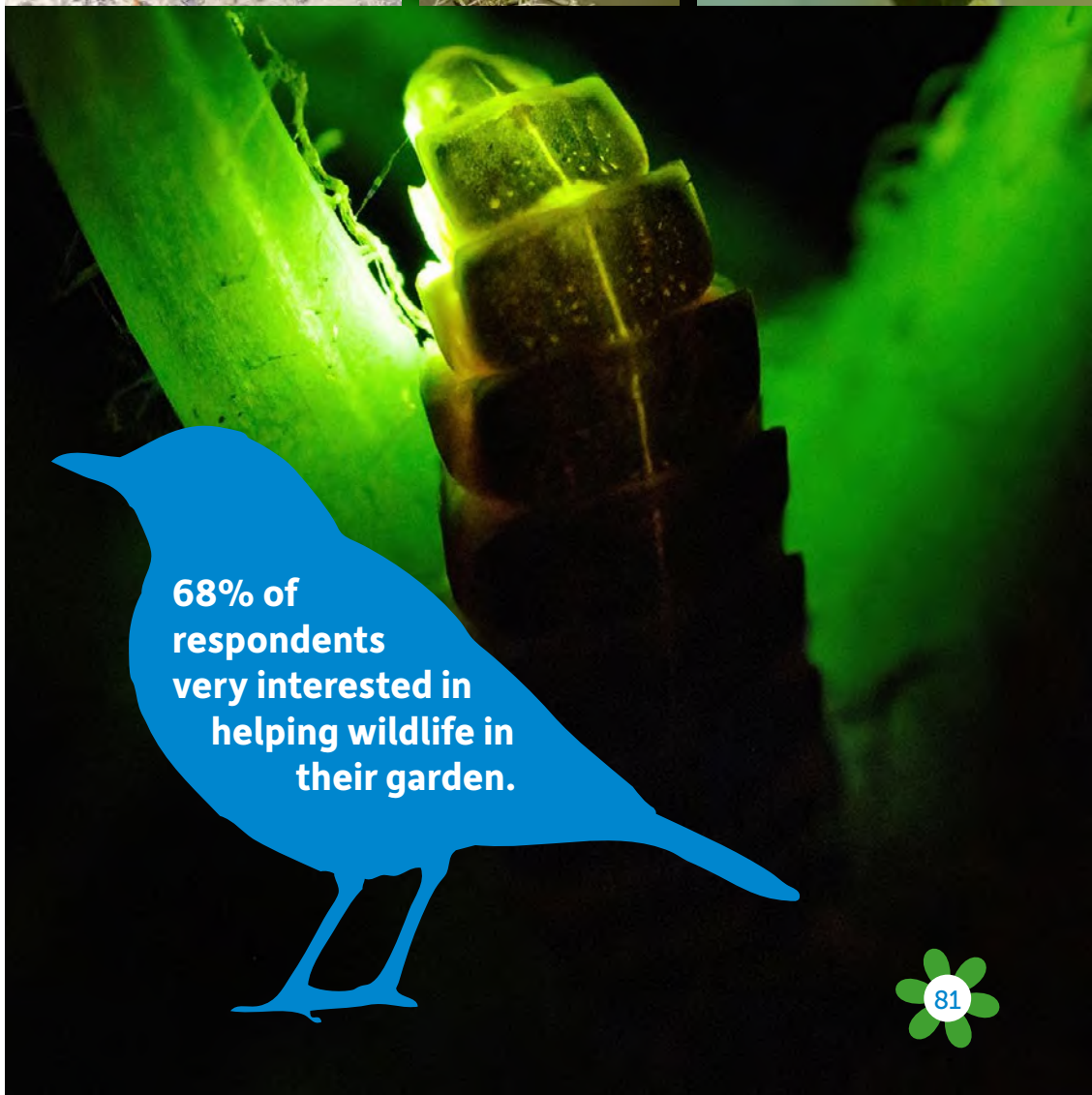
Farmland birds such as **Linnet** and **Yellowhammer** have well established but declining populations. These birds are easily identifiable and improvements in their numbers could be attributed to well managed hedgerows and field margins in arable fields.

**Swan Mussel** is a good indicator for clean flowing water. These are known to be declining but will recover with improvements to water quality and good management.

By monitoring these species, the Local Nature Recovery Strategy aims to create a robust and sustainable framework for biodiversity conservation, ensuring that all species and their habitats are preserved for future generations.

The full indicator species list and supporting selection process documents can be accessed in Appendix C.





## 9.5 Landscape Scale Priorities and Measures

### 9.5.1 Introduction

The Local Nature Recovery Strategy identified several key landscape-scale priorities that are essential for improving biodiversity and ecosystem health. These priorities address issues that affect large areas of the landscape and cannot be confined to specific mapped locations. Instead, they require widespread implementation across different land types and habitats.

A holistic approach to land management considers the ecological, social, and economic aspects of a landscape. It is complex as it often involves working in partnership and across multiple land ownerships. Hedgerow management, roadside grass verge management, woodland management, the control of invasive non-native species (INNS) and pests, nature-friendly farming and natural flood management need to be actioned at a landscape scale because these elements play a critical role in maintaining and enhancing ecological connectivity across large areas. These habitats serve as vital wildlife corridors, linking fragmented habitats and enabling species to move freely, essential for genetic diversity and resilience against environmental changes. Addressing invasive non-native species and pests at a landscape scale is crucial to prevent their spread and to protect native ecosystems. By taking a coordinated, large-scale approach, we can create a more cohesive, biodiverse landscape that supports the recovery and sustainability of priority species and habitats.

The following sections outline the measures associated with each priority, as well as additional landscape-scale initiatives that will contribute to nature recovery.

### 9.5.2 Landscape Scale Priorities and Measures

### a) Landscape Hedgerow Optimisation

Hedgerows are crucial ecological corridors in the rural and urban landscapes of Leicestershire, Leicester, and Rutland. They provide habitat and movement pathways for a range of species, including birds, mammals, insects, and plants. However, many hedgerows are poorly managed, fragmented, or over-trimmed, reducing their ecological value. Optimising hedgerow management at a landscape scale will support wildlife, enhance connectivity, and contribute to climate resilience.

**Hedgerow Priority:**

Optimise Hedgerows: Plant new, enhance existing and expand Hedgerows to create continuous habitat corridors that support wildlife movement improve habitat quality, and boost biodiversity across the landscape.

**Measures:**

- Prioritise planting new hedgerows in areas of low hedgerow density comparable to the strategy area.
- Implement a rotational cutting, planning different sections of hedgerows in different years to allow flowering and fruiting, which benefits pollinators and provides food for wildlife.
- Encourage the growth of wider and thicker hedgerows by planting additional native shrubs and trees, which provide better shelter and nesting opportunities for birds and small mammals.
- Fill in gaps in existing hedgerows with native species such as hawthorn, blackthorn, and hazel to create continuous wildlife corridors.
- Retain and promote the growth of standard trees within hedgerows, which provide habitat diversity and long-term ecological benefits.
- Following best practice guides, prioritise planting a variety of native hedgerow species to enhance biodiversity.
- Establish wildflower margins alongside hedgerows to increase nectar sources and habitat for pollinators.
- Ensure hedgerows are connected to other habitats such as woodlands, wetlands, and grasslands to facilitate wildlife movement across the landscape.
- Identify areas where historical hedgerows have been lost and work towards restoring these to reconnect fragmented habitats.

## b) Landscape Roadside Grass Verges

Roadside grass verges across the strategy area represent an extensive but underutilised habitat for wildlife. When managed correctly, they can act as wildflower corridors, support pollinator populations, and provide connectivity across fragmented landscapes. Unfortunately, road verges are often mown too frequently or at inappropriate times, limiting their ecological potential.

**Roadside Grass Verge Priority:**

Optimise Roadside Grass Verge: Manage and enhance roadside grass verges to create biodiverse corridors that support pollinators, improve habitat connectivity, and contribute to local wildlife conservation.

**Measures:**

- Implement a reduced mowing regime, cutting verges only once or twice a year, preferably after the flowering season to allow plants to set seed and support pollinators.
- Adopt staggered cutting practices where different sections of verges are mowed at different times, maintaining habitat diversity throughout the growing season.
- Introduce native wildflower species to road verges, focusing on species that are beneficial for pollinators and resilient to roadside conditions.
- Avoid planting non-native or invasive species and instead promote the establishment of native grasses and flowers that support local wildlife.
- Where appropriate, allow for the growth of small patches of scrub and native trees to provide shelter and nesting sites for birds and insects.
- Design road verges to function as pollinator corridors, ensuring they connect with other green spaces such as parks, farmland, woodlands, and nature reserves.
- Create buffer strips between the road and the verge to reduce pollution impacts and protect sensitive plant species from road runoff.
- Manage road verges in a way that balances safety for road users with the needs of wildlife, maintaining clear sightlines while promoting biodiversity.
- Promote pollinator-friendly planting in urban gardens, parks, and road verges by encouraging the use of native wildflowers and reducing chemical use. This will provide essential food sources and nesting habitats for pollinators like bees and butterflies.

## c) Landscape Invasive Non-Native Species and Pest Management

Invasive non-native species and pests pose a significant threat to native biodiversity by outcompeting native species, altering habitats, and spreading disease. The control and management of invasive non-native species and pests are essential to protect the ecological integrity of habitats across Leicestershire, Leicester, and Rutland.

**Invasive Non-Native Species Priority:**

Invasive Non-Native Species and Pest Management: Implement coordinated efforts to monitor, control, and eradicate invasive non-native species to protect native biodiversity and restore ecological balance.

**Measures:**

- Establish a comprehensive monitoring program to identify the presence of invasive non-native species early, particularly in sensitive habitats such as wetlands, woodlands, and along waterways.
- Sustainable pest management is essential to maintaining balanced ecosystems and preventing adverse impacts on biodiversity and food production.
- Form rapid response teams that can act quickly to control new infestations before they become widespread.
- Focus on eradicating the most harmful invasive species first, which have the greatest negative impact on native biodiversity.
- Follow best practice guides to choose the correct methods to manage invasive species, ensuring that the methods used are safe for the environment and non-target species.
- After removal of invasive species, promptly revegetate the area with native plants to prevent re-invasion and restore the ecological balance.
- Improve habitat conditions that favour native species over invasive ones, such as enhancing soil health, water management, and light conditions.
- Implement long-term monitoring and management plans to ensure that eradication efforts are sustained and that areas cleared of invasive species do not become reinfested.

## d) Landscape Woodland Management

Woodlands play a crucial role in biodiversity conservation, carbon sequestration, and water management. However, many woodlands in Leicestershire, Leicester, and Rutland suffer from poor management, including overgrazing by deer, lack of structural diversity, and a limited age range of trees. Optimising woodland management at a landscape scale will help create healthier, more resilient woodlands.

**Woodland Management Priority:**

Woodland Management: Implement sustainable management practices to enhance woodland health and resilience against climate change and pests.

**Measures:**

- Increase woodland management to bring all woodlands into good ecological condition.
- Encourage active woodland management through coppicing, thinning, and the promotion of structural diversity. This will create varied microhabitats and increase light penetration to support ground flora and invertebrates.
- Implement sustainable deer management practices to reduce browsing pressure on young trees and understorey vegetation. This will allow natural regeneration and enhance the overall biodiversity of woodlands.
- Retain deadwood both standing and, on the ground, as it provides essential habitat for fungi, invertebrates, birds, and mammals.
- Promote the management of woodland edges to create transitional zones between woodland and grassland, which are particularly valuable for species such as butterflies and small mammals.
- Engage local communities in woodland management activities, including volunteering programs to plant trees, control invasive species, and monitor biodiversity.
- Explore the use of trees and woodland as nature-based solutions and increase tree cover throughout the landscape.
- Implement strategic tree planting on non-productive agricultural land to sequester carbon, enhance biodiversity, and improve soil health.

## e) Landscape Nature-Friendly Farming

Nature-friendly farming: Nature-friendly farming plays a critical role in supporting biodiversity and promoting sustainable land use. By integrating conservation practices with agricultural production, farmers can help create habitats, support wildlife populations, and contribute to ecosystem health across the landscape. This approach also improves the resilience of farmland to environmental changes, ensuring long-term productivity.

**Nature-Friendly Farming Priority:**

Encourage farming practices that align with Sustainable Farming Incentive (SFI) schemes to support wildlife conservation while maintaining productive and viable agriculture. Enhance habitat quality, protect soil health, and boost biodiversity within the agricultural landscape.

**Measures:**

- Consider adopting diverse planting schedules and crop rotations, which can benefit soil health and support pollinators, as outlined in the relevant SFI standards.
- Explore options to establish field margins, buffer strips, and hedgerows to provide habitats for wildlife, supporting the goals of SFI.
- Review opportunities to reduce pesticide and chemical fertiliser use, focusing on enhancing natural pest control and pollinator-friendly practices through SFI guidance.
- Look into integrating agroforestry or introducing trees and shrubs into farmland to enhance habitat diversity, potentially supported by SFI funding.
- Consider creating or maintaining ponds or wetland features to support amphibians and insects, contributing to SFI priorities for water management and biodiversity.
- Allow for fallow areas or wildflower patches to encourage pollinator populations, in line with SFI options for habitat improvement.
- Explore organic or reduced-input practices as an approach that complements SFI schemes focused on natural ecosystem enhancement.

## f) Landscape Grassland Management

Grasslands are vital habitats for a variety of species, including plants, insects, birds, and small mammals. They provide essential ecosystem services such as pollination, soil stabilisation, and carbon storage. However, many grasslands are poorly managed or have been converted to other land uses, leading to a decline in biodiversity. Managing and creating species-rich grasslands at a landscape scale will help restore ecological balance, support pollinator populations, and contribute to climate resilience.

**Grassland Management Priority:**

Enhance and Create Species-Rich Grasslands: Manage existing grasslands and create new species rich grasslands to increase habitat diversity, support pollinator species, and promote connectivity across fragmented landscapes.

**Measures:**

- Identify and restore degraded grasslands through re-seeding with native wildflower and grass species that are beneficial to pollinators and other wildlife.
- Promote traditional hay meadow management, including late-season cutting and reduced grazing, to allow wildflowers to set seed and maintain plant diversity.
- Encourage rotational grazing practices that avoid overgrazing and allow for periods of rest and regeneration, supporting diverse plant communities.
- Establish new grassland habitats in areas of low grassland cover to increase landscape connectivity and provide corridors for wildlife movement.
- Introduce conservation grazing using native breeds to maintain grassland structure and prevent scrub encroachment, preserving the diversity of plant and animal species.
- Work with local landowners and farmers to create wildflower strips alongside arable fields, supporting pollinators and creating steppingstones between larger grassland habitats.
- Encourage the use of agri-environment schemes to support the creation and management of species-rich grasslands, particularly in areas of high landscape connectivity. Integrate grassland creation and enhancement with other habitat types, such as woodland edges, to create transitional zones that are valuable for a range of species.

## g) Landscape Freshwater and Wetland Management

Freshwater and wetland habitats such as rivers, ponds, and marshes are essential for supporting diverse aquatic life and providing important ecosystem services like water filtration, flood control, and carbon sequestration. However, these habitats have been significantly reduced and degraded. Managing and creating new freshwater and wetland areas will enhance biodiversity, improve water quality, and contribute to landscape-scale resilience against climate change.

**Freshwater and Wetland Management Priority:**

Restore and Create Freshwater and Wetland Habitats: Manage existing freshwater systems and create new wetlands, ponds, and riparian areas to support biodiversity, improve water quality, and reduce flood risk.

**Measures:**

- Restore natural hydrology in existing wetlands by re-establishing water flow regimes, removing artificial barriers, and reconnecting wetlands with floodplains.
- Create new ponds, scrapes, and wetland areas in suitable locations to provide habitats for amphibians, invertebrates, and wetland birds, focusing on areas with low wetland coverage.
- Enhance riparian zones along rivers and streams by planting native vegetation to stabilise banks, filter pollutants, and provide habitat for wildlife.
- Introduce buffer strips along freshwater bodies to reduce runoff from surrounding agricultural fields and improve water quality.
- Re-naturalise river channels through re-meandering and removing hard engineering structures to create more diverse habitats and slow down water flow, reducing downstream flood risks.
- Promote the restoration of ghost ponds and marshes to enhance carbon sequestration and water storage capacity, particularly in areas vulnerable to flooding.
- Work with local communities and landowners to create new wetland features that can act as steppingstones for wildlife, contributing to increased connectivity across the landscape.
- Encourage sustainable land use practices in catchment areas to prevent nutrient loading and improve the overall health of freshwater ecosystems.

## h) Landscape Flood Management and Natural Solutions

Natural flood management (NFM) uses processes like tree planting, wetland creation, and river restoration to slow water flow and reduce flooding. These methods not only protect communities but also create habitats for wildlife. However, limited awareness and support often restrict their full potential.

**Natural Flood Management Priority:**

Natural Flood Management: Implement natural flood management techniques to reduce flood risk, enhance water quality, and support biodiversity.

**Measures:**

- Collaborate on Catchment-Based Natural Flood Management (NFM): Work within catchment areas to implement NFM measures such as re-meandering rivers, restoring natural floodplains, and creating connected wetland networks. These actions will slow water flow, reduce peak flood levels, and improve water infiltration. These efforts are especially vital in flood-prone areas to reduce the downstream impacts of heavy rainfall.

- Enhance Riparian Vegetation: Establish and maintain riparian buffer zones with native tree and shrub planting. These areas help stabilise riverbanks, filter pollutants, and provide important habitats for wildlife, while also slowing water runoff and reducing erosion.

- Restore and Create Wetlands: Prioritise the restoration of degraded wetlands and create new wetlands where feasible. Restored wetlands can act as natural sponges, absorbing excess water, acting as carbon sinks, and providing critical habitat for various species. Focus on areas where wetland restoration can provide co-benefits, such as carbon sequestration, enhanced biodiversity, and improved water regulation.

- Reconnect Floodplains: Enable natural floodplain connectivity by removing physical barriers where possible. Reconnected floodplains can store excess floodwater, alleviate downstream flooding, and allow sediment deposition, which helps improve soil quality and prevent nutrient loss.

- Soil and Land Management: Encourage sustainable soil management techniques that enhance water retention and reduce surface runoff. Techniques such as cover cropping, reduced tillage, and maintaining permanent grasslands can significantly mitigate flood risks by improving soil structure and organic matter content.

- Promote Woodland Creation: Identify strategic areas where woodland planting can reduce the speed of water flow into rivers and streams. Woodlands enhance water infiltration and act as natural barriers that reduce surface runoff, while also offering valuable habitat for wildlife and sequestering carbon.

- Community Involvement and Monitoring: Engage local landowners, farmers, and communities in NFM initiatives, ensuring they understand the benefits of these measures and are involved in the process. Use citizen science and monitoring programs to track the effectiveness of NFM projects and adapt strategies as necessary.

# 10. Delivering the Local Nature Recovery Strategy

## 10.1 Introduction

We do not want the Local Nature Recovery Strategy to gather dust on a shelf, or the electronic equivalent. Instead, we want the strategy to be a catalyst for action. In order for such action to take place there needs to be a number of fundamental elements in place. This chapter sets out what these need to be and the key next steps that will be taken to mobilise the strategy into action.

## 10.2 Leveraging Partnerships

Collaboration among different stakeholder groups is essential for amplifying the impact of nature recovery efforts. As environmental challenges become more complex and widespread, it is increasingly clear that no single entity be it government, businesses, non-governmental organisations, or local communities can turn around nature's fortunes alone. By working together, diverse stakeholder groups can combine their resources, knowledge, and influence to achieve greater outcomes for nature recovery than any could accomplish independently.

One of the most significant benefits of collaboration is the ability to pool resources and expertise. Different stakeholders bring unique strengths to the table - financial resources, technical skills, local knowledge, and policy influence, which can all complement one another. For example:

- **Farmers and farm clusters** offer intimate knowledge of the land and practical insights into what approaches will work best on the ground.
- **Local communities, Parish Councils and landowners** offer detailed insights of the land and practical experience on what will work in reality.
- **Government agencies** can provide funding, regulatory frameworks, and access to public lands for conservation projects.
- **Businesses** can offer financial investment, innovative technologies, and influence in supply chains to promote sustainable practices.
- **Non-governmental organisations** such as environmental conservation organisations and catchment partnerships often bring expertise in conservation science, project management, and public engagement.
- **Local authorities and neighbouring responsible authorities** should liaise and adopt standard best practice to ensure nature recovery approaches are aligned across political boundaries

Through collaboration and formal partnerships, these groups should seek to leverage their collective resources more effectively, leading to more comprehensive and well-funded nature recovery initiatives.

Environmental issues such as habitat fragmentation, climate change, and biodiversity loss are often best addressed at a landscape scale, which requires coordinated efforts across large areas and multiple jurisdictions. Collaboration among stakeholders allows for the development of landscape-scale conservation strategies that are more effective and cost-efficient than isolated, piecemeal efforts.

For instance, farmers, landowners, conservation organisations, and government bodies need to work together to deliver the strategic objectives of the strategy, such as establishing strategic wildlife corridors that span agricultural lands, woodlands, and urban areas.

Collaborative efforts also ensure that conservation actions are strategically aligned, avoiding duplication, and maximising the impact across the entire landscape.

Key stakeholder partnerships should seek to deliver nature recovery projects that involves local communities, farmers, conservationists, and businesses. These initiatives will be seen as more legitimate and inclusive than one led by a single entity. This broad-based support can also lead to more sustainable outcomes, as partners will voluntarily sign up to binding agreements, ensuring they are more likely to remain committed to the project over the long term.

Collaboration fosters the exchange of knowledge, ideas, and best practices among stakeholders, leading to more innovative and effective solutions. Different groups often approach problems from unique perspectives, and when these perspectives are shared, it can lead to the development of new strategies and technologies that enhance nature recovery efforts.

For example, such a broad, formal but voluntarily entered into partnership could oversee a collaboration between a tech company and a conservation organisation, leading to the development of new monitoring tools that use satellite imagery or drones to track habitat restoration progress. Similarly, farmers working with ecologists might develop new ingenious farming practices that enhance biodiversity while maintaining agricultural productivity.

Collaboration allows successful nature recovery projects to be scaled up and replicated across different regions and contexts. When a collaborative approach proves effective in one area, it can serve as a model for others, and the lessons learned can be applied more broadly. This scalability is essential for addressing the global scale of biodiversity loss and ecosystem degradation.

Nature recovery efforts often require long-term commitment and long-term management to be successful. Collaboration helps ensure that these efforts are more sustainable by distributing responsibilities and creating a network of support that can endure beyond the life of individual projects.

Local authorities, partners and key stakeholders working and investing in projects together are more likely to maintain their involvement over time, providing ongoing support, monitoring, and adaptive management. For example, a conservation easement involving a land trust, local government, and a community group is more likely to be maintained over the long term than a project managed by a single entity.

Working with local communities to develop nature-based tourism can provide economic benefits while also promoting conservation. Similarly, engaging with farmers to implement agri-environment schemes can enhance biodiversity while supporting sustainable livelihoods. Collaboration ensures that the needs and rights of all stakeholders are considered, leading to more holistic and just outcomes.

## 10.3 Farmers Supporting Biodiversity Through Conservation Initiatives

Farmers, including tenant farmers, land managers and landowners can participate in government-backed agri-environment schemes which provides financial incentives for adopting environmentally friendly practices. These schemes often include measures to enhance wildlife habitats, improve water quality, and reduce carbon emissions, aligning farm management with broader conservation goals.

Formalised partnership working, including farms, farming clusters, conservation organisations, and local communities, could support farmers and land managers to contribute to landscape-scale conservation initiatives. These collaborative efforts are essential for creating large, interconnected habitats that support wide-ranging species and enhance ecosystem resilience. Farmer-led conservation groups and clusters are increasingly recognised as effective vehicles for driving these initiatives, enabling the sharing of knowledge, resources, and best practices.

Farmers have a unique voice in advocating for sustainable agriculture policies and practices at the local, regional, and national levels. By championing the importance of nature recovery in farming, they can influence policy development, encourage wider adoption of sustainable practices, and help secure the necessary support and resources for conservation efforts.

Farmers have an important role to play in conserving and enhancing nature on their land. Through financial schemes like Environmental Land Management (ELM), Biodiversity Net Gain (BNG), and other incentives that aim to support the delivery of Local Nature Recovery Strategies, farmers are provided with opportunities and financial benefits to make space for nature, contributing to the recovery of biodiversity, climate resilience, and sustainable agriculture. These initiatives align with the UK's goals for nature restoration and climate change mitigation.

The integration of agriculture and nature conservation through these schemes not only ensures sustainable and viable food production but also contributes to national and global efforts to tackle the biodiversity and climate crises.

Image courtesy of Charnwood Forest LPS

**Farmers and landowners most prepared to contribute to the restoration and management of wetlands, heathland and grassland to protect and enhance nature, with the right support.**

Some conservation routes open to farmers and landowners include:

## Local Nature Recovery Strategy delivery

- **Targeted nature recovery:** Local Nature Recovery Strategy identifies priority habitats and species in specific areas. Farmers can align their land management practices with local nature recovery goals by creating or restoring habitats that support these regional priorities.
- **Collaborative conservation:** Farmers including tenants can work together with other landowners, conservation groups, and local authorities to form landscape-scale conservation projects. These collaborative efforts can focus on restoring wildlife corridors, floodplains, and woodlands, creating connected landscapes that are more resilient to environmental changes.
- **Public-Private Partnerships:** Local Nature Recovery Strategies encourage partnerships between the public sector, private landowners, and non-governmental organisations. Farmers can engage with these partnerships to access funding and expertise for large-scale habitat restoration or species recovery initiatives.
- **Tailored approaches:** Local Nature Recovery Strategies aim to be locally relevant, meaning farmers can adopt conservation practices suited to their region's unique landscape and ecological challenges, ensuring that their efforts contribute effectively to biodiversity and climate resilience.

## Environmental Land Management

Environmental Land Management (ELM) focuses on paying farmers to deliver "public goods" such as clean air, water, biodiversity, and carbon sequestration. ELM consist of Sustainable Farming Incentive (SFI) and Countryside Stewardship (CS), Landscape Recovery, each offering different opportunities for farmers to integrate nature into their operations. What follows is a summary of how these schemes can support farmers in delivering for nature recovery. For more information on these schemes: Environmental land management schemes: details of actions and payments - Farming (blog.gov.uk)

## Sustainable Farming Incentive and Countryside Stewardship

- Farmers are encouraged to adopt practices that improve soil health, such as cover cropping, reduced tillage, and organic farming. Healthy soils store carbon, improve water retention, and support diverse ecosystems, including beneficial invertebrates, fungi, and plant species.
- Integrating trees and shrubs into farming systems (agroforestry) can provide habitats for wildlife while improving soil fertility and carbon sequestration. Agroforestry can also increase resilience to climate change impacts, such as drought.
- Habitat creation and restoration of habitats such as wetlands, meadows, and woodlands. Farmers can establish flower-rich grasslands, ponds, and riparian buffers along watercourses, creating havens for pollinators, birds, and aquatic species.
- Funding is available for linking habitats across farms, helping species to move and disperse. Farmers can plant hedgerows or manage field margins in ways that promote connectivity between fragmented habitats.
- Farmers may be incentivised to implement measures that benefit threatened species, such as providing nesting sites for birds or restoring habitats for amphibians and reptiles.

## Landscape Recovery

- Large-Scale Habitat Restoration: Farmers who own larger areas of land may be able to participate in large-scale restoration projects, such as restoring peatlands, wetlands, or forests. These projects contribute significantly to carbon sequestration, flood management, and biodiversity recovery.
- River and Wetland Restoration: There are opportunities to restore natural watercourses and wetland systems on farmland, improving water quality, reducing flooding risk downstream, and creating habitats for aquatic and wetland species.

## Biodiversity Net Gain

Biodiversity Net Gain requires developers to ensure that any habitat loss due to construction or development is not only compensated but results in an overall measurable net gain in biodiversity. This is achieved by creating or enhancing habitats either on-site or off-site, with the level of compensation influenced by the strategic significance multiplier. This multiplier increases the value of biodiversity units where habitat creation aligns with local nature recovery priorities, ensuring that offsetting contributes to landscape-scale ecological restoration rather than isolated interventions. By directing habitat enhancement towards priority areas identified in the Local Nature Recovery Strategy, Biodiversity Net Gain can deliver greater ecological connectivity, resilience, and long-term biodiversity benefits.

This presents benefits and opportunities for farmers and the Local Nature Recovery Strategy to make long-term commitments to nature recovery through:

- **Habitat creation as offsetting:** Farmers can create or enhance habitats on their land to sell biodiversity credits to developers who need to offset their environmental impacts. This could involve creating woodlands, wetlands, or species-rich grasslands.
- **Management of existing habitats:** Farmers who manage their land for wildlife can enter agreements to conserve or enhance existing habitats, such as woodlands, ponds, or wildflower meadows, ensuring long-term biodiversity benefits.
- **Financial incentives:** By participating in Biodiversity Net Gain, farmers can access a new revenue stream that commits them to long-term habitat management or creation. This allows them to diversify their income while supporting wildlife recovery.
- **Alignment with Local Nature Recovery Strategy Aims:** Farmers participating in Biodiversity Net Gain can contribute directly to the Local Nature Recovery Strategy by creating or enhancing habitats that align with the conservation priorities identified in their local area. This could help secure additional funding and recognition for their efforts in contributing to regional and national biodiversity targets.
- **Community and Regional Benefits:** By participating in Local Nature Recovery Strategy-aligned schemes, farmers support not only biodiversity on their own land but also contribute to larger, landscape-level conservation initiatives, fostering stronger community ties and regional environmental improvements.

**Additional opportunities** across these schemes are well suited to less productive areas of farms and may enable farmers to reduce costs and increase efficiencies across the rest of their holdings:

- Carbon sequestration and climate resilience: In addition to biodiversity benefits, many of the habitat creation and enhancement activities under ELMs, BNG, and LNRS also provide opportunities for carbon sequestration. Practices such as tree planting, restoring peatlands, and improving soil health capture carbon, helping farmers contribute to climate change mitigation.

- Water quality and flood management: Restoring wetlands, creating riparian buffers, and planting hedgerows and trees can improve water quality by reducing nutrient runoff and trapping sediments. These features also slow down water flow, reducing the risk of flooding, which benefits both farmers and downstream communities.
- Pollinator support: Farmers can create pollinator habitats through wildflower meadows, field margins, and hedgerows, which are essential for supporting crops that depend on pollination. These actions also benefit a wide range of other wildlife, from birds to insects.

## 10.4 Individual Actions

Nature recovery is not solely the result of large-scale projects or sweeping policy changes; it is also driven by the cumulative impact of countless individual actions taken by people, communities, and organisations. Each small action, whether it's planting a tree, reducing pesticide use, creating a pond, or restoring a hedgerow, contributes to the larger goal of enhancing biodiversity and restoring ecosystems. When these actions are multiplied across a landscape, they collectively create significant positive change.

The principle behind this cumulative impact is that small, local efforts can add up to large, landscape-scale benefits. For example, if many farmers in a region adopt more sustainable land management practices, such as reducing chemical inputs or establishing wildlife corridors, the overall health of the strategy area's ecosystems can improve dramatically. Similarly, if residents in urban areas collectively increase green spaces, plant native species, and reduce waste, the urban environment can become much more supportive of biodiversity.

This cumulative effect underscores the importance of engaging and empowering individuals and communities to act. When people understand that their contributions matter, they are more likely to participate in and support nature recovery efforts. Moreover, these individual actions can inspire others, creating a ripple effect that amplifies the impact across broader regions.

**Opportunities for individual involvement:**

- Community-led planning: Parish Councils and neighbourhood planning groups can play a key role in embedding nature recovery within local plans and influencing land use decisions that benefit nature.
- Giving nature a home: Taking action that supports nature in spaces that individuals have control of. For example, private gardens, community spaces, schools and allotments.
- Citizen science: Encouraging individuals to participate in species monitoring and habitat surveys.
- Sustainable living practices: Promoting actions such as reducing pesticide use, planting native species, and supporting local conservation efforts.
- Volunteering: Opportunities for individuals to contribute time and skills to local nature recovery projects.

**53% of respondents enjoy or access nature every day.**

## 10.5 Securing Funding and Resources

While individual actions are crucial, the success of this Local Nature Recovery Strategy also hinges on securing adequate funding and resources. Achieving the ambitious goals of nature recovery often requires significant financial investment, access to specialised knowledge, and the deployment of practical tools and technologies. Without sufficient funding and resources, even the most well-intentioned plans can struggle to achieve their full potential.

Securing funding allows for the implementation of large-scale projects, such as habitat restoration, the creation of nature reserves, or the development of green and blue infrastructure. These projects often require capital for land acquisition, restoration activities, and ongoing management. Additionally, resources are needed for research, monitoring, and public engagement, all of which are essential components of a successful nature recovery strategy.

Funding can support capacity building and training for those involved in nature recovery efforts. This includes providing farmers with the tools and knowledge needed to adopt sustainable practices, training volunteers in habitat management, or supporting local authorities in developing and enforcing conservation policies.

The importance of securing funding also extends to ensuring the long-term sustainability of nature recovery efforts. Many environmental initiatives require ongoing maintenance and management to remain effective. For example, reforested areas may need continued protection from invasive species, and restored wetlands may require regular water quality monitoring. Without long-term funding commitments, these efforts may falter, leading to a loss of hard-won gains.

A further benefit of a formal partnership arrangement is the increased ability to leverage collective skills and resources to access public and private investment for those positioned to deliver action for nature.

## 10.6 Sharing Knowledge and Creating Capacity

One of the most significant challenges in nature recovery is the fragmentation of efforts across different sectors and organisations. Businesses, conservation groups, local authorities, farmers, and community organisations often work independently, each with valuable insights and resources but limited interaction with others engaged in similar work. This can lead to duplication of efforts, inefficient use of resources, and missed opportunities for synergy.

The ability to monitor, support and review nature recovery would be greatly enhanced with a centralised knowledge and resource sharing platform. This would present a transformative opportunity for enhancing nature recovery efforts at the local and regional levels. As environmental challenges grow more complex and interconnected, the need for coordinated action, informed by the latest knowledge and best practices, becomes increasingly critical. Such a platform would not only streamline access to information and resources but also foster collaboration and innovation across diverse sectors involved in conservation.

A centralised platform would address fragmentation by bringing all relevant stakeholders together in a single, accessible digital space. It would enable organisations and volunteer groups to align their efforts, share data, expertise and knowledge, and coordinate actions more effectively. This kind of coordination is essential for tackling complex environmental issues that span multiple jurisdictions and require a landscape-scale approach.

By pooling resources, stakeholders can access a richer and more diverse set of information than they would be able to gather independently. This includes access to the latest research, case studies, management guides, and technical expertise, all of which can significantly improve the effectiveness of nature recovery initiatives.

Innovation often arises from collaboration, especially when diverse perspectives come together to solve common problems. A centralised knowledge and resource sharing platform would foster such collaboration by connecting stakeholders who might not otherwise interact. This could lead to the development of new partnerships, joint ventures, innovation, and collaborative projects that might otherwise remain localised. For example, a farming cluster in one region might develop a novel method for enhancing biodiversity on agricultural land. Through the platform, this method could be shared and adapted by other farmers across the country, amplifying its impact and contributing to wider environmental benefits.

Access to resources whether financial, technical, or information is often a limiting factor in the success of nature recovery projects. A centralised platform would serve as a hub where stakeholders can find the support they need, whether it's through grants and funding opportunities, expert advice, or tools and templates for project management.

For catchment partners, smaller organisations and community groups, in particular, the ability to tap into a broader network of support can be crucial. The platform would provide access to resources, ensuring that all stakeholders, regardless of size or capacity, could contribute effectively to nature recovery efforts.

A centralised platform would build and focus efforts on a shared vision for nature recovery across all sectors. By bringing together stakeholders with diverse interests but common goals, the platform would facilitate the development of a coherent and unified strategy for environmental stewardship. This shared vision is essential for creating the momentum and public support needed to achieve large-scale, lasting change.

The opportunity to create a centralised knowledge and resource sharing platform for nature recovery would represents a significant step forward in addressing the environmental challenges we face. By improving coordination, leveraging collective expertise, enhancing access to resources, promoting collaboration, and building a shared vision, this platform has the potential to transform how we approach conservation and sustainability. It is an opportunity to move beyond isolated efforts and toward a more integrated, effective, and impactful strategy for restoring and protecting our natural environment.

## 10.7 Next Steps

To effectively deliver the Local Nature Recovery Strategy, the immediate next steps involve setting up robust governance structures, developing a delivery plan, developing detailed work plans, and understanding the availability of funding and resources.

- Establish Governance Structures: A formal governance framework will be created to oversee the delivery of the Local Nature Recovery Strategy, including the evolution of the Steering Group and Strategic Reference Group, setting up working groups, and securing key roles for stakeholders. This governance structure will ensure accountability and provide clear leadership throughout the implementation phase.
- Develop a Delivery Plan: A structured delivery plan will be created to outline the key steps, timelines, and responsibilities necessary for implementing the Local Nature Recovery Strategy. This plan will provide a clear framework for action, ensuring that resources are allocated efficiently and milestones are met. It will also establish mechanisms for monitoring progress, adapting to challenges, and maintaining stakeholder engagement throughout the process. By setting out clear deliverables and performance indicators, the delivery plan will support the effective coordination of efforts across all involved parties.
- Develop Work Plans: Work plans will be developed to instruct the specific actions required to achieve the strategies aims. This will include identifying priority areas for habitat restoration, species recovery efforts, and nature-based solutions. The work plans will also allocate responsibilities among partners and stakeholders, ensuring a coordinated approach across sectors.
- Securing Funding and Resources: A critical next step is to assess potential funding streams and resource availability. This will involve identifying funding opportunities, from local or national funding sources, and in-kind support from stakeholders. We will work to ensure a sustainable financial model that supports the long-term delivery of the strategy.
- Partnership Engagement: We will continue engaging with existing partners and identify new stakeholders to broaden the collaborative effort. This includes strengthening ties with local authorities, farmers, land managers and landowners, community groups, government agencies and environmental organisations, ensuring that all relevant parties are involved in the strategy's delivery.
- Monitoring and Reporting Framework: A framework for monitoring and evaluating progress will be developed to track the effectiveness of the Local Nature Recovery Strategy. This will include setting key performance indicators (KPIs), timelines, and reporting mechanisms to ensure transparency and accountability.
- Training and Capacity Building: To ensure the successful implementation of the strategy, we will assess and address any skills gaps among partners and stakeholders. This might involve providing training or facilitating knowledge exchange to build capacity for biodiversity management and restoration activities.

# Appendices

## Appendix A

### Glossary of Terms and Acronyms

| Term | Definition |
|---|---|
| **Adaption** | In the context of climate change, it is the altering our behaviour, systems, and in some cases ways of life to protect our families, our economies, and the environment in which we live from the impacts of climate change. |
| **Biodiversity Net Gain** | BNG is an approach to development. It makes sure that habitats for wildlife are left in a measurably better state than they were before the development. In England, BNG is mandatory under Schedule 7A of the Town and Country Planning Act 1990. |
| **Citizen Science** | When the public participates voluntarily in the scientific process to address real-world problems. |
| **Ecological Decline** | Also called Ecosystem Decline. The process by which an ecosystem suffers a drastic, possibly permanent reduction in the carrying capacity for all organisms. This can often result in mass extinction. This can happen slowly over time but more often occurs over a short timescale. |
| **Ecosystem Services** | The direct and indirect contributions ecosystems (known as natural capital) provide for human wellbeing and quality of life e.g. food, water, health benefits. |
| **Green Blue Corridors** | The use of waterways, land e.g. disused rail line, as a sustainable design solution to establish an interconnected passageway between natural habitats. |

| Term | Definition |
|---|---|
| **Flood Zones** | Flood zones are based on the likelihood of an area flooding from rivers or the sea with catchments greater than 3km². Flood Zone 1 areas are least likely to flood and Flood Zone 3 areas more likely to flood. |
| **Greenhouse Gases** | A group of gases which contribute to global warming and climate change. Includes carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, sulphur hexafluoride, perfluorocarbons, and nitrogen trifluoride. |
| **Green Infrastructure** | The network of multi-functional green space, both new and existing, both rural and urban, which supports the natural and ecological processes and is integral to the health and quality of life of sustainable communities. We also include 'blue infrastructure' (landscape elements linked to water) within our use of this phrase. |
| **Hydrology** | Is the movement, distribution, and management of water on Earth, including the water cycle, water resources, and drainage basins. |
| **Keystone Species** | Any organism - from animals and plants to bacteria and fungi – which is the glue that holds a habitat together. |
| **Lawtonian Principles** | Originating from the 2010 Lawton report, it is the principle of creating an ecological network that operates more naturally and effectively, the Lawton report called for some simple measures - more, bigger, better and joined-up sites within the landscape. |

| Term | Definition |
|---|---|
| **Leaky Dam** | Is a dam made of natural woody materials, laid in streams and ditches. They are designed to reduce the downstream flood peak by temporarily storing water by holding it back within the stream's channel or encouraging it to spill onto the banks behind the barrier and slowing the flow. |
| **Local Habitat Map** | The Local Habitat Map is a key component of the Local Nature Recovery Strategy. It maps areas of particular importance for biodiversity, and areas that could become of particular importance. |
| **Mitigation** | In the context of climate change, it means avoiding and reducing emissions of heat-trapping greenhouse gases into the atmosphere to prevent the planet from warming to more extreme temperatures, e.g. reducing use of fossil fuels, protecting existing woodland. |
| **Natural Capital** | The sum of all our ecosystems, species, freshwater, land, soils, minerals air and seas. They provide value by providing us with food, clean air and water, wildlife, energy, wood, recreation and protection from hazards. It is the source of all other types of capital whether it is manufactured, financial human or social. |
| **Natural Capital Features** | These are many and varied but include hedgerows, woodlands, semi-natural grasslands, air and water quality. |
| **Natural Flood Management** | Natural flood management (NFM) uses natural processes to reduce the risk of flooding. These processes protect, restore, and mimic the natural functions of catchments, floodplains and the coast to slow and store water. NFM measures can include: soil and land management, river and floodplain management. |

| Term | Definition |
|---|---|
| **Nature Based Solutions** | Are approaches that address societal challenges through actions to protect, sustainably manage, and restore natural and modified ecosystems, benefiting people and nature at the same time e.g. creating a natural floodplain, planting trees to provide shade. |
| **Oolitic Limestone** | A type of rock made up of small spheres which were formed when calcium carbonate was deposited on the surface of sand grains rolled by wave action under a shallow sea during the Jurassic period. |
| **Open Mosaic Habitat** | Usually located on previously developed land they are complex and diverse habitats that emerge on post-industrial or urban land, such as former quarries, brownfields, or derelict urban areas. |
| **Red List Species** | A species that has been assessed as being close to becoming extinct. |
| **Ridge and Furrow** | A type of landscape, characterised by parallel ridges and troughs, created by the methodical ploughing of fields with oxen during the medieval period. |
| **Riparian** | Relates to the land along the bank of a watercourse such as a river, lake or stream. |
| **Sustainable Drainage Systems** | Sustainable drainage systems (SuDS) mimic natural drainage processes to reduce the effect on the quality and quantity of run-off from developments and provide amenity and biodiversity benefits. |

## Acronyms and Abbreviations

| | |
|---|---|
| **ACB** | Area that Could Become of particular importance |
| **AES** | Agri-Environment Scheme |
| **APIB** | Area of Particular Importance for Biodiversity |
| **BAP** | Biodiversity Action Plan |
| **BNG** | Biodiversity Net Gain |
| **CAP** | Common Agricultural Policy |
| **CRoW** | Countryside & Rights of Way Act 2000 |
| **CS** | Countryside Stewardship |
| **DEFRA** | Department for Environment, Food & Rural Affairs |
| **ELMS** | Environmental Land Management Schemes |
| **EU** | European Union |
| **GIS** | Geographic Information Systems |
| **INNS** | Invasive Non-Native Species |
| **LNR** | Local Nature Reserve |
| **LNRS** | Local Nature Recovery Strategy |
| **LR** | Landscape Recovery |
| **LRERC** | Leicestershire & Rutland Environmental Records Centre |
| **LRWT** | Leicestershire & Rutland Wildlife Trust |
| **LWS** | Local Wildlife Sites |
| **NBN Atlas** | National Biodiversity Network Atlas |
| **NBs** | Nature Based Solutions |
| **NCAs** | National Character Areas |
| **NERC** | Natural Environment & Rural Communities Act |
| **NFC** | National Forest Company |
| **NFM** | Natural Flood Management |
| **NGOs** | Non-Governmental Organisations |
| **NIA** | Nature Improvement Area |
| **NNR** | National Nature Reserve |
| **NO2** | Nitrogen Dioxide |
| **PAWS** | Plantations on Ancient Woodland Sites |
| **PM2.5** | Particulate Matter 2.5 (the matter has a size of 2.5 micrometres or smaller) |
| **PM10** | Particulate Matter 10 (the matter has a size of 10 micrometres or smaller) |
| **RA** | Responsible Authority |
| **RIGs** | Regionally Important Geology Sites |
| **SAC** | Special Area of Conservation |
| **SFI** | Sustainable Farming Incentives |
| **SPA** | Special Protection Area |
| **SSSI** | Site of Special Scientific Interest |
| **SuDS** | Sustainable Urban Drainage Systems |
| **UK CEH** | UK Centre for Ecology & Hydrology |
| **UNESCO** | United Nations Educational, Scientific and Cultural Organisation. |
| **WeBS** | Wetland Bird Surveys |
| **°C** | Degrees Celsius |
| **mm/day** | Millimetres per day |
| **µg $m^{-3}$** | The amount of pollutant in one cubic metre of air in micrograms |

# Appendix B
## Methodology and Criteria

### 1. FPCR Ecological GIS Technical Report

www.leicestershire.gov.uk/environment-and-planning/local-nature-recovery-strategy/what-a-local-nature-recovery-strategy-is

This report summarises the technical details for the creation of the GIS outputs suitable to be used to locate areas of key importance for nature in the Local Nature Recovery Strategy for Leicestershire, Leicester, and Rutland.

The objectives were to:

- Create a habitat map of the project area
- Model habitat connectivity within the project area
- Overlay various data sources suitable for the determination of key areas for nature in a format that can be understood by various stakeholders

### 2. Species Recovery within Local Nature Recovery Strategies

www.leicestershire.gov.uk/environment-and-planning/local-nature-recovery-strategy/lnrs-resources

Local Nature Recovery Strategies (LNRS) must describe opportunities, set priorities, and propose potential measures for the recovery and enhancement of species. This document sets out an approach to help responsible authorities (RAs) achieve this goal in a consistent way. The approach involves two broad stages: identifying threatened and other locally significant species relevant to the strategy area and determining which of these species should be prioritised for recovery action. This process is aligned with the LNRS preparation steps described in the LNRS statutory guidance, and it is closely supported by Natural England (NE) and other partners.

### 3. Indicator Species Selection

www.leicestershire.gov.uk/environment-and-planning/local-nature-recovery-strategy/lnrs-resources

The Indicator Species are intended to offer a means of monitoring progress towards the objectives of the Local Species Recovery Strategy. The selected species should be indicative of good ecological health, particularly in the priority habitats, and offer a representative sample of local species to provide monitorable, broad-based data to assess the changing status of biodiversity in Leicestershire and Rutland.

# Appendix C

## Species-Specific and Habitat-Specific Information

### 1. Species Profiles

**a. Table of Priority Species and Measures**

(The full list of Priority Species including 76 Vascular Plants and 6 Lichens can be accessed in the resource section on the Local Nature Recovery Strategy website.)

www.leicestershire.gov.uk/environment-and-planning/local-nature-recovery-strategy/lnrs-resources

| Taxon and Picture | Status | Common Name | Information | Measures |
|---|---|---|---|---|
| **1. Amphibian** | | **Palmate Newt** | A small amphibian often found in ponds and slow-moving water bodies. Recognizable by its smooth skin and webbed feet during the breeding season. | Restoration and enhancement of pond networks in underrepresented acid grassland areas, creating fish-free breeding ponds with surrounding scrub and vegetation to prevent drying. Consider translocation efforts to suitable, restored sites in Charnwood Forest. Focus on areas where historical records show Palmate Newt presence but where ponds have deteriorated, e.g. northern Charnwood Forest. |
| **2. Reptile** | NT | **Adder** | The UK's only venomous snake, known for its zigzag pattern along its back. Found in heathlands, grasslands, and woodland edges. | Habitat connectivity improvements by restoring and creating heathland and open mosaic habitats. Use controlled reintroduction from healthy populations to establish Adders in previously occupied sites. Prioritise area specific locations for restoration and reintroduction. |

| Taxon and Picture | Status | Common Name | Information | Measures |
|---|---|---|---|---|
| **3. Bird** | LC | **Osprey** | The Osprey is a large raptor known for its striking plumage and fish-eating habits. It migrates between Europe and Africa, returning to the UK to breed. | Opportunity for national reintroduction / trans-relocation projects stemming from Rutland Osprey Project at Rutland Water. Encourage the establishment and maintenance of artificial nesting platforms near key water bodies to increase suitable breeding opportunities. |
| **4. Bird** | CR | **Turtle Dove** | A migratory dove, famous for its soft "purring" call. It breeds in hedgerows and open woodlands and has experienced severe population declines. | Establishment of seed-rich feeding areas and supplementary feeding programs during the breeding season. Partner with landowners to manage hedgerows and restore areas for foraging and nesting. Focus on farmlands in the East Leicestershire and Rutland, Belvoir Vales, Welland Valley and Charnwood Forest for hedgerow restoration and supplementary feeding efforts. |
| **5. Bird** | VU | **Nightingale** | Renowned for its powerful and beautiful song, this elusive bird breeds in dense, low vegetation in woodlands and scrub. | Scrub regeneration projects, especially in woodland edges and abandoned farmland. Create dense scrub and thicket habitats specifically managed for nightingales, using grazing or cutting to prevent succession. Focus on the areas near Rutland Water and other woodland fringes where nightingale populations have previously existed. |

| Taxon and Picture | Status | Common Name | Information | Measures |
|---|---|---|---|---|
| **6. Bird** | EN | **Willow Tit** | A small, shy bird of damp woodlands and wetlands, easily confused with the Marsh Tit. It is in serious decline in the UK. | Create decayed wood habitats in wet woodland areas by deliberately felling trees or managing deadwood. Install artificial nesting cavities to increase breeding success. the Soar and Wreake Valleys for re-establishing suitable habitats. |
| **7. Bird** | EN | **Swift** | A migratory bird that spends most of its life in the air, catching insects. Swifts breed in cavities, often in buildings, and are known for their fast, scythe-shaped wings. | Swift brick installation programs in urban and semi-urban areas. Swift bricks are a universal nest brick for small bird species and should be installed in new developments including extensions, in accordance with best practice guidance. Promote swift tower installations in parks and near water bodies to provide nesting opportunities. Focus on urban areas like Leicester City and major towns such as Loughborough and Oakham. |
| **8. Bird** | VU | **Starling** | Famous for its murmurations, this glossy blackbird-like species is highly social and often found in urban areas, though its population has declined. | Establishment of foraging habitats such as permanent grasslands and wet meadows managed for invertebrates. Encourage the installation of starling nest boxes in urban areas. Engage with farms and urban areas across Leicester and Leicestershire to enhance invertebrate-rich habitats and create nesting opportunities. |

| Taxon and Picture | Status | Common Name | Information | Measures |
|---|---|---|---|---|
| **9. Bird** | | **House Sparrow** | A familiar urban bird, found in gardens and farmlands. Its population has dropped significantly in recent decades, making it a priority species. | Urban greening and community garden initiatives that include hedge planting, native shrubs, and wildflower meadows to provide both food and shelter. Promote the installation of sparrow nest boxes in residential areas. Work with housing associations in Leicester City and suburban areas to install nesting boxes and improve urban habitat. Monitor existing populations to find out what makes these populations stable. |
| **10. Bird** | VU | **Woodcock** | A wading bird with cryptic plumage, found in woodlands where it probes the soil for invertebrates. It is also known for its nocturnal display flight, called "roding." | Restoration and creation of damp woodland areas with rides, particularly with dense undergrowth for foraging and nesting. Consider trial reintroduction from healthy populations in adjacent counties. Focus on large wooded areas such as the National Forest and areas surrounding Rutland Water. |
| **11. Bird** | NT | **Marsh Tit** | A small bird that prefers deciduous woodlands and wetlands. It has a black cap and is closely related to the willow tit. | Maintain deadwood and rotting tree stumps within damp woodland. Create artificial nest sites and enhance woodland structure with low canopy cover. Target woodland around known breeding populations. |

| Taxon and Picture | Status | Common Name | Information | Measures |
|---|---|---|---|---|
| **12. Bird** | EN | **Curlew** | The UK's largest wader, with a distinctive long, curved bill used for probing mudflats and grasslands. Known for its haunting call. | Create and enhance suitable grassland habitats and restore lowland floodplain meadow areas. Predation control and nest protection schemes should be implemented during the breeding season. Prioritise sites like Rutland Water Nature Reserve and the Soar Valley floodplains for nest protection efforts and habitat management. |
| **13. Bird** | VU | **Lapwing** | A farmland and wetland bird with a striking black-and-white plumage and an iridescent green back. Known for its aerial displays during the breeding season. | Create wet grassland mosaics and maintain short, open vegetation structure. Encourage rotational grazing in breeding areas and introduce predator control programs during breeding. Focus on agricultural land restoration projects in the Welland Valley and near Rutland Water. |
| **14. Bird** | VU | **Tree Pipit** | A small bird of open woodlands and heathlands, often seen performing parachute-like flight displays. Its population is declining due to habitat loss. | Create and manage open, wooded heathland habitats with scattered trees for breeding and foraging. Promote low-level grazing and periodic scrub clearance to maintain suitable habitat. Target heathland restoration in Charnwood Forest. |

| Taxon and Picture | Status | Common Name | Information | Measures |
|---|---|---|---|---|
| **15. Crustacean** | | **White-clawed Crayfish** | A native freshwater crayfish that inhabits clean rivers and streams. It is under threat from habitat degradation and the invasive signal crayfish. | Removal of invasive signal crayfish and reintroduction of white-clawed crayfish to suitable watercourses after invasive species are controlled. Focus on smaller watercourses in rural Rutland and Leicestershire where signal crayfish populations are lower, such as tributaries of the River Soar, and re-naturalised Quarries and Mineral Sites. |
| **16. Insect - Butterfly** | | **Dingy Skipper** | A small, brownish butterfly that prefers grasslands with patches of bare ground. Its "dingy" appearance provides effective camouflage. | Restoration of chalk and limestone grassland to provide larval food plants, particularly Bird's-foot trefoil. Introduce a grazing regime to create suitable open patches for egg-laying. Focus on limestone quarries and disused railway lines such as those around Ketton Quarry. |
| **17. Insect - Butterfly** | VU | **Grizzled Skipper** | A small, fast-flying butterfly, with a checkered black-and-white pattern, often found in sunny grasslands and woodland edges. | Manage grasslands and clear scrub on a rotational basis to promote larval food plants like wild strawberry and creeping cinquefoil. Target railway cuttings and grasslands in Rutland for specific management interventions. |
| **18. Insect - Butterfly** | EN | **Black Hairstreak** | A rare and elusive butterfly, confined to blackthorn thickets in ancient woodlands. It is one of the UK's rarest butterflies. | Ensure the continuation of rotational scrub management to maintain blackthorn-rich scrubland. Reintroduce to suitable sites if population surveys indicate local extinction. Focus on blackthorn-rich hedgerows and woodland edges in areas like Charnwood Forest. |

| Taxon and Picture | Status | Common Name | Information | Measures |
|---|---|---|---|---|
| **19. Insect - Butterfly** | VU | **White-letter Hairstreak** | This butterfly, often overlooked due to its habit of staying high in elm trees, has suffered due to the loss of elm trees to Dutch elm disease. | Elm tree disease resistance programs and planting of disease-resistant elms to support larvae. Promote connectivity between elm populations to support genetic diversity. Focus elm restoration efforts in hedgerows and woodland edges in central Leicestershire. |
| **20. Insect - Butterfly** | NT | **Dark Green Fritillary** | A striking orange butterfly with dark spots, typically found in grasslands and woodland clearings, where it feeds on violets. | Restore and manage large, open grassland habitats with plenty of violets, the butterfly's larval food plant. Introduce grazing or cutting regimes to maintain open swards. Identify suitable translocation programmes in Leicestershire from Rutland populations. |
| **21. Insect - Beetle (Coleoptera)** | | **Glow Worm** | A beetle whose females glow in the dark to attract males. It is most often found in grasslands, hedgerows, and woodland edges. | Restore and maintain species-rich grasslands, avoiding chemical usage and ensuring low-level grazing to support snail populations, the larvae's prey. Implement light pollution control in key glow worm sites. Focus on suitable roadside grass verges, chalk grassland and railway embankments in Rutland and Leicestershire. |
| **22. Bony Fish (Actinopterygii)** | | **Brown Trout** | Brown trout are a native freshwater fish and important indicators of good water quality. Found in clean fast flowing rivers and streams. It is probable the fast-flowing streams in Charnwood Forest are a site for the pure native breeding population. Wild populations of the species are threatened. | River restoration projects to enhance spawning gravels and increase flow variability, with strict pollution control and habitat improvement for young trout. |

| Taxon and Picture | Status | Common Name | Information | Measures |
|---|---|---|---|---|
| **23. Bony Fish (Actinopterygii)** | | **Spined Loach** | A small, bottom-dwelling fish that inhabits slow-flowing rivers and canals. It is easily identified by the small spines beneath its eyes. Located in Rutland Water, River Mease, River Soar- the species is confined to only a select number of sites in Britain therefore the populations with Leicestershire and Rutland are in key locations. | Implement riverbed restoration schemes to reintroduce areas of silt and sand for spawning. Ensure water quality improvements by reducing agricultural runoff. |
| **24. Bony Fish (Actinopterygii)** | CR | **European Eel** | A migratory fish that breeds in the Sargasso Sea but spends its adult life in European rivers. It is critically endangered due to overfishing, barriers to migration, and habitat loss. | Remove barriers to migration, such as weirs, by installing eel passes. Improve river connectivity between feeding and spawning grounds. |
| **25. Terrestrial Mammal** | VU | **Barbastelle** | A rare and elusive woodland bat species, vulnerable due to loss of main habitat – roost sites in numerous mature trees within a well-structured broadleaved woodland and connecting hedgerows for foraging. This species is sensitive to light pollution and will avoid feeding or commuting near to lit areas. | Increase the coverage of broadleaved woodland and protect and restore old growth woodland. Accelerate maturity of trees through ringbarking and veterenisation to increase natural roosts and install bat boxes specifically designed for Barbastelles within woodlands. Develop and/or enhance the habitat edges to increase the density of moth populations (main food source) with a focus on restoring and increasing wetland and woodland habitats that support a high moth biomass e.g. maintain open rides with scalloped edges in mature woodlands. Retain and enhance hedgerows with mature tree standards to provide roost habitat and foraging corridors between mature woodland sites. Avoid light pollution. |

| Taxon and Picture | Status | Common Name | Information | Measures |
|---|---|---|---|---|
| **26. Terrestrial Mammal** | | **Daubenton's Bat** | This Bat is closely associated with water ways and open waters where it feeds on aquatic insects and terrestrial insects alongside riparian habitat edges. The optimal habitat are slow-flowing rivers and canals, and sheltered lakes, reservoirs, and flooded gravel pits. | Avoid light pollution along waterside edges and disturbance of Bat roosts by discouraging access to potential/known roost sites and sensitive management of trees, hedges, and bankside vegetation. Enhance riparian and hedgerow habitat by planting waterside trees, maintain aquatic plants and control fish stocks to encourage freshwater insects. Retain and manage veteran waterside trees and establish trees on both banks of wider water courses. Retain and maintain open water to allow Bats to freely forage over waterbodies. |
| **27. Terrestrial Mammal** | NT | **Leisler's Bat** | A fast-flying Bat often found in open woodland and parkland, relying on large, old trees for roosting. They will forage over a range of areas from rivers, lakes, pastures, meadows and hedgerows This bat is locally scarce due to loss of suitable habitat and fragmentation. It will also forage around white light. | Retain and conserve roost sites in buildings and mature trees wherever possible. Install and monitor specified Bat boxes in known locations to mitigate and encourage roost sites in across strategic areas. Avoid felling mature trees, especially parkland trees where roosting opportunities are present. |
| **28. Terrestrial Mammal** | EN | **Water Vole** | Once widespread, this semi-aquatic rodent is now in decline due to habitat loss and predation. | Restore and manage riparian habitats with dense vegetation along water margins. Implement predator control measures and reduce pollution to improve water quality. |

| Taxon and Picture | Status | Common Name | Information | Measures |
|---|---|---|---|---|
| **29. Terrestrial Mammal** | VU | **Hedgehog** | A familiar nocturnal mammal found in gardens, hedgerows, and woodlands. Its population has declined due to habitat loss and fragmentation. | Create wildlife-friendly gardens, schools and campuses with hedgehog highways and reduce the use of pesticides. Promote the conservation and connectivity of hedgerows for safe movement. |
| **30. Terrestrial Mammal** | VU | **Hazel Dormouse** | A small, arboreal mammal that inhabits dense woodlands and hedgerows. It is a highly endangered species in the UK due to habitat loss. | A priority species for reintroductions. Enhance woodland connectivity through the planting of native hedgerows and the creation of new woodlands. Implement rotational coppicing to maintain dense understorey habitats. |
| **31. Vascular Plant Gene-bank Assemblage** | | **65 Species** | Rare vascular plants found at 3 or fewer locations across the strategy area. | Vascular plants needing protection and gene-banking (Ex Situ Conservation) Protect existing populations and collect seeds and store them in a seed bank under controlled conditions to preserve genetic diversity for future restoration efforts. |
| **32. Vascular Plant In-situ Conservation Assemblage** | | **12 Species** | Rare vascular plants found at 3 or fewer locations across the strategy area. | Vascular plants needing In Situ Conservation: Protect and manage the natural habitats where the plants occur, ensuring that the ecological conditions remain suitable for their survival |
| **33. Lichen In-situ Conservation Assemblage** | | **6 Species** | Rare Lichens found at 3 or fewer locations across the strategy area. | Lichen needing In Situ Conservation: Protect and manage the natural habitats where the plants occur, ensuring that the ecological conditions remain suitable for their survival |

**b. Priority Species Maps**

https://haveyoursay.leicestershire.gov.uk/local-nature-recovery-strategy-local-habitat-map

These maps can be access on the Local habitat Map Website. They show where priority species have been recorded in recent decades and we have confidence these locations could be suitable for measures that protect and enhance their populations. These records are displayed as either 2km squares, landscape areas such as the Soar Valley, or boundary lines. Each of these priority species has a bespoke measure designed to protect and enhance their populations. These measures can be viewed in the Local Nature Recovery Strategy, Appendix C 1a.

**c. Table of 100 Indicator Species and their Habitats**

www.leicestershire.gov.uk/environment-and-planning/local-nature-recovery-strategy/lnrs-resource

This table lists 100 indicator species identified for the Local Nature Recovery Strategy, along with their associated habitats. This table provides a reference for assessing habitat suitability and biodiversity index across varied landscapes, supporting conservation and habitat management planning. The full table can be accessed in the resource section on the Local Nature Recovery Strategy Website.

## 2. Habitat Profiles

**a. Table of Habitats of Principle Importance in England and the estimate total extent they cover within the strategy area**

| Habitat of Principle Importance in England | | Estimated Total Extent |
|---|---|---|
| Arable and Horticultural | **Arable field margins** | No data on extent of overall resource |
| Boundary and Linear Features | **Hedgerows** | 17,000 Km |
| Broadleaved, Mixed and Yew Woodland | **Lowland mixed deciduous woodland (all)** | 12,300 ha |
| Broadleaved, Mixed and Yew Woodland | **Lowland mixed deciduous woodland (Ancient Woodland)** | 2679 |
| Broadleaved, Mixed and Yew Woodland | **Wet woodland** | c. 300 ha |
| Broadleaved, Mixed and Yew Woodland | **Wood-pasture and parkland** | 4,500 ha |

| Habitat of Principle Importance in England | | Estimated Total Extent |
|---|---|---|
| Broadleaved, Mixed and Yew Woodland | **Traditional orchards** | 36 ha |
| Broadleaved, Mixed and Yew Woodland | **Mature Trees (all)** | 20,000 trees |
| Broadleaved, Mixed and Yew Woodland | **Ancient Trees** | 1,800 trees |
| Calcareous Grassland | **Lowland calcareous grassland** | < 200 ha |
| Neutral Grassland | **Lowland meadows - Neutral** | 2,550 ha |
| Acid Grassland | **Lowland dry acid grassland** | <100 ha |
| Dwarf Shrub Heath | **Lowland heathland** | <500 ha |
| Improved Grassland | **Coastal and floodplain grazing marsh** | c. 200 ha |
| Fen, Marsh and Swamp | **Purple moor-grass and rush pastures** | <20 ha |
| Fen, Marsh and Swamp | **Lowland fens** | <100 ha |
| Fen, Marsh and Swamp | **Reedbeds** | c. 30 ha |
| Rivers and Streams | **Rivers** | TBC |
| Standing Open Waters | **Eutrophic standing waters (canals, Reservoirs)** | TBC |
| Standing Open Waters | **Ponds** | c. 13,000 |

| Habitat of Principle Importance in England | | Estimated Total Extent |
|---|---|---|
| Standing Open Waters | **Ponds (Sphagnum)** | <50 ponds |
| Inland Rock | **Inland rock outcrop and scree habitats** | TBC |
| Inland Rock | **Open mosaic habitats on previously developed land** | TBC |

**Other important habitats**

| | | |
|---|---|---|
| Urban | **Built environment and Gardens** | TBC |
| Urban | **Railways** | c. 205 km |
| Urban | **Railways (historic)** | c. 195 km |
| Roadside verges | **Roadside verges of local wildlife site standard** | 104 km |
| Springs and flushes | **Springs and flushes** | c.500 |

**b. Habitat Description and Distribution Maps**

www.leicestershire.gov.uk/environment-and-planning/local-nature-recovery-strategy/lnrs-resources

Detailed habitat description and local distribution maps can be accessed in the resource section of the Local Nature Recovery Strategy website and in the Leicester, Leicestershire and Rutland Biodiversity Action Plan 2016 - 2026.

# Appendix D

## Supporting Maps, Figures, and Data Tables

### 1. Tables

**a. Significant Rivers and Waterbodies**

**Table D1.a:** Examples of Significant Waterbodies of Leicestershire, Leicester and Rutland

| Name | Location | Importance |
|---|---|---|
| **Rivers** | | |
| **River Soar** | The River Soar flows northward through central Leicestershire, passing through major urban areas such as Leicester City and the town of Loughborough before joining the River Trent near Ratcliffe on Soar. | The River Soar is the most prominent river in Leicestershire, flowing through the heart of the county. It is central to the region's hydrology, draining a large portion of Leicestershire and ultimately joining the River Trent. The Soar is vital for flood management, particularly in urban areas like Leicester, where it helps mitigate the risk of flooding. Several stretches of the River Soar are designated as Sites of Special Scientific Interest (SSSIs), particularly where it supports rich aquatic habitats and species, including wetland areas and floodplain meadows. |
| **River Mease** | The River Mease is located in the northwestern part of Leicestershire, flowing eastward through the rural areas near Measham and joining the River Trent near Croxall. | The River Mease is a highly significant watercourse due to its ecological importance, recognised by its designation as a Special Area of Conservation (SAC) and a Site of Special Scientific Interest (SSSI). It supports rare and protected species, including the spined loach and bullhead fish. The high-quality water and associated habitats of the Mease are crucial for the conservation of these species. Additionally, the Mease plays an important role in local agriculture, providing water resources and contributing to the agricultural landscape in northwestern Leicestershire. |

| Name | Location | Importance |
|---|---|---|
| **Rivers** | | |
| **River Wreake** | The River Wreake flows north-eastward from the outskirts of Leicester City, passing through rural areas near Syston and Melton Mowbray, before joining the River Soar. | The River Wreake, meandering through agricultural landscapes in central Leicestershire, is an important tributary of the River Soar It contributes to local floodplains and wetlands, which are vital for maintaining regional biodiversity. The river supports various habitats, including those for fish species like Brown Trout and aquatic plants. It also plays a key role in local water management, particularly in supporting agricultural activities and managing flood risks in its catchment area. |
| **River Trent** | The River Trent forms the northern boundary of Leicestershire, although it does not flow extensively through the county itself. It passes close to the towns of Kegworth and Ratcliffe on Soar, where Leicestershire meets Nottinghamshire. | The River Trent is one of the major rivers in England, playing a crucial role in draining a large portion of the Midlands. Its significance to Leicestershire lies in its role as a receiving body for several of Leicestershire's rivers, including the Soar and Mease. The Trent is vital for regional water management, flood control, and it supports a diverse range of habitats along its course, contributing to both local and regional biodiversity. |
| **River Welland** | The River Welland flows through the eastern part of Leicestershire and Rutland. It originates near Sibbertoft in Northamptonshire and flows northeast through Market Harborough in Leicestershire and Stamford in Lincolnshire before continuing eastward towards the Wash. | The River Welland is crucial for supporting the wetland habitats along its floodplain, several areas are designated as Local Wildlife Sites (LWS) and also a Site of Special Scientific Interest (SSSI) at Seaton Meadows Nature Reserve. The river provides important ecological connectivity, supporting species such as otters and kingfishers, and plays a key role in regional water management and flood control. |
| **River Eye** | The River Eye is a tributary of the River Wreake, flowing through the eastern part of Leicestershire. It originates near the village of Owston and passes through Melton Mowbray before joining the Wreake near Kirby Bellars. | The River Eye is significant for its contribution to the agricultural landscape of Leicestershire, supporting wetland habitats and providing water for irrigation. It also plays a role in local flood management and supports a variety of species, including fish, mammals and birds. |

| Name | Location | Importance |
|---|---|---|
| **Rivers** | | |
| **River Sence (and Hinckley Sence)** | The River Sence rises from the village of Billesdon, just east of Leicester City, before flowing westwards until it joins the River Soar to the west of Blaby. | The River Sence is crucial for managing local flood risks, particularly in its lower reaches where it contributes to the floodplain systems of the River Soar. It supports a range of wetland and riparian habitats that are important for biodiversity, including species such as otters, water voles, and various bird species. The Sence also plays a significant role in agricultural drainage and water management in the rural areas through which it flows. |
| **River Tame** | The River Tame flows through the northeastern part of Leicestershire and is a major tributary of the River Trent. The Tame originates in the West Midlands, passing through urban areas like Tamworth before it meets the Trent near Alrewas. | The River Tame is one of the key rivers in the Tame and Anker catchment area. It is crucial for flood management, especially in the more urbanised parts of its catchment. It has undergone significant modifications for flood defences and water quality improvements. The river's catchment also supports diverse habitats, particularly in its more rural stretches where wetlands and floodplain meadows are prevalent. |
| **River Anker** | The River Anker flows through the western part of Leicestershire, primarily along the boundary with Warwickshire. It originates near the village of Wolvey and flows northeastwards through Nuneaton, eventually joining the River Tame near Tamworth. | The Anker supports a mix of urban and rural environments, with its upper catchment dominated by agricultural land. It plays a key role in local water management and supports important habitats, including those for species like otters and kingfishers. Parts of its floodplain are significant for biodiversity, particularly in terms of wetland conservation. |
| **River Gwash** | The River Gwash flows through Rutland, originating near the village of Knossington and passing through the towns of Empingham and Ryhall before feeding into Rutland Water and eventually flowing into the River Welland near Stamford. | The Gwash is particularly important for feeding into Rutland Water, which is a critical water reservoir and a site of international importance for bird conservation. The river supports various aquatic species and helps maintain the water balance of Rutland Water, contributing to the reservoir's ecological health. |

| Name | Location | Importance |
|---|---|---|
| **Rivers** | | |
| **River Chater** | The River Chater also flows through Rutland, originating near Whissendine and flowing eastward through villages such as Ketton before joining the River Welland near Tinwell. | The River Chater is important for maintaining local biodiversity in Rutland, providing habitats for aquatic species and contributing to the ecological significance of the Welland catchment. It also plays a role in sustaining the water levels in the surrounding agricultural and rural landscapes. |
| **River Swift** | The River Swift is a tributary of the River Avon. It flows through the southern part of Leicestershire, near the town of Lutterworth, before joining the Avon near the village of Rugby in Warwickshire. | The Swift's catchment is primarily rural, with agricultural land dominating the landscape. While not as prominent as the Soar or Welland, it contributes to the local hydrology and supports small-scale wetland habitats. |
| **River Avon** | The River Avon flows through southern Leicestershire, near the town of Lutterworth, and eventually joining the River Severn in Warwickshire. | The Leicestershire Avon is significant for its role in regional water management and biodiversity. It drains a predominantly rural catchment and provides essential water resources for agriculture. The river supports a variety of wetland and riparian habitats that are important for species such as otters, water voles, and a range of fish. Additionally, the Avon is part of a broader river system that ultimately flows into the River Severn, playing a role in the hydrological connectivity of the region. The river's natural beauty also makes it a valuable resource for local recreation and tourism. |
| **River Devon** | The River Devon flows through north-east Leicestershire, originating near the village of Eastwell. It meanders through rural landscapes, including Belvoir and Bottesford, before crossing into Nottinghamshire and eventually joining the River Trent. | The River Devon is ecologically significant for its contribution to riparian and wetland habitats, supporting species such as kingfishers, otters, and aquatic invertebrates. It plays a key role in local water management, sustaining floodplain meadows and agricultural irrigation. Additionally, the river is important for water quality and hydrological connectivity within the Trent catchment, influencing biodiversity and ecosystem health. The surrounding landscape, including Belvoir Castle's estate and associated parklands, adds heritage and recreational value, making it an asset for both wildlife conservation and public enjoyment. |

| Name | Location | Importance |
|---|---|---|
| **Lakes and Reservoirs** | | |
| **Rutland Water** | Situated in the heart of Rutland, near the towns of Oakham and Uppingham, Rutland Water is one of the largest artificial lakes in Europe, centrally located within the county. | Rutland Water is essential for regional water supply and flood management. It is also a key site for bird conservation, particularly for Osprey reintroduction and as a major stopover for migratory birds. The reservoir supports a wide range of recreational activities, including sailing, fishing, and birdwatching, making it a significant ecological and social resource. Specific designations within Rutland Water include:<br>**Ramsar Site:**[7] recognised as a wetland of international significance, particularly for its importance as a habitat for waterfowl.<br>**Special Protection Area (SPA):** Designated due to its critical role in supporting significant populations of overwintering wildfowl, including species like the Tufter Duck and Pochard.<br>**SSSI:** Noted for its rich biodiversity, especially its bird populations, aquatic habitats, and surrounding woodlands. |
| **Eyebrook Reservoir** | Straddling the border between Leicestershire and Rutland, Eyebrook Reservoir is located near the villages of Caldecott, Stoke Dry and close to the town of Uppingham. | Eyebrook Reservoir plays a crucial role in water storage for surrounding agricultural areas and is an important site for birdlife. Its tranquil environment supports various recreational activities including birdwatching, and its diverse habitats contribute to the conservation of both local and migratory bird species.<br>It is a SSSI, recognised for its importance to bird populations, particularly for wintering waterfowl and waders like Teal, Wigeon, and Lapwing. |
| **Swithland Reservoir** | Located in Charnwood Forest in northwestern Leicestershire, near the village of Swithland and the town of Loughborough. | Swithland Reservoir is vital for local water supply and is part of a larger network of protected areas within Charnwood Forest, which is known for its geological and ecological significance. The reservoir and its surrounding woodlands are home to rare species and provide important recreational opportunities for the local community.<br>SSSI designated for its significant bird populations, including wintering and breeding birds, as well as its diverse aquatic and woodland habitats |

[7] A Ramsar site is a wetland that has been designated as a Wetland of International Importance under the Ramsar Convention

| Name | Location | Importance |
|---|---|---|
| **Lakes and Reservoirs** | | |
| **Cropston Reservoir** | Situated in Charnwood Forest, near the villages of Cropston and Newtown Linford, adjacent to Swithland Wood. | Cropston Reservoir, along with Swithland Reservoir, contributes to the water supply for the surrounding areas and supports a variety of wildlife habitats. The area is popular for walking, birdwatching, and other outdoor activities, contributing to both ecological conservation and public recreation. |
| **Thornton Reservoir** | Located near the village of Thornton in western Leicestershire, close to the town of Coalville. | Thornton Reservoir provides an important habitat for local wildlife, including species of birds, mammals, and aquatic life. The reservoir is also a key site for recreational activities such as fishing and walking, serving as a valuable green space for the local community.<br>It has Local Nature Reserve (LNR) designation for its local importance to biodiversity, particularly for aquatic species and surrounding woodlands. |
| **Blackbrook Reservoir** | Situated in the Charnwood Forest area, near the village of Shepshed, Leicestershire. | Blackbrook Reservoir plays a crucial role in the local water supply and supports a variety of habitats that are important for biodiversity. The area is also a popular spot for birdwatching and walking, contributing to both ecological preservation and public enjoyment.<br>It has SSSI recognition for its importance to wildlife, particularly bird species, and its surrounding woodlands. |
| **Canals** | | |
| **Grand Union Canal (Leicester Line)** | This section of the Grand Union Canal runs through the eastern part of Leicestershire, passing through areas such as Market Harborough and Foxton, known for its historic locks. | The Leicester Line of the Grand Union Canal is significant both for its historical importance as a key transportation route and for its ecological value. The canal and its surrounding habitats support a variety of wildlife, including birds, invertebrates, fish, and aquatic plants. The Foxton Locks area is a popular tourist destination, highlighting the canal's role in both cultural heritage and recreation.<br>It includes sections designated as SSSI, particularly around the Foxton Locks, emphasising historical and ecological importance. |

| Name | Location | Importance |
|---|---|---|
| **Canals** | | |
| **Ashby Canal** | Runs through western Leicestershire, from Ashby-de-la-Zouch to Moira, moving through Market Bosworth and ending near Bedworth in Warwickshire connecting to the Coventry Canal. | The Ashby Canal is approximately 35 kilometres long and is important for leisure activities and biodiversity, serving as a corridor for various species and offering recreational opportunities like boating and fishing.<br>While not formally designated as a nature reserve, the canal is recognised for its ecological value and is an important feature in the western part of the county. |
| **Oakham Canal** | The Oakham Canal was historically located in Rutland, connecting the market town of Oakham to the Melton Mowbray Navigation. Although no longer fully navigable, remnants of the canal still influence the local landscape. | Although the Oakham Canal is no longer in use for navigation, its traces are important for local history and landscape structure. The former canal route contributes to the region's heritage and provides green spaces that support local biodiversity, including various aquatic plants and animals. |
| **Leicester Navigation** | The Leicester Navigation is part of the Grand Union Canal, running through Leicester City and connecting to the River Soar. | This section of the Grand Union Canal is particularly important for urban biodiversity, providing a green corridor through Leicester that supports both wildlife and recreational activities. |
| **Melton Mowbray Navigation** | This historical canal runs through the town of Melton Mowbray, connecting to the River Wreake. | Although no longer in active use, remnants of the Melton Mowbray Navigation still influence local hydrology and contribute to the cultural heritage of the region. Its historical structures and associated water bodies are important for local wildlife. |

**b. Examples of Important Priority Woodland and Grassland**

**Table D1.b:** Examples of Important Woodlands and Grasslands of Leicestershire, Leicester and Rutland

| Name | Location | Priority Habitat Type | Importance |
|---|---|---|---|
| **Charnwood Forest** | Northwestern Leicestershire | Ancient woodland, grasslands, and heathland | Charnwood Forest is one of the oldest landscapes in England, characterised by ancient woodlands, heathlands, and rocky outcrops. The area supports rare plant species, ancient trees, and diverse wildlife, including populations of rare invertebrates and birds such as **Tree Pipit** and **Woodcocks**.<br>**Designations:** Site of Special Scientific Interest (SSSI), National Forest. |
| **Rutland Water Nature Reserve** | Rutland, near the town of Oakham | Grassland, wetland, and woodland | This reserve is internationally recognised for its importance as a wetland habitat, especially for bird species. The grasslands and surrounding woodlands support a rich diversity of flora and fauna. Rutland Water is especially noted for being a key stopover for migrating birds and has a significant population of breeding **Ospreys**.<br>**Designations:** SSSI, Special Protection Area (SPA), Ramsar Site. |
| **The National Forest** | Spanning parts of Leicestershire, Derbyshire, and Staffordshire | Woodland, grassland, and reclaimed habitats | The National Forest is a large-scale, multi-use forest project that aims to transform a landscape heavily affected by mining into a mosaic of habitats, including new woodlands, wetlands, and grasslands. It supports a diverse range of wildlife, and provides important recreational, educational, and climate mitigation benefits. It is also key for connecting fragmented woodlands and increasing biodiversity.<br>**Designations:** Local Wildlife Sites (LWS), National Forest. |

| Name | Location | Priority Habitat Type | Importance |
|---|---|---|---|
| **Aylestone Meadows** | Situated along the River Soar, just southwest of Leicester City centre | Floodplain grassland, wetland, and woodland | Aylestone Meadows is an important green space within an urban setting, offering a range of habitats, including floodplain meadows, wetland areas, and patches of woodland. It supports a variety of wildlife, including birds, invertebrates, and plant species adapted to wet conditions. The meadows and wetlands are particularly valuable for species such as **Reed buntings**, **Water Voles**, and various amphibians such as **Smooth Newt**. The site plays a crucial role in flood management, acting as a natural buffer that absorbs excess water during periods of heavy rain.<br>**Designations:** Local Nature Reserve (LNR), Local Wildlife Site (LWS), Part of River Soar Green Corridor. |
| **Bardon Hill** | Near Coalville, Leicestershire | Woodland and grassland | Bardon Hill is the highest point in Leicestershire and features both woodland and grassland habitats. The hill supports a variety of rare plants and insects, and the quarrying activity in the area has revealed important geological formations.<br>**Designations:** Site of Special Scientific Interest (SSSI). |
| **Leighfield Forest** | East of Oakham, Rutland | Ancient woodland | Leighfield Forest is a large area of ancient woodland that has remained relatively unchanged for centuries. It is significant for its rich ground flora, including **Bluebells** and **Wild Garlic**, and supports a variety of woodland birds and mammals, including **Badgers** and **Bats**.<br>**Designations:** Site of Special Scientific Interest (SSSI). |

| Name | Location | Priority Habitat Type | Importance |
|---|---|---|---|
| **Swithland Wood** | Near Loughborough, Leicestershire | Ancient woodland | Swithland Wood is a remnant of the ancient Charnwood Forest and is known for its diverse range of tree species, including **Oak**, **Birch**, and **Ash**. The woodland supports a rich variety of wildlife, including bats, birds, and invertebrates. The site also contains important archaeological features, such as medieval earthworks.<br>**Designations:** Site of Special Scientific Interest (SSSI), National Nature Reserve. |
| **Bradgate Park** | Near Leicester, Leicestershire | Ancient Woodland, heathland, grassland | Bradgate Park is a historic parkland with a mix of grassland, heathland, and ancient woodland. It is particularly noted for its veteran trees, which provide habitats for various fungi, insects, and birds. The park is also home to herds of red and fallow deer and is an important site for the study of ancient landscapes and ecology.<br>**Designations:** Site of Special Scientific Interest (SSSI), National Nature Reserve. |
| **Burley and Egleton Meadows** | Near Oakham, Rutland | Neutral grassland | These meadows are some of the best remaining examples of neutral grassland in the region. They are rich in wildflowers, including several species of orchid, and support a wide variety of insects, including butterflies and bees. The meadows are traditionally managed by hay cutting and grazing, maintaining their biodiversity.<br>**Designations:** Site of Special Scientific Interest (SSSI). |
| **Launde Big Wood** | East of Leicester, Leicestershire | Ancient woodland | Launde Big Wood is one of the largest ancient woodlands in Leicestershire, with a rich ground flora and a diverse range of tree species. It is particularly important for woodland birds, such as Greater Spotted Woodpeckers and Tawny Owls, and is a haven for invertebrates.<br>**Designations:** Site of Special Scientific Interest (SSSI). |

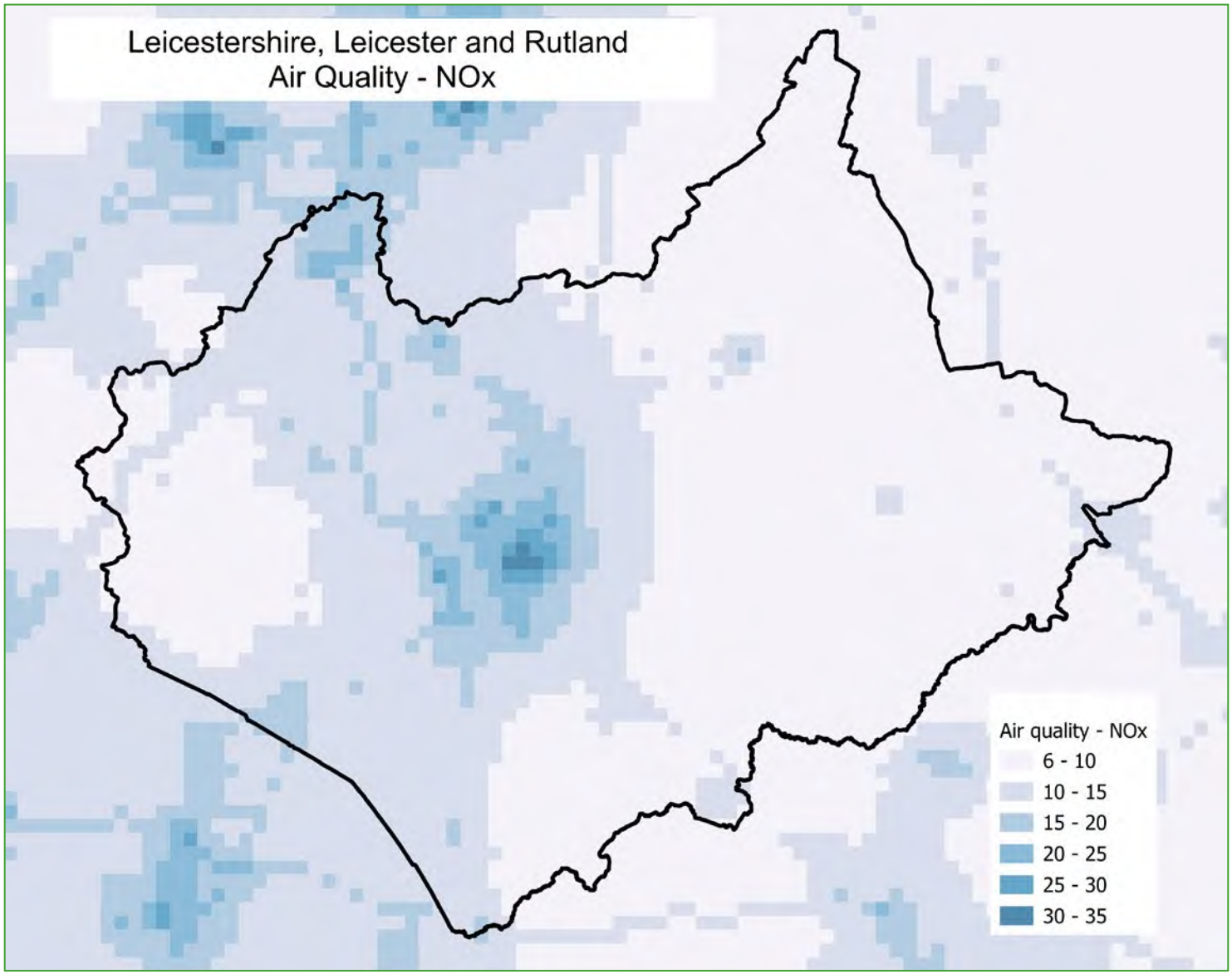
| Name | Location | Priority Habitat Type | Importance |
|---|---|---|---|
| **Launde Park Wood** | East of Leicester, Leicestershire | Ancient woodland | Close to Launde Big Wood, Launde Park Wood is another important ancient woodland with a diverse flora and fauna, including several rare plant species and a variety of woodland birds and mammals. It is managed traditionally, which has helped preserve its rich biodiversity.<br>**Designations:** Site of Special Scientific Interest (SSSI). |
| **Ketton Quarry** | Near Stamford, Rutland | Limestone grassland and scrub | Ketton Quarry is a significant site for limestone grassland, supporting a wide range of plant species, including several rare orchids. The site is also important for its geological features and is a key area for the study of quarry restoration and management for biodiversity.<br>**Designations:** Site of Special Scientific Interest (SSSI), Local Nature Reserve (LNR). |
| **Cribbs Meadow** | Near Wymondham, Leicestershire | Unimproved neutral grassland | Cribbs Meadow is an excellent example of species-rich unimproved neutral grassland. The site is notable for its array of wildflowers, including **Early Purple Orchids** and **Cowslips**, and supports a variety of invertebrates, particularly butterflies and grasshoppers.<br>**Designations:** Site of Special Scientific Interest (SSSI). |
| **Prior's Coppice** | Near Uppingham, Rutland | Ancient woodland | Prior's Coppice is one of the best-preserved ancient woodlands in Rutland, known for its diverse ground flora and old coppice management regime. The wood supports a rich community of woodland birds, including woodpeckers and Nuthatches, and is home to various protected bat species.<br>**Designations:** Site of Special Scientific Interest (SSSI). |

| Name | Location | Priority Habitat Type | Importance |
|---|---|---|---|
| **Bloody Oaks Quarry** | Near Empingham, Rutland | Limestone grassland | This small but botanically rich limestone grassland is significant for its variety of calcareous plants, including several species of orchids. The site also provides habitat for butterflies and other invertebrates and is a good example of how old quarries can become important wildlife habitats.<br>**Designations:** Site of Special Scientific Interest (SSSI). |
| **Holwell Reserves** | Near Melton Mowbray, Leicestershire | Grassland and scrub | The Holwell Reserves comprise several small sites of calcareous grassland and scrub, important for their plant communities which include orchids and other wildflowers. The area is also notable for its invertebrate fauna, particularly butterflies and moths. |
| **Lyndon Nature Reserve** | Rutland, along the southern shore of Rutland Water | Grassland, scrub, and woodland | Lyndon Nature Reserve is part of the broader Rutland Water ecosystem. It includes a mix of grassland, scrub, and woodland habitats that support a variety of bird species, particularly those associated with water bodies. The reserve is also important for butterflies and other invertebrates.<br>**Designations:** Site of Special Scientific Interest (SSSI), (part of the larger Rutland Water designation). |
| **Goss Meadows** | Leicester, just northwest of Leicester City centre | Grassland | Goss Meadows is a locally important site for grassland biodiversity, particularly wildflowers and invertebrates. This area of linear grassland is managed to encourage the growth of native plant species and provide habitat for local wildlife, making it an important green space and valuable green corridor within the urban landscape.<br>**Designations:** Local Nature Reserve (LNR), Local Wildlife Site (LWS). |

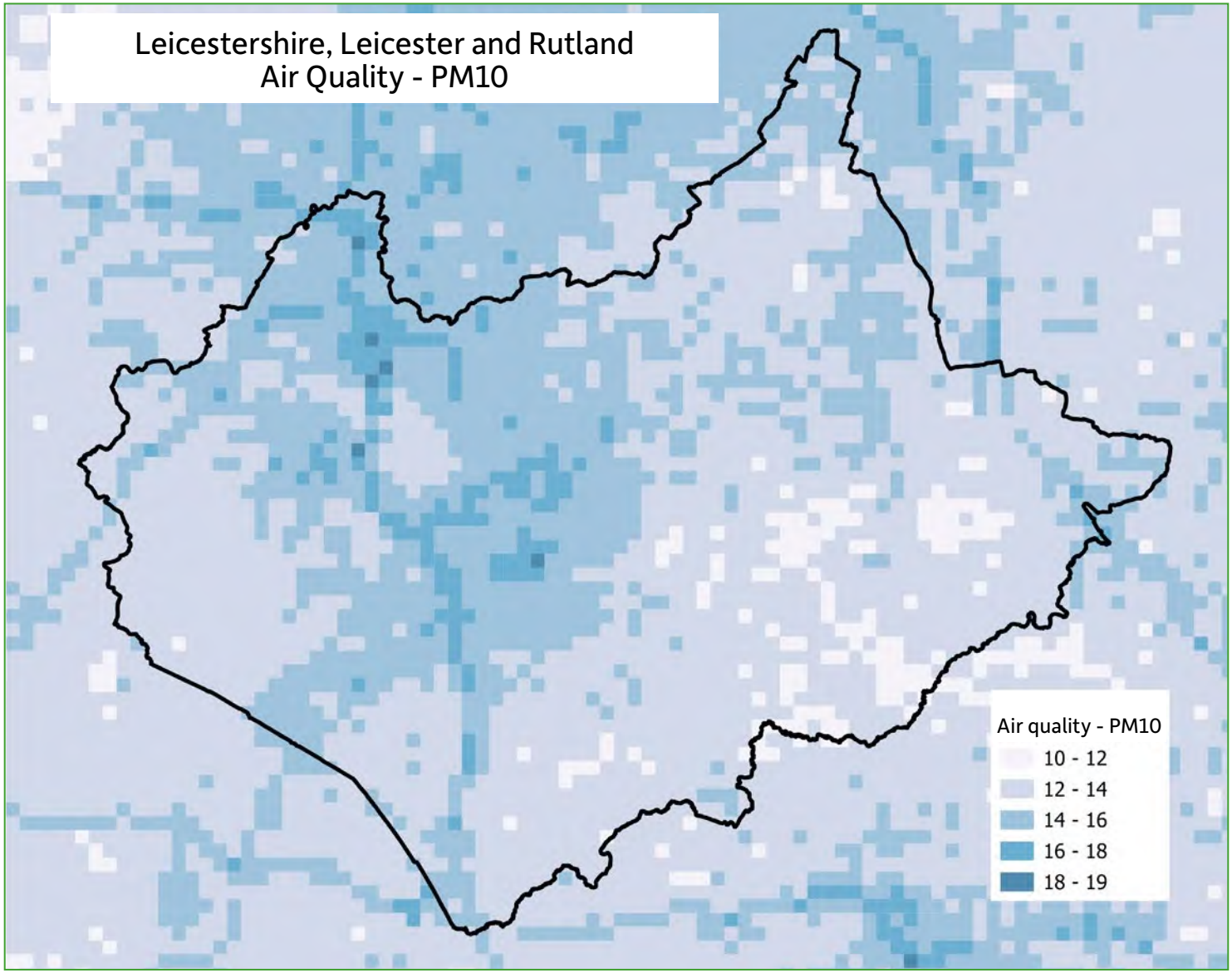
| Name | Location | Priority Habitat Type | Importance |
|---|---|---|---|
| **Great Merrible Wood** | Near Market Harborough, Leicestershire | Ancient woodland | Great Merrible Wood is a fine example of ancient woodland with a diverse flora, including many woodland indicator species. The wood is also significant for its birdlife, including various warblers and woodpeckers, as well as for its populations of bats.<br>**Designations:** Site of Special Scientific Interest (SSSI) |
| **Clipsham Old Quarry and Pickworth Great Wood** | Near Clipsham, Rutland | Woodland and limestone grassland | This area combines ancient woodland with limestone grassland, creating a unique habitat mosaic. The site is important for its diverse plant communities, including rare orchids, and supports a variety of wildlife, including butterflies, bats, and woodland birds.<br>**Designations:** Site of Special Scientific Interest (SSSI). |
| **Knighton Spinney** | Leicester, within Knighton Park south of Leicester City centre. | Woodland | This small but significant area of woodland set within the wider urban park includes several mature trees, including numerous impressive oak specimens and well-developed woody understory. Ground flora includes some ancient woodland indicator species. Standing deadwood and mature trees provide roosting and nesting sites for birds and bats.<br>**Designation:** Local Nature Reserve (LNR), Local Wildlife Site (LWS). |

## 2. Maps

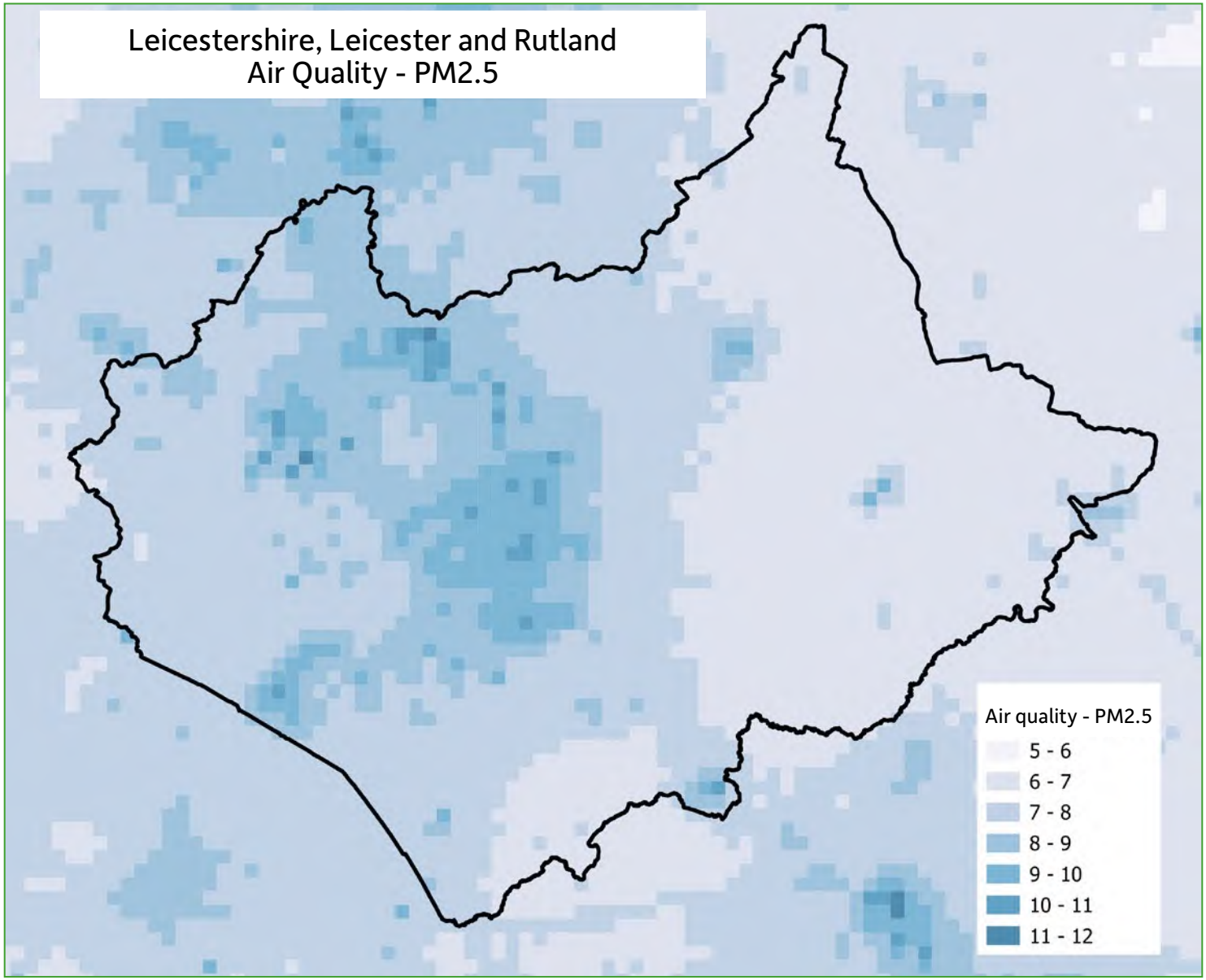
**a. Air Quality NOx:** This map shows nitrogen oxide (NOx) concentrations across the area, highlighting areas affected by vehicle emissions and industrial activities impacting air quality.



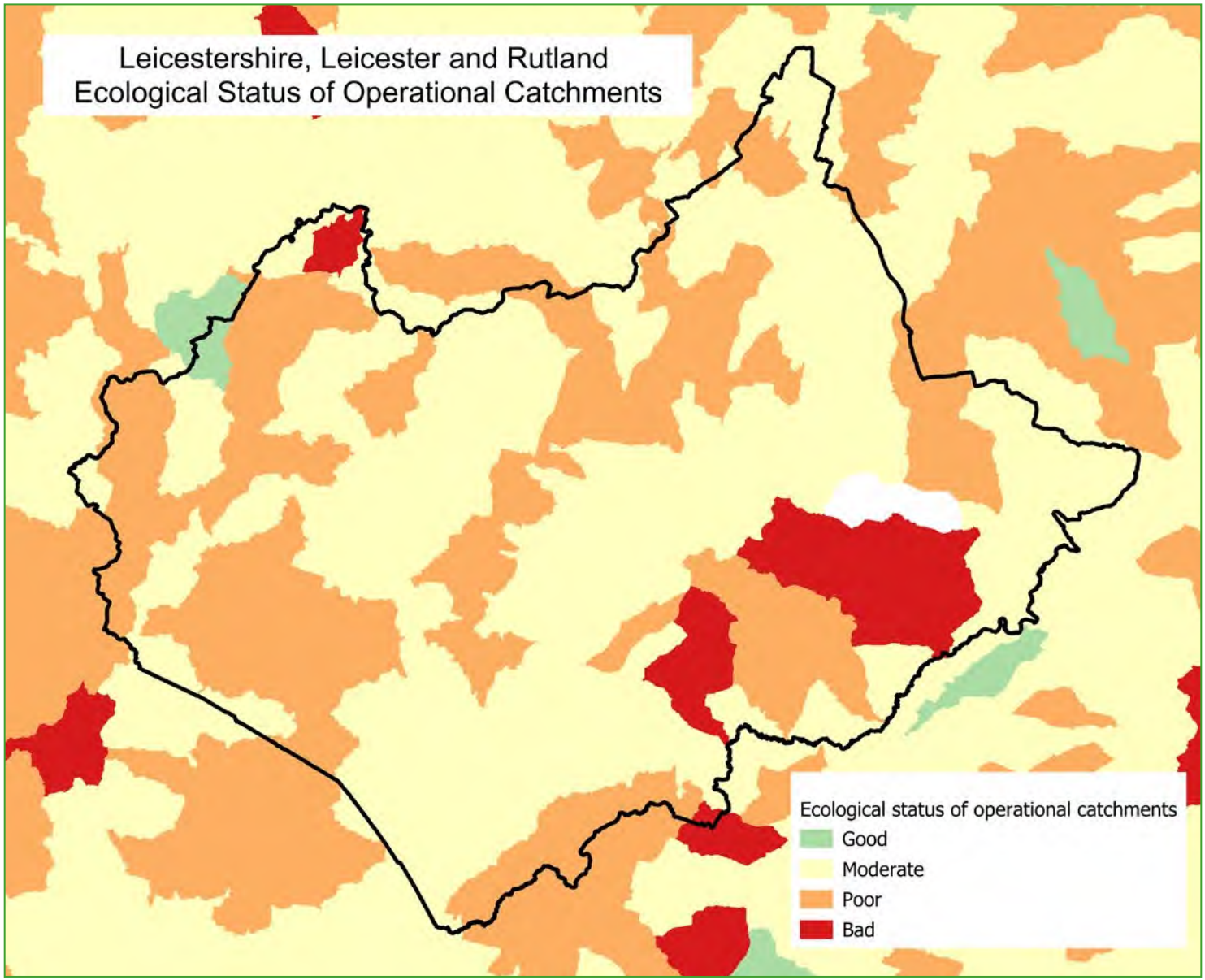
**b. Air Quality PM10:** This map displays the distribution of PM10 particulate matter, indicating areas with elevated coarse particles due to sources like construction and traffic.



**c. Air Quality PM2.5:** This map presents PM2.5 levels, reflecting fine particulate pollution from sources such as combustion, affecting respiratory health.

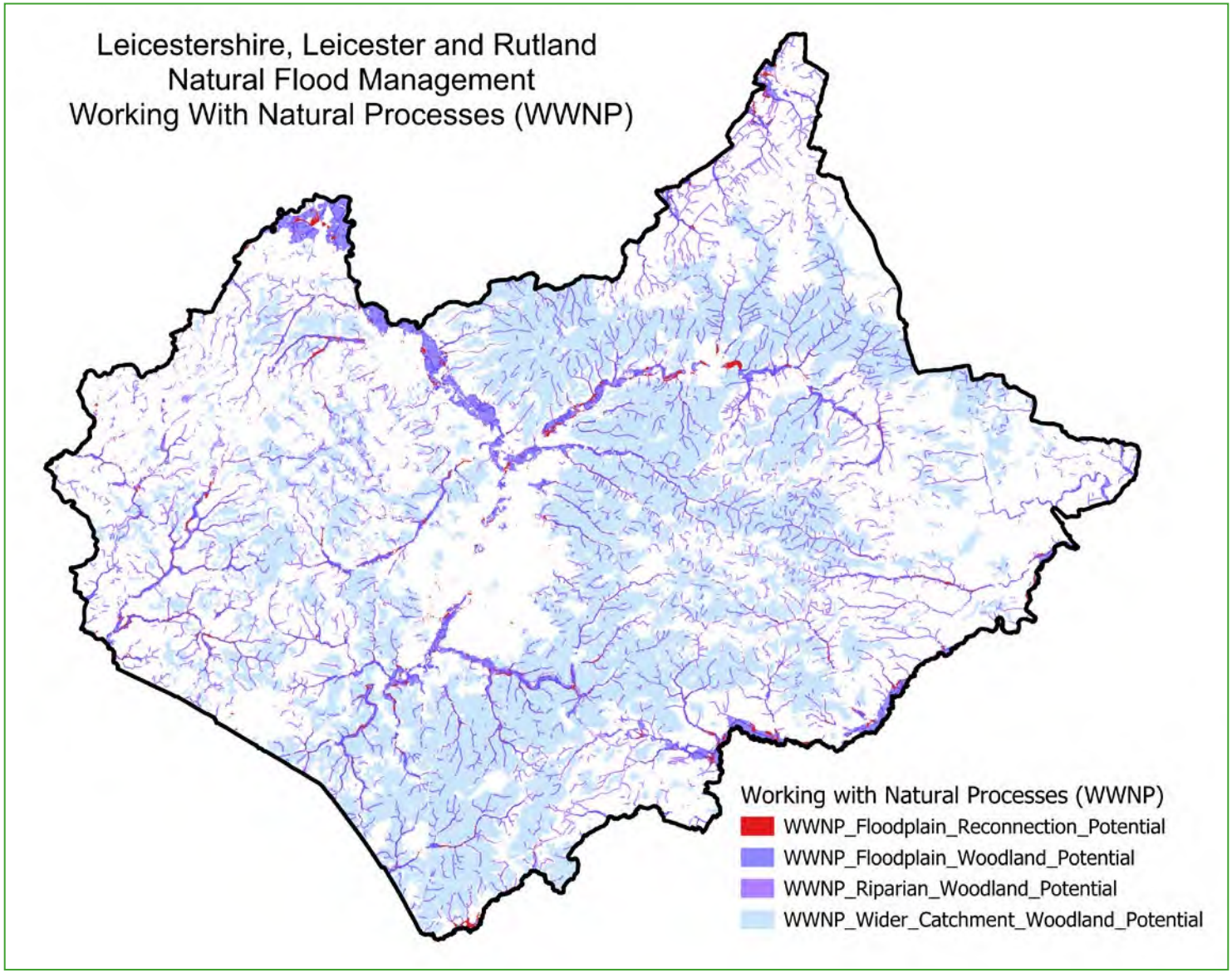


**d. Ecological Status of Catchment Areas:** This map illustrates the ecological health of water catchments, based on assessments of water quality and biodiversity.



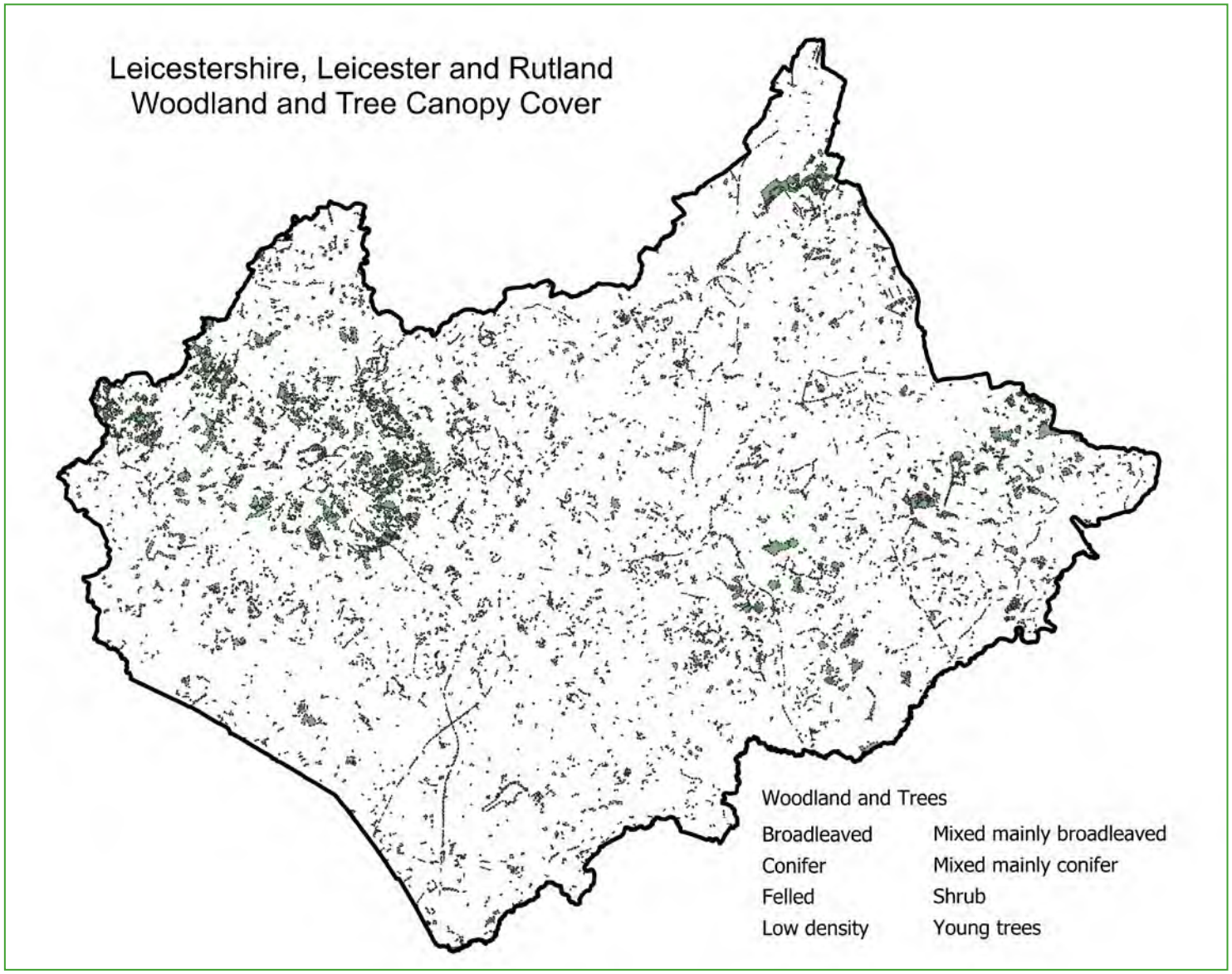

Source: Environment Agency.

**e. Natural Flood Management:** This map identifies potential areas for natural flood management, including reconnecting rivers and streams to their floodplains, floodplain woodland and riparian woodland enhancement and creation.




Source: Environment Agency.

**f. Woodland and Tree Canopy Cover:** This map shows the extent of woodland and tree canopy cover, emphasising areas contributing to biodiversity, carbon sequestration, and ecosystem resilience.



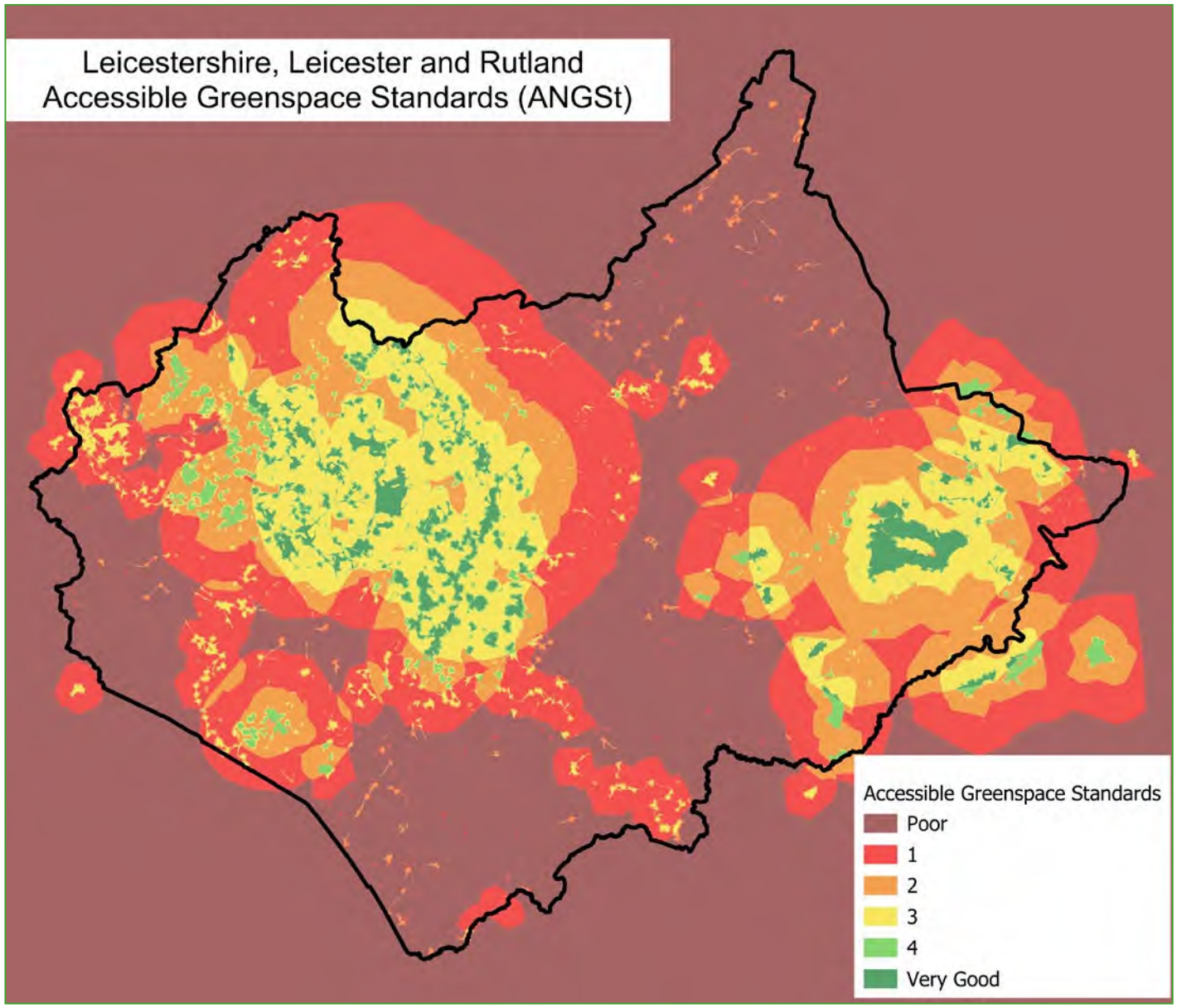

Source: National Forest Inventory 2021.

**g. Accessible Greenspace Standards (ANGSt) Map:** This map shows the Accessible Natural Greenspace Standards (ANGSt) developed by Natural England. This is a framework for evaluating and improving access to natural spaces within communities.

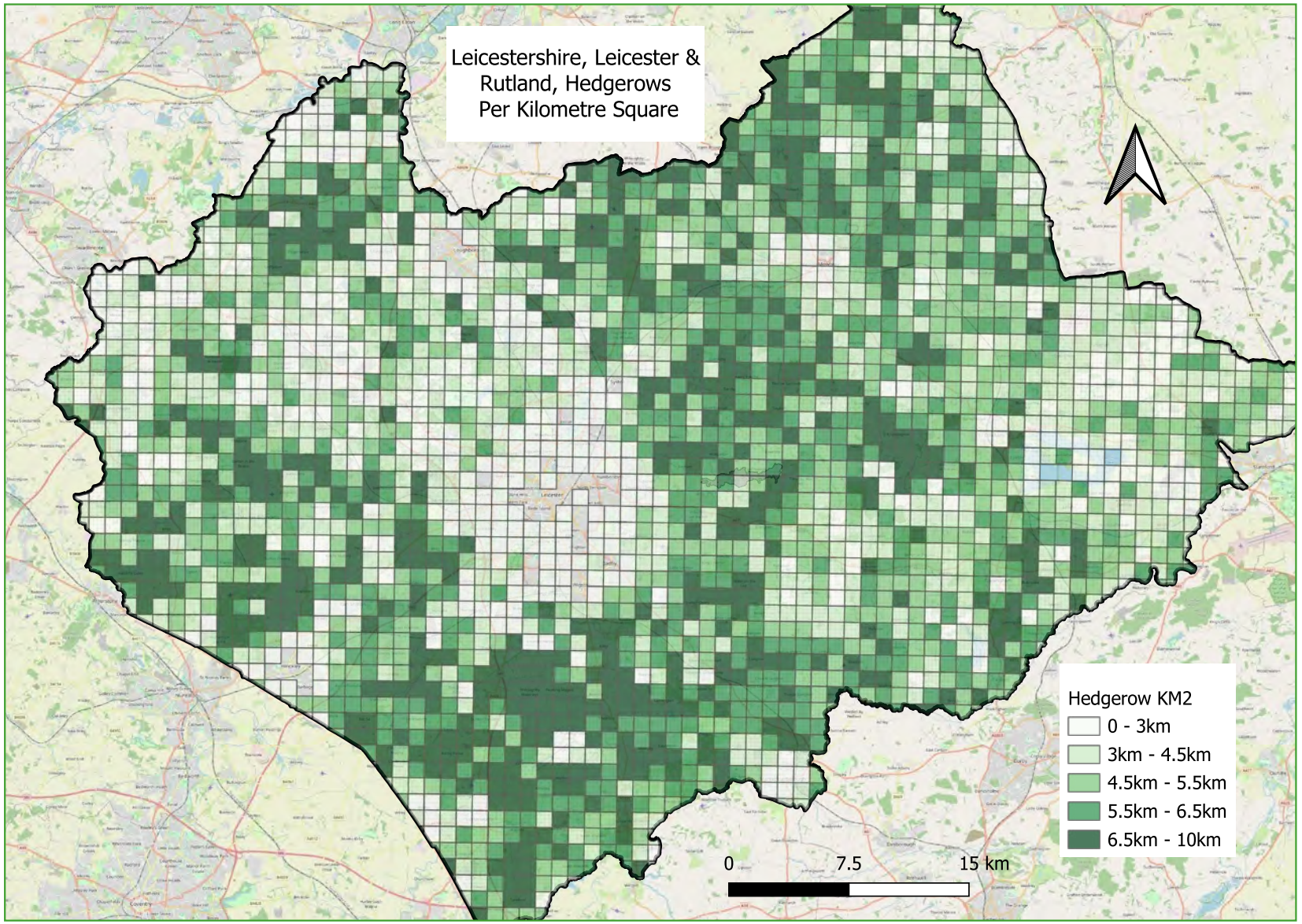
The ANGSt guidelines suggest that people should have:

- A green space of at least 2 hectares within 300 meters (about a 5-minute walk) from their home.
- At least one accessible 20-hectare site within 2 kilometres.
- A larger natural area (100 hectares) within 5 kilometres.
- One very large site of at least 500 hectares within 10 kilometres.

These standards aim to ensure that everyone has adequate access to green spaces for recreation, mental well-being, and connection to nature, which is increasingly recognised as essential for health and quality of life.



**h. Hedgerows:** This map shows the distribution and density of hedgerows in Leicestershire, Leicester and Rutland, including how many kilometres of hedgerow are in each kilometre square.




Source: UKCEH Land Cover Map & Hedgerows.

# Appendix E
## Stakeholder Engagement Records

### 1. Stakeholder Engagement Report

www.leicestershire.gov.uk/environment-and-planning/local-nature-recovery-strategy/lnrs-resources

Trueman Change was engaged through a competitive quotation process by Leicestershire County Council, as the responsible authority. Their role was to support and facilitate comprehensive engagement with the public and key stakeholder groups, achieving valuable input of opinions and perspectives to inform the creation of the draft strategy, in readiness for full public consultation prior to adoption. The full engagement report can be accessed in the resources section of the Local Nature Recovery Strategy Website.

# Appendix F
## Relevant Legislation and Policies

**The Environment (Local Nature Recovery Strategy) (procedure) Regulations 2023**: www.legislation.gov.uk/uksi/2023/341/made

**Environment Act 2021:** www.legislation.gov.uk/ukpga/2021/30/contents

**Natural Environment and Rural Communities Act 2006:**
www.legislation.gov.uk/ukpga/2006/16/contents

**Biodiversity Net Gain:** www.gov.uk/government/collections/biodiversity-net-gain

**Biodiversity Duty:** www.gov.uk/guidance/complying-with-the-biodiversity-duty

**HMSO (Her Majesty's Stationery Office) 1981:**
The Wildlife and Countryside Act 1981, HMSO, London.

# Appendix G
## References and Further Reading

### 1. Bibliography

All sources referenced in the development of the Local Nature Recovery Strategy are available in the resources section of the Local Nature Recovery Strategy webpages. This can be accessed here: www.leicestershire.gov.uk/environment-and-planning/local-nature-recovery-strategy/lnrs-resources

These sources are organised into two main tables for easy reference:

**a. Table of existing strategies and plans assessed in the development of the Local Nature Recovery Strategy**

This table includes all the 100 strategic documents assessed and referenced to establish the aims, priorities, and measures that underpin the Local Nature Recovery Strategy.

**b. Management plans and good practice guidance documents**

This table lists the management and best practice resources that inform effective strategies for delivering the Local Nature Recovery Strategy measures, priorities and aims.

## 2. Further Reading


**JNCC (Joint Nature Conservation Committee) (2019).**
UK Biodiversity Action Plan (UK BAP) Priority Species and Habitats.
Available at: https://jncc.gov.uk

**Natural England. (2020).**
Building Partnerships for Nature Recovery: Local Nature Recovery Strategy Pilot.
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**Clarke, S., White, S., Harris, J. (2014).**
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**Cox, P., Trew, J., & Nicolson, T. (2016).**
Ecological Networks and Nature Recovery Strategies in the East Midlands.
Ecological Journal of the Midlands.

**Rothero, G., Lake, S., & Gowing, D.J. (2016).**
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Managing Habitats for Species: The UK Experience.
Cambridge University Press.

**Wildlife Trusts. (2020).**
Nature Recovery Network – A National Framework for Action.
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Available at: www.wildlifetrusts.org

**DEFRA (Department for Environment, Food & Rural Affairs). (2022).**
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Conservation of Leicestershire and Rutland Butterflies.
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RSPB.
Available at: www.rspb.org.uk

**Froglife. (2021).**
Amphibian and Reptile Conservation Strategy for the East Midlands.
Froglife Trust.
Available at: www.froglife.org

**Stoate, C. (2022).**
Farming with the Environment: Thirty Years of Allerton Project Research.
Available at: www.gwctshop.org.uk/products/farming-with-the-environment-thirty-years-of-allerton-project-research


The following organisations have contributed to the production of this Strategy in their role as supporting authorities: Natural England, the Environment Agency and Forestry Commission.


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