



Greater Lincolnshire **Nature Recovery Strategy**



Contents

Foreword

1 – Introduction

- 1.1 What is nature recovery
- 1.2 What is a Local Nature Recovery Strategy (LNRS)
- 1.3 Creation of the Greater Lincolnshire LNRS
- 1.4 Policy context
- 1.5 Vision and principles
- 1.6 The top five aims
- 1.7 What the LNRS is not aiming to achieve
- 1.8 How the LNRS can support the people of Greater Lincolnshire
- 1.9 How can we help nature, and how can nature help us

2 – Local Nature Recovery Strategy development process

- 2.1 LNRS development
- 2.2 The National Character Area approach
- 2.3 The Greater Lincolnshire LNRS development process
 - Engagement strategy
 - Local Habitat Map development

3 – State of nature and the environment across Greater Lincolnshire

- 3.1 Introduction to Greater Lincolnshire's Key LNRS facts
- 3.2 Overview of Greater Lincolnshire's current natural assets
- 3.3 What does nature provide for us?
- 3.4 Key pressures affecting nature across Greater Lincolnshire
- 3.5 What are the expected future trends in nature conservation?
- 3.6 How the LNRS can impact future pressures and trends

4 – Description of Area

- 4.1 Description of area introduction
- 4.2 Population composition
- 4.3 Greater Lincolnshire's key industries
- 4.4 Greater Lincolnshire's key natural habitats at a glance
- 4.5 Key habitats
 - 4.5.1 Engagement survey priority habitats
- 4.6 Key Species
 - 4.6.1 Engagement survey priority species
- 4.7 Key wider environmental benefits and co-benefits
- 4.8 Key pressures affecting nature across Greater Lincolnshire
- 4.9 – 4.19 Individual National Character Area descriptions

5 – Pressures and Opportunities

- 5.1 Pressures and Opportunities introduction
- 5.2 What needs to happen for nature to recover – The Lawton Principles
- 5.3 Priorities and Actions Tables
- 5.4 Species Priorities and Actions
- 5.5 Moving from strategy to delivery
- 5.6 Landscape Recovery Projects
- 5.7 Glossary
- 5.8 Habitat Definitions

Appendices are available on the LNRS website at <https://www.glinclnrs.org.uk/>



Foreword

It is recognised that a diverse and resilient natural environment is essential for life and contributes to the health and wellbeing of local communities as well as our economic prosperity.

Greater Lincolnshire is home to a variety of nationally important landscapes and associated habitats, including coast and marshes, estuarine, grasslands, heathland and ancient woodland, all supporting a wide range of species. Sadly, our natural areas have been in decline over the last century, with many areas of habitat depleted and shrunk in size and native species under threat or already lost.

Action needs to be taken, not only to protect what is still present, but also for the recovery of what we have lost. We need to provide more space for nature and ensure it's "bigger, better and more joined up", so that our precious habitats and species are there for future generations to enjoy.

This includes our towns and villages where green spaces provide access to nature for residents and visitors, improving both physical and mental health, as well as our rural landscapes which produce food for Greater Lincolnshire and the rest of the country, and where our farmers, land managers and landowners play a key part.

The Local Nature Recovery Strategy for Greater Lincolnshire has been developed as part of a nationwide requirement to do more for nature, as set out in the Environment Act 2021, which mandated the creation of LNRSs across the whole of England—the first time that a statutory duty has been put in place to enhance depleted nature.

Through extensive consultation with local communities, environmental bodies, voluntary organisations, farmers and landowners, individuals and other stakeholders, we have developed the strategy, with a focus on delivering tangible improvements for nature, prioritising those practical actions that will have the most beneficial impact, including restoring habitats, increasing connectivity between green spaces and supporting species recovery, with all the benefits it creates for people and wildlife.

We are extremely grateful for the input and collaboration of all who have contributed their time, knowledge, expertise and passion to this draft strategy.

This strategy provides a framework for action for the next five years, setting out priorities for action. We now need to ensure the agreed strategy is delivered, and we will be monitoring progress. We will continue to work closely with communities and partners to deliver the strategy and restore nature across Greater Lincolnshire.

Greater Lincolnshire LNRS Management Board



1 Introduction

1.1 What is nature recovery?

Nature recovery restores and creates spaces for wildlife, such as habitat rich places, corridors and stepping stones between them. This helps wildlife populations thrive and grow by being able to move, expand and adapt to pressures, including a changing climate.

1.2 What is a Local Nature Recovery Strategy (LNRS)?

The Environment Act 2021 introduced a new legal requirement to produce Local Nature Recovery Strategies across England as part of the national drive to give nature more room to grow. It is a spatial strategy that is designed to be practical, co-ordinated and focused on nature recovery.

The strategies are a new approach to restoring and protecting nature across England which aim to identify and prioritise areas for nature recovery, creating a network of habitats that are bigger, better, and more joined up. These strategies will guide local planning policy and funding for nature restoration and are designed to complement other environmental schemes like biodiversity net gain.



Key aspects of LNRS:

• Mapping and Prioritisation:

LNRSs map existing valuable areas for nature (shown in their Areas that are Particularly Important for Biodiversity mapping (APIB)), identify opportunities for improvement, and establish local priorities for habitat creation and restoration.

• Habitat Network:

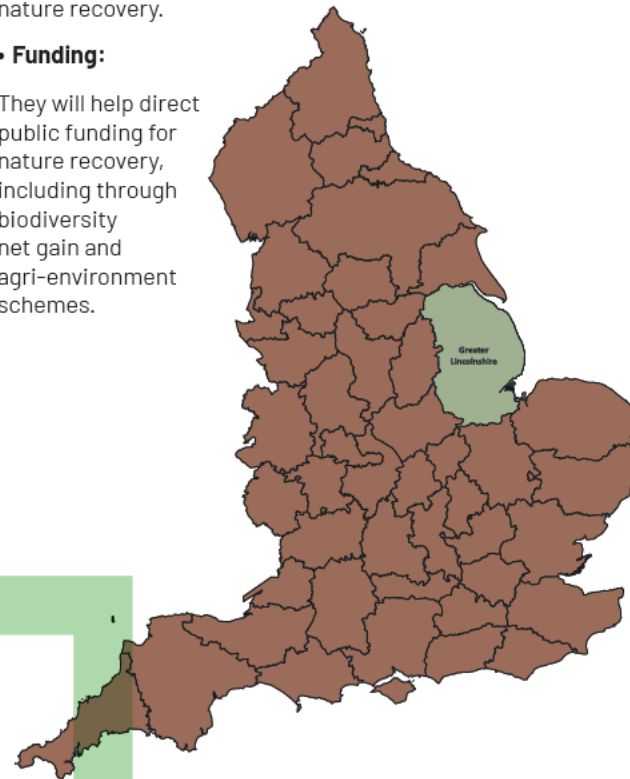
They will contribute to the development of a National Nature Recovery Network, aiming to restore and enhance habitats across England.

• Complementing other initiatives:

LNRSs will integrate with biodiversity net gain (BNG) and other environmental schemes, ensuring a coordinated approach to nature recovery.

• Funding:

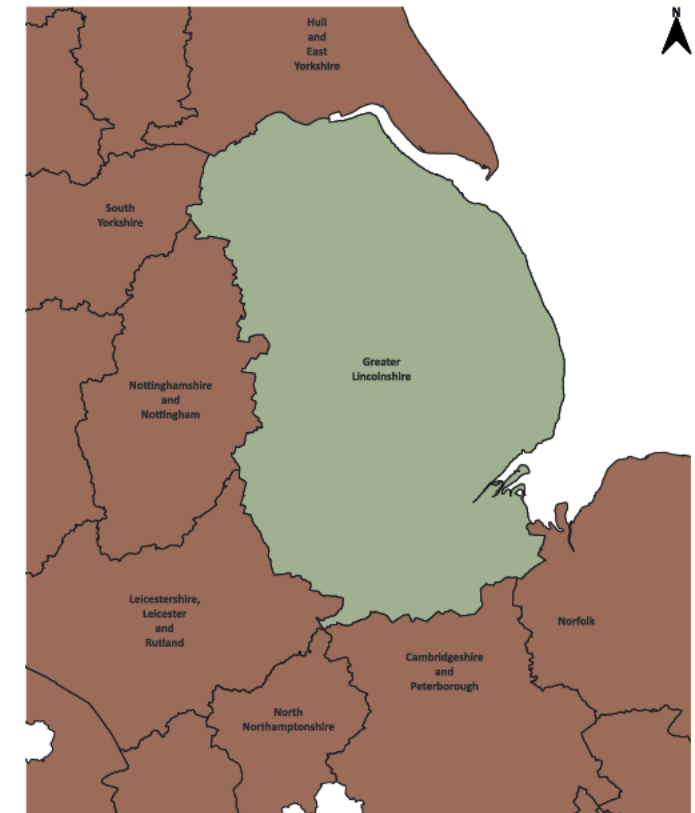
They will help direct public funding for nature recovery, including through biodiversity net gain and agri-environment schemes.



• Wider Environmental Benefits:

LNRSs will consider the wider environmental benefits of nature recovery, such as flood management, carbon sequestration, and improved water quality.

There are 48 LNRSs covering the whole of England.



1.3 Creation of the Greater Lincolnshire LNRS

Lincolnshire County Council was appointed as the Responsible Authority for the Greater Lincolnshire Local Nature Recovery Strategy by the Secretary of State for Environment, Food and Rural Affairs (Defra). Lincolnshire County Council, North Lincolnshire Council and North East Lincolnshire Council, together with the Greater Lincolnshire Nature Partnership, have worked in partnership to shape the LNRS for the whole of Greater Lincolnshire.

The Strategy has been produced collaboratively and based on the best local evidence. It has worked closely with:

- All local authorities across Lincolnshire
- Nature conservation organisations
- Landowners and land managers
- Local experts
- Local people, community groups and stakeholders
- Natural England, the Environment Agency and the Forestry Commission

The substantial contributions from these partner organisations and individuals is much appreciated.

Many individuals, communities, landowners, farmers and businesses have participated in surveys, events and workshops. Together with nature conservation experts, who have shared their expertise and detailed local knowledge, lists of priorities for the recovery of Greater Lincolnshire's wildlife, and practical actions to deliver those priorities, have been created.

The Strategy has been developed alongside the LNRSs for Lincolnshire's seven neighbouring counties. Greater Lincolnshire shares conservation priorities with all of them and all opportunities for collaboration and shared delivery are included in the Strategy.

1.4 Policy context

The LNRS contains actions needed for local delivery of the government's 25-year Environment Plan which contains targets including:

- Restore 500,000 ha of wildlife-rich habitat
- Increase woodland cover to 16.5% of England
- Halt the decline in species abundance
- Cut greenhouse gas emissions from land use sources
- Achieve clean and plentiful water in 75% of rivers
- Ensure there is high quality accessible greenspace near where people live and work

The LNRS has been designed with consideration for existing plans and strategies currently being implemented by local authorities and organisations. These plans and strategies include plans for development, managing water, flood risk and forestry. The LNRS is intended to inform and influence the direction of new policies relating to nature recovery.

1.5 Vision and Principles

Our vision is for Greater Lincolnshire to be much richer in wildlife, with more people benefitting from nature and the services it provides.

Greater Lincolnshire will have better habitat corridors linking more areas of woodland, grassland and wetland. Rivers will be healthier, and populations of our species will be more robust.

As a leading farming county, nature recovery will support sustainable food production; it will help reduce flood risk, maintain river flows and support pollination.

Residents will benefit from the services provided by nature, including increased access to greenspace, known to benefit both physical and mental health.

1.6 The top five aims

- More, Bigger, Better and Joined up sites supporting local wildlife (the Lawton Principles)
- Larger populations and broader distribution of key and rare species
- Increased benefits to people from nature, with nature supporting healthy and happy communities
- Building agricultural resilience in Greater Lincolnshire by supporting key processes such as pollination
- Reducing the impacts of climate change on nature and local communities, such as from flooding and drought

1.7 What the LNRS is not aiming to achieve

The LNRS is not designed to be prescriptive but is a tool to help nature recover within Greater Lincolnshire.

It will not be used to:

- Require land managers to make changes to their land. This will remain their choice
- Place new restrictions on developing land
- Create new nature reserves or legal nature designations
- Prevent nature conservation work in areas not prioritised by the LNRS

1.8 How the LNRS can support the people of Greater Lincolnshire

The strategy is a plan for everyone across Greater Lincolnshire, from local communities to landowners, local authorities, businesses, government and non-governmental agencies and wildlife charities to help restore nature through planning and practical action on the ground.

Local authorities, planners and developers

Planners and developers have a legal requirement to 'take account' of the LNRS, to ensure nature recovery is properly reflected in the planning system.

The LNRS can:

- Help ensure planning decisions are informed by nature recovery priorities and follow best practice for enhancing biodiversity
- Help in preparing local plans, design guides, waste and mineral plans and green infrastructure strategies ensuring development improves, uplifts and safeguards Greater Lincolnshire's natural assets
- Support decision making for biodiversity net gain (BNG)
- Provide potential actions for embedding nature into urban areas
- Provide potential actions to help deliver the most suitable nature-based solutions in the appropriate places

For local businesses and tourism, the LNRS can:

- Unlock opportunities and provide supporting evidence for businesses and tourism to meet environmental, biodiversity and social goals while driving economic growth
- Be used to promote and encourage a balanced approach to private and public investment into nature recovery

For land managers and farmers, the LNRS can:

- Signpost ways to help create, enhance and restore nature, by providing a strategic spatial guide for habitats and species recovery and supporting environmental funding under Environmental Land Management Schemes (ELMS) such as Countryside Stewardship, Sustainable Farming Incentive (SFI), Farming in Protected Landscapes (FiPL) grants and landscape recovery schemes, enabling large scale positive changes for nature
- Identify the highest priority opportunity areas for habitat creation and connectivity of existing habitats, helping to direct BNG investment
- Provide guidance on actions to achieve nature recovery to expand and link existing habitats
- Support sustainable agriculture, flood risk management and carbon capture

For local communities and individuals, the LNRS will:

- Inform how all the local authorities in Greater Lincolnshire meet their legal duty to conserve and enhance biodiversity
- Seek to enhance the positive effects of nature on community wellbeing that contribute to improved physical and mental health, including benefits such as clean air, water and food
- Help to identify key areas within local communities to prioritise nature recovery and to create and enhance local habitats
- Support funding applications for nature recovery projects
- Encourage local community groups to engage in nature recovery and focus their activities



1.9 How can we help nature, and how can nature help us

Nature recovery is not just the responsibility of large organisations or landowners – everyone can make a difference. Whether you have a garden, a balcony, or a single plant pot, your actions matter. Planting native wildflowers, reducing harmful practices, creating space for wildlife, or supporting local conservation efforts are just a few ways individuals can contribute. Even small changes, when introduced across communities, have a powerful, positive impact on nature recovery.

In return, nature provides so many benefits. It cleans our air and water, supports our mental and physical health and wellbeing, and provides beauty, inspiration, and a sense of place. Access to green spaces has been shown to reduce stress, improve health, and foster stronger communities. By helping nature thrive, we help ourselves – and future generations – live healthier lives.

The LNRS highlights where nature recovery can have the greatest impact, but it is people who will bring it to life. Whether we are residents, farmers, business owners, or local volunteers, our role is vital. Together, we can restore nature across Greater Lincolnshire and beyond, and ensure it continues to support and inspire us all.



2 LNRS Development Process

2.1 LNRS development

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

Step 1: Map areas that are of particular importance for biodiversity

This is the foundation of the strategy and identifies some of the most important areas for nature and biodiversity in Greater Lincolnshire. This is based on the best available information on existing nature rich areas. It is the basis for identifying areas for nature recovery and the actions needed to deliver that.

Step 2: This step is only applicable to the review stage of the LNRS and involves mapping actions which have taken place during the period in which the strategy is in place.

Step 3: Describe the strategy area and its biodiversity and opportunities to recover nature

The Greater Lincolnshire LNRS covers Lincolnshire, North Lincolnshire and North-East Lincolnshire and describes the variety of habitats, up to and including the coast, that lie within it. The description of the strategy area emphasises the need to expand existing sites, improve their connectivity and increase species populations.



Step 4: Agree local nature recovery strategy priorities and identify potential actions (statement of biodiversity priorities)

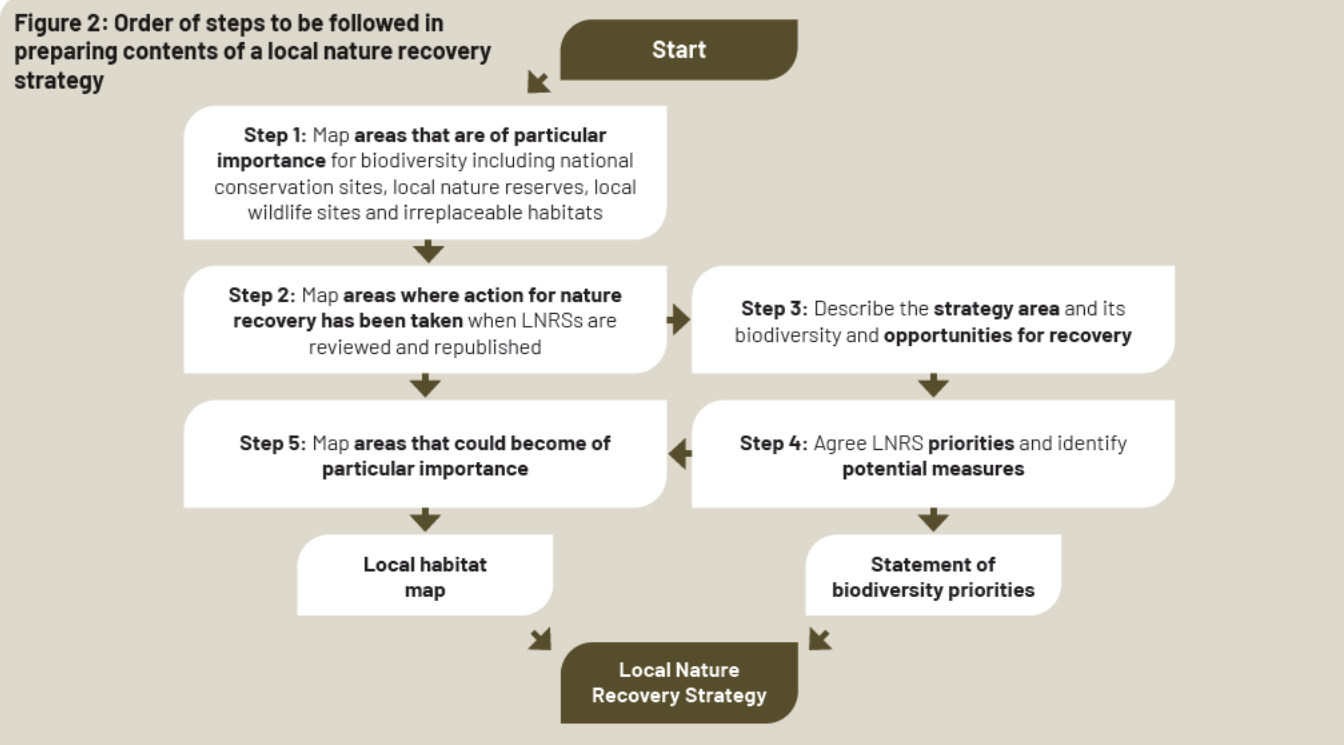
Following the results from the public survey and from discussions with experts, a list of priorities and actions to support nature recovery over the duration of the Local Nature Recovery Strategy has been agreed

Step 5: Map areas that could become of particular importance (Local Habitat Map). Mapping of priority areas for nature recovery

This map shows areas of opportunity for habitat creation, biodiversity enhancement, and areas that will best expand and improve the existing habitats of Greater Lincolnshire, including broad-leaved woodland, calcareous grassland, wet grassland, rivers and wetlands, coastal dunes and saltmarsh, and urban greenspace.



Figure 2: Order of steps to be followed in preparing contents of a local nature recovery strategy



2.2 The National Character Area Approach

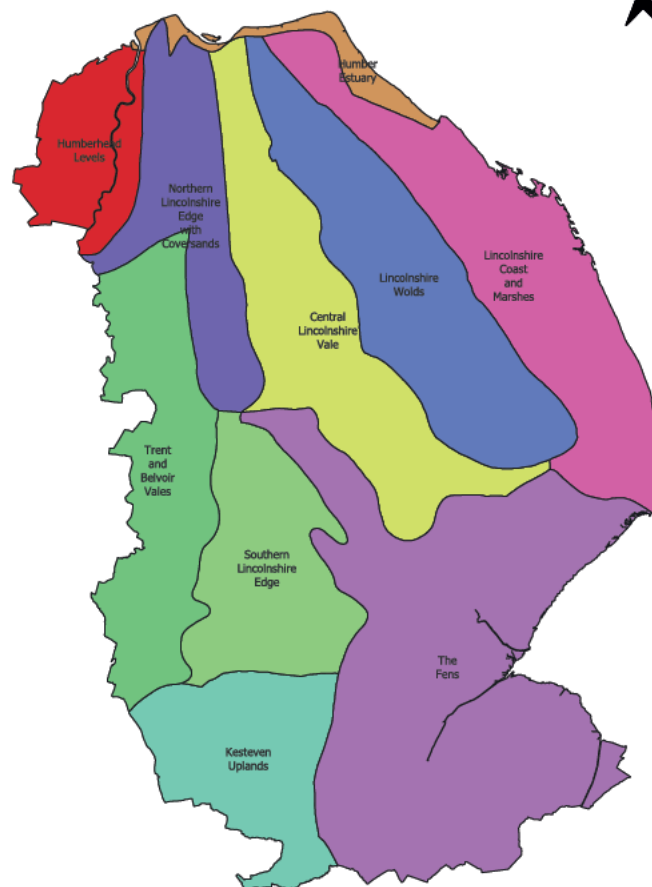
National Character Areas (NCAs) divide England into 159 distinct areas. The profiles for each area have been drawn up by Natural England in conjunction with stakeholders. Each NCA represents an area of distinct and recognisable character at the national scale. Their boundaries follow natural lines in the landscape, based on topography, rock and soils, hydrology and settlement pattern, not local authority boundaries.

NCAs provide a good framework for decision making and planning for future change. Many local authorities base their local landscape characterisation on NCAs and this framework is now being used to develop LNRSs throughout England.

The NCA approach enables effective prioritisation across different landscapes. Greater Lincolnshire covers a very large and diverse area from the Humber to The Wash encompassing ten NCAs, of which nine cross borders with adjacent LNRSs. There has been liaison with those developing neighbouring LNRSs to ensure a consistent approach. Priorities and Actions appropriate to each NCA have been drawn up.



Map of National Character Areas ▼



NCAs do not cover inter-tidal areas. In Greater Lincolnshire, the Humber Estuary and The Wash are of particular importance for nature and local communities and have been incorporated into the LNRS.

Greater Lincolnshire's LNRS focuses on ten NCAs and the internationally important The Wash. It should be noted that while a small section of Rockingham Forest NCA can be found within Greater Lincolnshire, it has a limited impact on the area's overall character and has therefore not been included for the purposes of this strategy.

The NCAs are:

- NCA39 Humberhead Levels
- NCA41 Humber Estuary
- NCA42 Lincolnshire Coast and Marshes
- NCA43 Lincolnshire Wolds
- NCA44 Central Lincolnshire Vale
- NCA45 Northern Lincolnshire Edge with Coversands
- NCA46 The Fens
- NCA47 Southern Lincolnshire Edge
- NCA48 Trent and Belvoir Vales
- NCA75 Kesteven Uplands

More information on the NCAs listed above can be found in section 4, with full profiles available at <https://nationalcharacterareas.co.uk>.

2.3 Greater Lincolnshire LNRS development process

Engagement strategy

The Local Nature Recovery Strategy for Greater Lincolnshire was developed through collaboration with a wide range of stakeholders, including local organisations and representatives of the local communities.

A key part of the LNRS development process was a series of engagement surveys, targeting every resident of Greater Lincolnshire and a further survey focussed on farmers and land managers.

A series of stakeholder workshops and webinars was organised focussing on land managers, farmers, developers, businesses, local planning authorities and environmental organisations to gather insights and ensure that the strategy is balanced and representative of all interests.

These sessions, combined with environmental expertise, were invaluable in shaping the strategy's priorities and proposed actions. This evidence-based approach ensures that the strategy addresses the most pressing issues and identifies the most appropriate opportunities for nature recovery across Greater Lincolnshire. Professional advice also played an important role, providing expert knowledge, ensuring the strategy is scientifically robust and reflective of the specific needs of the different habitats and species within the area.

This engagement and communication has ensured transparency and collaboration, and will continue to support the next stages of consultation, delivery, and implementation of the LNRS.

Local Habitat Map Development

See Appendix 1 for the method of developing the LNRS local habitat map.



3 State of Nature and the Environment across Greater Lincolnshire

3.1 Introduction to Greater Lincolnshire's Key LNRS facts

Greater Lincolnshire has:

- 30,000 ha of land designated as Sites of Special Scientific Interest (SSSI)
- Nearly 20,000 ha of County Wildlife Sites
- Approximately 4% woodland cover
- 18% of Great Britain's saltmarsh, 5.25% of lowland bog
- Surprisingly, only 0.8% lowland fen
- Been recognised as having the second least amount of public access to nature across England
- An estimated value of at least £24 billion in terms of its natural capital

3.2 Overview of Greater Lincolnshire's current natural assets

Nature has been declining across Greater Lincolnshire and the UK for decades.

Examples of declining nature across Greater Lincolnshire:

- Out of 124 SSSIs, only 58 are in a favourable condition
- Out of 1305 Local Wildlife Sites, only 50% are under positive management
- Only 61% of woodland is in positive management

According to the Lincolnshire Biodiversity Action Plan (3rd edition) there has been significant habitat loss or degradation in the following habitats:

- Heath
- Chalk streams
- Fens
- Reedbeds
- Ponds
- Woodland

The impacts of habitat decline could have an impact on climate change, which is currently predicted to result in higher temperatures, increased fluctuations in rainfall, and projected sea level rise.

3.3 What does nature provide for us?

Nature provides many benefits including:

- Clean air
- Clean water
- Supporting agriculture
- Creating beauty
- Supporting leisure
- Supporting health and wellbeing
- Reducing climate change
- Reducing flooding and drought
- Creating a sense of place
- Protecting our soils

3.4 Pressures affecting nature across Greater Lincolnshire

Greater Lincolnshire's natural environment faces many pressures, and many of them link together and result in a greater impact on nature. Many pressures affecting nature in Greater Lincolnshire are on a larger scale than can be addressed solely by the Greater Lincolnshire LNRS, with coordination between all LNRSs being the key to addressing these pressures nationally.

Some of the pressures affecting Greater Lincolnshire include:

- Habitat loss and fragmentation
- Climate change
- Pollution
- Water quality
- Disturbance
- Unsustainable agricultural practices
- Unsustainable Forestry – i.e. the inappropriate clearance of woodland habitats and inappropriate planting on open habitats
- Development



3.5 What are the expected future trends in nature conservation?

Based on current trends and data, within the next 50 years we can expect to see the following impacts on nature across Greater Lincolnshire:

Impacts on biodiversity and habitats:

- Continued decline in habitat area, quality and connectivity
- Reduced abundance and ranges of rare species
- Increased spread of invasive species and subsequent loss of native species
- Disruption of species relationships
- Changes to woodland habitat composition

Impacts of changing climate and weather patterns

- More extreme and unpredictable weather patterns
- Greater sea level rise resulting in impacts on freshwater and terrestrial habitats as well as excessive saline levels within intertidal habitats
- More frequent and severe droughts and floods
- Increased greenhouse gas emissions from degraded peat soils
- Increased number of heatwaves and wildfires
- Significant stress on species and habitats experiencing climate change

Impact on agriculture

- Decline in soil quality
- Altered soil composition and microbial communities
- Reduced availability of water for irrigation

Impact on freshwater

- Decline in water quality and reduced availability of drinking water
- River water flow will be altered, with very low river flow in summer and rising water temperatures affecting aquatic species that need cool water

Impact of development

- Continued commercial and residential development will increase pollution, disturbance and habitat loss and fragmentation without appropriate consideration of the environment.

3.6 How the LNRS can help manage future pressures and trends

With nature recovery shaped by of the LNRS, we can expect to see the following impacts within the next 10 years:

- More and improved habitat for wildlife
- Improved habitat connectivity through habitat creation and wildlife corridors
- Increased abundance and distribution of rare species
- Enhanced natural resilience to extreme weather events and changing weather patterns
- Reduced impacts of sea level rise, drought and flooding
- Improved soil quality for agriculture
- Protection of water quality and drinking water availability
- Reduced greenhouse gas emissions from degraded peat soils
- Greater support for native species and species interaction
- Stabilised river flows, reducing flooding
- Overall increase in biodiversity through successful implementation of the LNRS and Environmental Improvement Plan



4 Description of Area

4.1 Introduction

Greater Lincolnshire lies on the east coast of England, between The Wash in the south and the Humber Estuary in the north. It is a large, primarily agricultural, county and is one of the most agriculturally productive areas of the UK.

A population of just under 1.1m is distributed across Greater Lincolnshire, which includes the administrative areas covered by Lincolnshire County Council (LCC), and two unitary authorities, North Lincolnshire Council (NLC) and North East Lincolnshire Council (NELC). Within the area covered by LCC are seven district authorities. The first mayor of the Greater Lincolnshire Combined County Authority (GLCCA) was elected in May 2025.

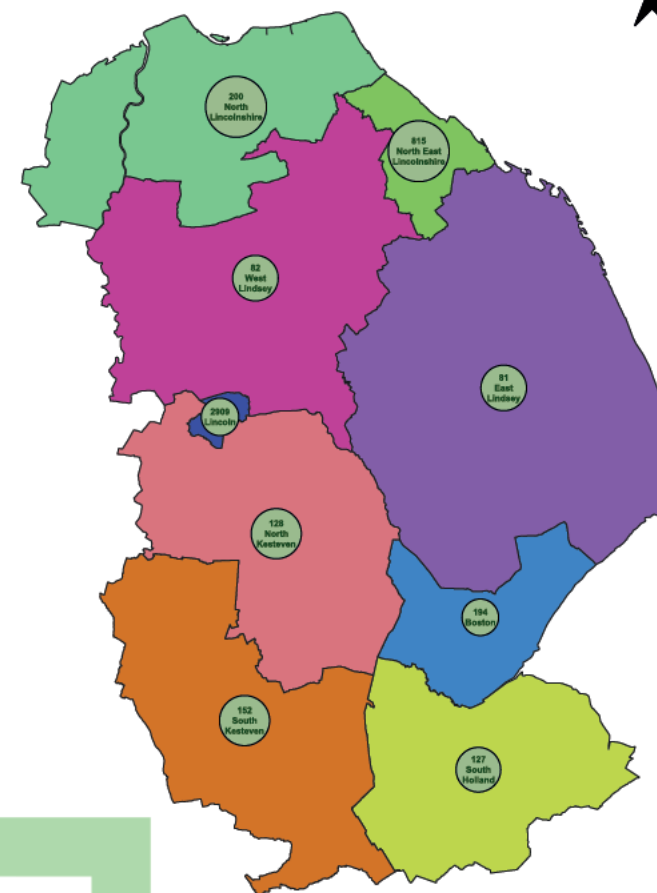


There are seven Local Nature Recovery Strategies adjacent to Greater Lincolnshire: Hull and East Yorkshire; South Yorkshire; Nottinghamshire and Nottingham; Cambridgeshire and Peterborough; Norfolk; Leicestershire, Leicester and Rutland; and North Northamptonshire.

Nature recovery within these areas is supported by the LNRSs produced by their respective responsible authorities. As nature does not respect administrative boundaries, there has been collaboration with the neighbouring LNRSs to appropriately support nature and habitat connectivity across the wider region.



4.2 Population composition (thousands of residents)



4.3 Greater Lincolnshire's Key Sectors

Greater Lincolnshire is home to a variety of key sectors, which both contribute to the local economy and play important roles nationally. These include the agri-food industry, defence and security, ports and logistics, manufacturing, energy, health and care, tourism, heritage and water.

Agri-food industry

- Greater Lincolnshire plays an important role in feeding the country, which includes growing 30% of the nation's vegetables. This nationally important role is dependent on the natural environment and is at risk from the effects of climate change, loss of pollinators and reduced soil health.

Defence and Security

- Greater Lincolnshire has a major role in UK defence. The four operational airfields provide opportunities to create spaces for nature alongside military use

Ports and logistics

- The Humber Estuary has a unique geomorphology - its deep-water channel close to the shore supports a thriving shipping industry. The estuary is also home to important habitats and wildlife which need to be protected.

Manufacturing

- 16% of jobs in Greater Lincolnshire are in the manufacturing sector. Certain sites such as Scunthorpe Steelworks include areas valuable for biodiversity, highlighting the potential to build nature into the sector through design.

Energy

- The low carbon and energy sector is worth £1.2 billion per year to Greater Lincolnshire. It is important that this sector works to protect and enhance the natural environment.

Health and care

- Nature is estimated to add £887 million value to physical health and wellbeing in Greater Lincolnshire according to natural capital accounts prepared by the Greater Lincolnshire Nature Partnership. Nature recovery holds the potential to increase this figure and help address the health inequities of the area.

Tourism

- The Greater Lincolnshire coast is a traditional tourist destination, with many visitors coming to visit the unique natural beauty of the Wolds and the coastline. Protecting and enhancing the natural environment will help ensure that this landscape remains for the visitors of the future.

Heritage of Greater Lincolnshire

- There is evidence of human habitation in Greater Lincolnshire for 250,000 years leading to the development of a rich cultural heritage. Due to their protected status many heritage sites hold value for nature, making them a key resource for our natural environment.

Water sector

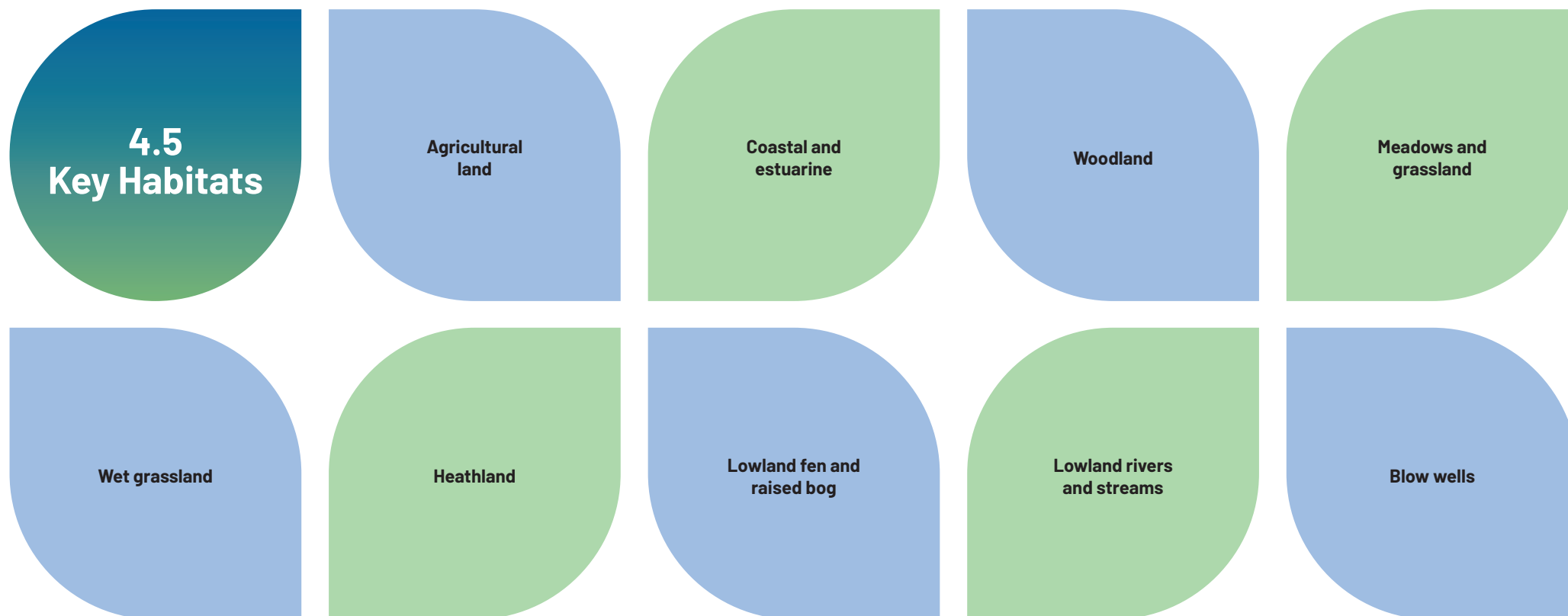
- Much of Greater Lincolnshire is an artificially drained landscape, a process started by the Romans. These drains can be highly valuable for wildlife, as well as protecting the land from flooding. Greater Lincolnshire is also home to nationally significant chalk streams and blow wells. Existing and proposed reservoirs not only improve water availability they are also a good opportunity to secure nature recovery through design and management of the landscape in which they sit.

4.4 Greater Lincolnshire's key natural habitats at a glance

Greater Lincolnshire is home to a wide range of habitats including fenland, wetland, grassland and coastal habitats. This includes key terrestrial and intertidal habitats, much of which is found in the Humber Estuary, The Wash, the Wolds National Landscape (legally Area of Outstanding Natural Beauty), the coast, the Humberhead Levels and the Isle of Axholme. Greater Lincolnshire also supports a wide range of marine habitats including ross worm (*Sabellaria spinosa*) reefs and saline lagoons.

Greater Lincolnshire contains six National Nature Reserves: Bardney Limewoods, Gibraltar Point, Lincolnshire Coronation Coast, The Wash, Humberhead Peatlands and Far Ings. It also has more than 120 Sites of Special Scientific Interest and more than 1300 Local Wildlife Sites and Local Geological Sites. Greater Lincolnshire has a range of agricultural habitats such as arable field margins and permanent pasture that support key species groups such as farmland birds. However, this highly productive land could be enhanced to support greater biodiversity.





Greater Lincolnshire has a broad variety of habitats, summarised below. However, due to intensive land use, many of the sites that support these habitats are small and isolated.

Agricultural land – Areas of arable and horticultural farmland that are actively producing products and which can have valuable features for biodiversity when managed sustainably. Includes arable field margins.

Coastal and estuarine – Habitats along coastlines and estuaries. Includes supralittoral sediments, sublittoral rock, littoral sediments and sublittoral sediments.

Woodland – Habitats dominated by trees, woody vegetation and woodland species assemblages; Includes broadleaved and mixed woodlands, coniferous woodlands, traditional orchards and ancient, veteran and mature trees.

Meadows and grassland – Habitats dominated by grass, and grass species assemblages. Includes acid grasslands, neutral grasslands and calcareous grasslands.

Wet grassland – Semi-aquatic ecosystems containing a broad range of habitats where the ground is either seasonally or permanently flooded, and dominated by wetland species assemblages; includes fen marshes and swamps, ponds, wetland mosaics, drains, ditches and dykes.

Heathland – Habitats dominated by heather, often found in mosaic with acid grasslands. Includes heathlands and connected acid grasslands.

Lowland Fen and raised bog – Areas dominated by peat or boggy soils; includes lowland fen, lowland raised bog; excludes farmlands on peat soils.

Lowland rivers and streams – Including chalk streams and limestone becks and drains. Aquatic, riparian and estuarine ecosystems with flowing, open water. Dominated by aquatic species assemblages. Includes priority habitat rivers and streams, chalk streams, limestone becks and other rivers and streams.

Blow wells – Blow wells are artesian springs, where water under pressure escapes from a chalk aquifer. A very rare habitat found only in Greater Lincolnshire

Functionally Linked Land - In Greater Lincolnshire Functionally Linked Land (FLL) refers to areas that support sites designated for their water bird populations, such as Special Protection Areas (SPA) and Ramsar sites, including the Humber and The Wash. They do so by providing opportunities for those birds to fulfil important aspects of their ecological behaviours, such as feeding, roosting and breeding, especially when intertidal areas are covered by the sea. They also act as stepping stones between other important habitats. Without these areas of FLL, internationally important water bird populations would be at risk of decline.

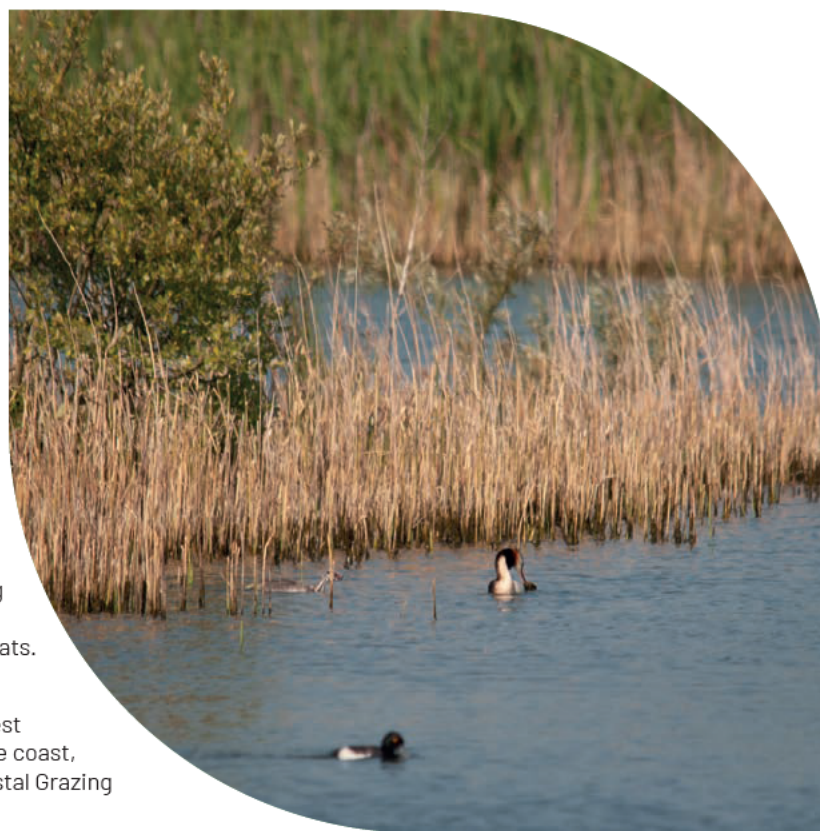


By its definition FLL is doing the job that is required of it and as such no actions directly relating to FLL were included within the LNRS, however it is important to make sure that these places continue to support bird populations. There are numerous measures identified within the LNRS that support the enhancement of FLL including those related to Farmland, Freshwater Wetlands, Peat Habitats and Grasslands.

It is not possible to map all the existing areas FLL due to lack of available data needed identify the sites currently used by significant numbers of waterbirds. Where functionally linked land has been identified (see map, shown as green) actions have been limited to those that will not impact the ability of these areas to continue to support designated sites, where possible. This is especially important close to the Humber and The Wash estuaries.

While not designated itself, FLL must be considered by competent authorities in Habitats Regulations Assessments to ensure that conservation objectives can be met. When considering the implementation of actions identified in the LNRS, especially those either unmapped or when considering mapped actions where they are not mapped, impacts on functionally linked land must be considered. Any land use change which alters the elevation of the land is likely to have a detrimental effect on the function of FLL and should be avoided. This includes, but is not limited to, actions to create new woodlands, scrub and hedgerows. When considering any land use change in areas containing FLL expert advice should be sought and necessary consultation undertaken to protect these vital habitats.

The map of FLL is illustrative and is based on a 2km coastal buffer highlighting where there is the greatest potential for FLL, as well as areas within 20km of the coast, where a significant presence of Floodplain and Coastal Grazing Marsh has been recorded.



4.5.1 Engagement survey priority habitats

A public survey shared across Greater Lincolnshire identified three habitats that are considered to be the most important:

The public's top habitats

1. Woodland
2. Coastal
3. Farmland

A land managers and farmers survey identified and prioritised the following habitats as the most important:

1. Grassland
2. Farmland
3. Coastal

4.6 Key Species

The table below shows key species found in the NCAs of Greater Lincolnshire.

- Adder
- Bittern
- Beach nesting birds e.g. little tern
- Farmland birds e.g. barn owl
- Grey seal and Common seal
- Hedgehog
- Migratory wading birds e.g. knot and dunlin.
- Natterjack toad
- Otter
- Small-leaved lime
- Water vole

4.6.1 Engagement survey top species groups

The public and land managers and farmers surveys asked participants to share their most important species groups.

The public survey identified and prioritised their most important groups of species as

1. Birds
2. Wildflowers
3. Mammals

The land managers and farmers survey identified and prioritised their most important groups of species as

1. Wildflowers
2. Trees and shrubs
3. Invertebrates
4. Farmland birds



4.7 Key wider environmental benefits and co-benefits

In the context of the LNRS wider environmental benefits and co-benefits refers to:

- **Wider environmental benefits** – positive impacts delivered by a healthy natural environment, beyond the benefits for nature, such as improved flood management or improved water quality
- **Co-benefits** – benefits that nature delivers for people and society, such as improved physical and mental health.

Natural capital accounts prepared by the Greater Lincolnshire Nature Partnership found that in Greater Lincolnshire, the benefits provided by the natural environment are worth an estimated minimum of £776 million a year, resulting in an estimated total value of at least £24.1 billion.

Across Greater Lincolnshire agriculture benefits the most from services provided by nature, with an estimated added value of £554 million pounds every year and with an estimated total added value of £16.5 billion. After agriculture, recreation is the second biggest beneficiary with an added value of approximately £135 million annually with a total added value of £4 billion. Physical health is the third biggest beneficiary of services provided by the area's natural environment, with an estimated added value of £30 million annually and a total added value of £887 million.

The three most important ecosystem services identified by the public were:

- Physical and mental health and wellbeing
- Clean air
- Flood protection

Land managers and farmers identified the most important as:

- Pollination
- Soil condition

Through the priorities and actions of the LNRS, nature recovery will enhance the benefits provided by nature.

The LNRS focusses on the following services, which contribute to meeting the key pressures facing Greater Lincolnshire, that may be improved by the strategy's actions:



4.8 Key pressures affecting nature across Greater Lincolnshire

Nature and wildlife across Greater Lincolnshire face a broad range of pressures preventing nature from recovering further. Below, some of the key threats that were identified by the engagement report are described.

Habitat loss and fragmentation. Over time there has been major habitat loss and degradation across the UK. In Greater Lincolnshire, large areas of woodland, wetlands and grassland have been lost or degraded as a result of human activity. This poses a severe threat to the nature and wildlife across the region as well as adding to the global problem of climate change.

Flooding – flooding is a key threat to the economy and nature of Greater Lincolnshire. As sea levels rise and the rainfall becomes heavy, flooding is predicted to become more frequent and severe and may pose a greater threat to habitats across Greater Lincolnshire.

Water quality and availability – Watercourses across Greater Lincolnshire have been polluted and heavily modified by human activity, industrialisation and development. This has resulted in a decline in water quality and led to various negative effects to these important ecosystems, such as local extinctions and declining populations of wildlife. A reduction in chemicals and waste entering Greater Lincolnshire's watercourses, through

reduced use and mitigation can help to reduce this pressure.

Equally, the drained nature of Lincolnshire's landscape along with low levels of rainfall can occasionally lead to drought conditions with impacts on the availability of water.

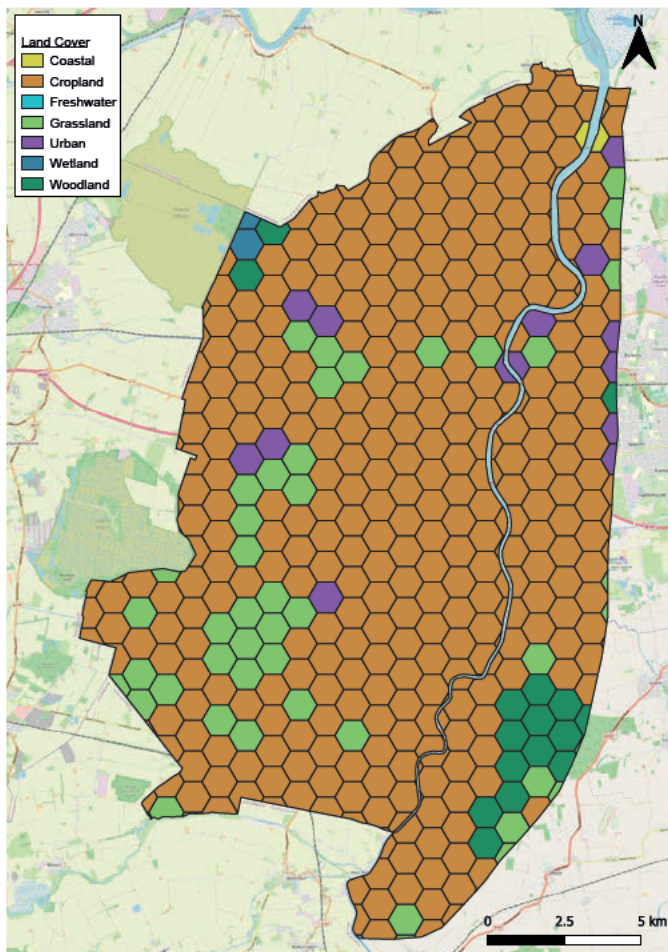
Agriculture – Large scale industrial agriculture has resulted in habitat loss and fragmentation, as well as contributing to declines across species of key pollinators, on which the sector relies, due to pesticide use. Agricultural inputs also contribute to environmental issues across Greater Lincolnshire, such as decreasing water quality, biodiversity decline and habitat loss. Agriculture has an important role in addressing these impacts which in turn will increase the overall sustainability of the sector alongside supporting nature recovery. It is recognised that farmers and other land managers are keen to play, and have played, their part in improving the environment in which their holdings are located.

Development – Development is a key pressure on nature across Greater Lincolnshire. Commercial and residential development can result in significant habitat loss, habitat degradation, habitat fragmentation and pollution of the natural environment: e.g. from road traffic and light pollution.

Climate Change – Climate change is a key threat to nature across Greater Lincolnshire and is projected to become worse in the future. It has resulted in habitat loss, a decline in native species populations and distribution, and increases the frequency and intensity of droughts and flooding.

Ecosystem imbalance – Ecosystems rely on a delicate balance. For example, the impact of deer on woodlands (and other habitats) is a significant pressure in Greater Lincolnshire. Expansion of the deer population is resulting in over grazing of woodland flora which both prevents successful establishment of new woodlands, and removes the understorey from existing woodlands impacting a whole range of other species. Whilst deer are a natural part of woodland ecosystems we need to sensitively reduce their numbers in order to create thriving woodland communities.

Air Quality – The air across Greater Lincolnshire has also been polluted by human activity, industrialisation and development and its associated impacts, such as increased use of petrol and diesel vehicles. Not only does this have impacts for nature, it also has impacts on human health. A reduction of pollutants in Greater Lincolnshire's air can help to reduce this pressure.

4.9 NCA- Humberhead Levels**Description**

The Humberhead Levels is a highly agricultural, flat and low-lying landscape at the northwestern edge of Greater Lincolnshire. The area is crossed by the Rivers Trent, Idle and Torne, the Stainforth and Keadby Canal and a network of drains. Arable fields are divided by ditches used for drainage and tend to be without hedgerows.

The NCA includes the Isle of Axholme, which lies on a low mudstone ridge above the lower ground. It is noted for extensive evidence of medieval open strip fields of international significance. Crowle Moor, Epworth Turbary and Haxey Turbary are remnants of the vast and complex moor, bog and fen that historically surrounded the once waterlogged head of the Humber. These habitats have been vastly reduced over the previous centuries due to agricultural intensification and urbanisation.

**Habitats and Species****Key habitats include:**

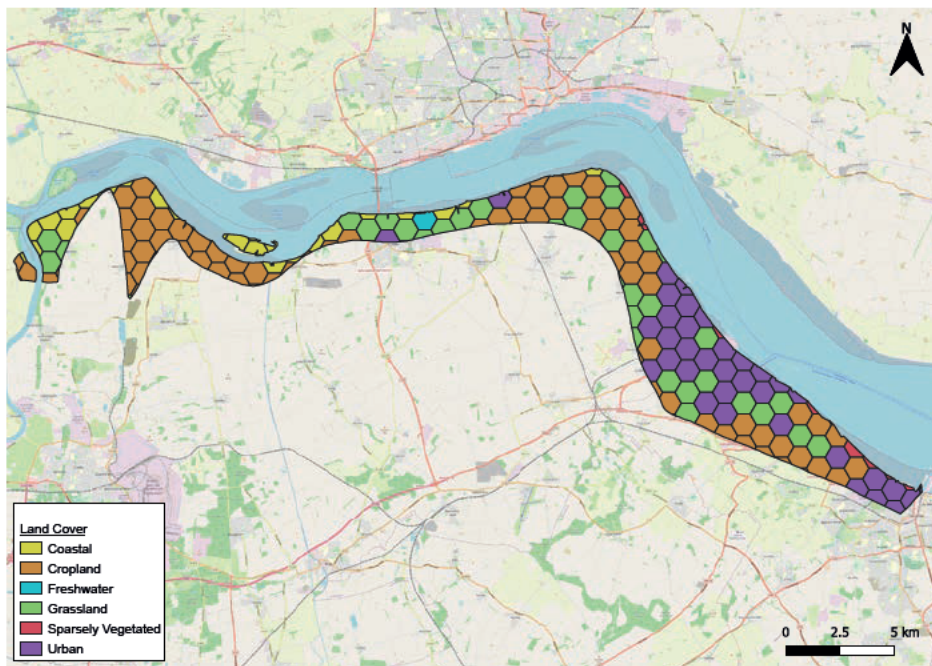
- Lowland raised bog
- Purple moor grass
- Drains

Key species include:

- Nightjar
- Adder
- Large Heath Butterfly



4.10 NCA- Humber Estuary



Description

Flowing east, the Humber is one of Britain's largest estuaries, fed by several major rivers (Trent, Don, Aire, Ouse and Hull). The Humber estuary is a dynamic environment, shaped by natural coastal processes such as tides and sediment movement, as well as by human activity. It is located at the north of Greater Lincolnshire. The Humber NCA, including the tidal estuary, is responsible for draining one fifth of the area of England into the North Sea. Extensive stretches of intertidal and coastal habitats have formed along the estuary including intertidal mudflats, saltmarshes and tidal reedbeds. These provide essential habitats for large numbers of overwintering, migratory and breeding birds and migratory lamprey populations and contribute to the international importance of the Humber Estuary as part of the 'East Atlantic Flyway'. The Humber Estuary is designated as Ramsar, Special Protection Area (SPA), Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI). The NCA is also known for its unique blow wells, which can be habitat for the elusive crystal moss animal.

Much of the landscape is flat and low-lying, with some small areas of rising land on both sides of the estuary, where the chalk ridge, forming the Lincolnshire Wolds to the South and Yorkshire Wolds to the North, cuts across it.

More intensive agricultural practices and industrial expansion have resulted in declines in grassland habitats in the NCA.

To the north of the NCA, Immingham provides important trade links to Europe, and the coast supports important infrastructure with offshore wind energy and the wider energy network.

Habitats and Species

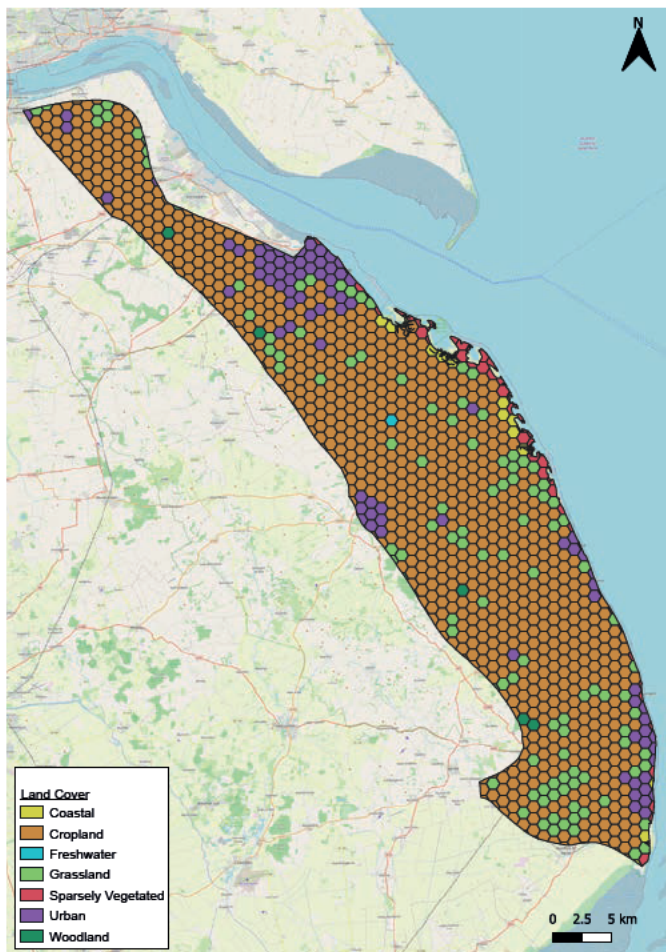
Key habitats include:

- Reedbeds
- Wet grassland
- Mudflats

Key species include:

- Bittern
- Black-tailed godwit
- Curlew



4.11 NCA- Lincolnshire Coast and Marshes**Description**

The Lincolnshire Coast and Marshes is the most easterly NCA in Greater Lincolnshire. It borders the North Sea and the Lincolnshire Wolds and extends from Barton upon Humber in the north to the mouth of the Humber Estuary in the northeast and to Skegness in the south. The NCA contains a chalk aquifer that provides an important water source for the region. The NCA can be divided into three distinct areas:

The middlemarsh, which runs parallel to the Lincolnshire Wolds NCA, and contains a comparatively substantial area of woodland for the NCA, including ancient woodlands and hedgerows.

The outmarsh, which was historically an area of grassland, however, following the implementation of effective drainage and sea banks, has become an increasingly arable area.

The coast, which is a highly dynamic landscape subject to erosion and accretion. Large areas of the coast are undeveloped and managed as nature reserves, including the internationally significant Lincolnshire Coronation Coast and Gibraltar Point National Nature Reserves. This area of the NCA includes significant areas of intertidal mudflats, sandflats, saltmarshes and sand dunes.

The NCA contains several important rivers, including the Great Eau, Freshney and the Steeping. The NCA is known for its blow wells which can provide habitats for the elusive crystal moss animal. It is also home to a significant grey seal breeding colony at Donna Nook.

To the north of the NCA, Grimsby provides important trade links to Europe, and the coast supports important infrastructure with offshore wind energy and the wider energy network.

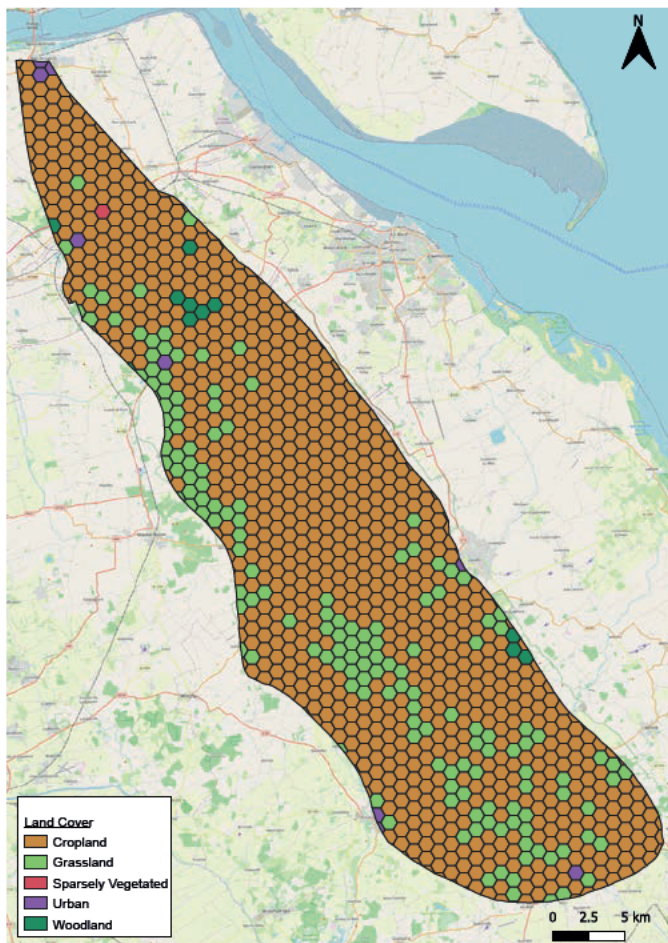
Habitats and Species**Key habitats include:**

- Grazing marsh
- Coastal dunes
- Saltmarsh

Key species include:

- Natterjack toads
- Beach nesting birds
- Grey seals
- Little tern



4.12 NCA- Lincolnshire Wolds**Description**

The Lincolnshire Wolds NCA is a long, narrow band of rolling chalk hills, running from eastern to northern Greater Lincolnshire. The Wolds have a series of ironstone, limestone, sandstone, clay and glacial deposits that create a variety of landforms and soil types in the area. There is a distinct scarp edge to the north and west, rising to approximately 150 metres along the western edge, providing panoramic views across the landscape.

The Wolds are predominantly agricultural land with shallow, lime-rich soils across the chalk plateau and loamy soils within valley bottoms. Some pasture fields are present, which are mainly bordered by hawthorn hedgerows. The agricultural landscape provides essential habitats for biodiversity, including many farmland bird species. Historic calcareous and neutral grasslands are now isolated and limited to the steepest uncultivated slopes.

The Wolds are situated on one of the main chalk aquifers in the East Midlands, resulting in many chalk streams, springs and flushes. Chalk streams are nationally and internationally important habitats that support many species such as submerged plants, invertebrates, and fish. There are also 18 rivers within the NCA, such as the Great Eau, Waring, Bain and Lymn, which rise in the Wolds.

Though trees, woods and parkland remain an important part of the landscape, woodland cover is sparse, particularly in the north, with occasional shelter belts, hedgerow trees and scattered beech clumps present. Some examples of a priority habitat such as, wet woodland remain in some of the valleys in the southwest. Ancient oak and ash woodlands in the south-east clay-lands provide a refuge for ground flora. Valuable semi-natural acid mires are found in the valley marshes of the Rivers Lymn and Bain, with tree-lined water courses bordering these valleys.

62% of the Lincolnshire Wolds NCA is protected as the Lincolnshire Wolds National Landscape, which is the only National Landscape in the East Midlands and has clear aspirations of its own for the recovery of nature.

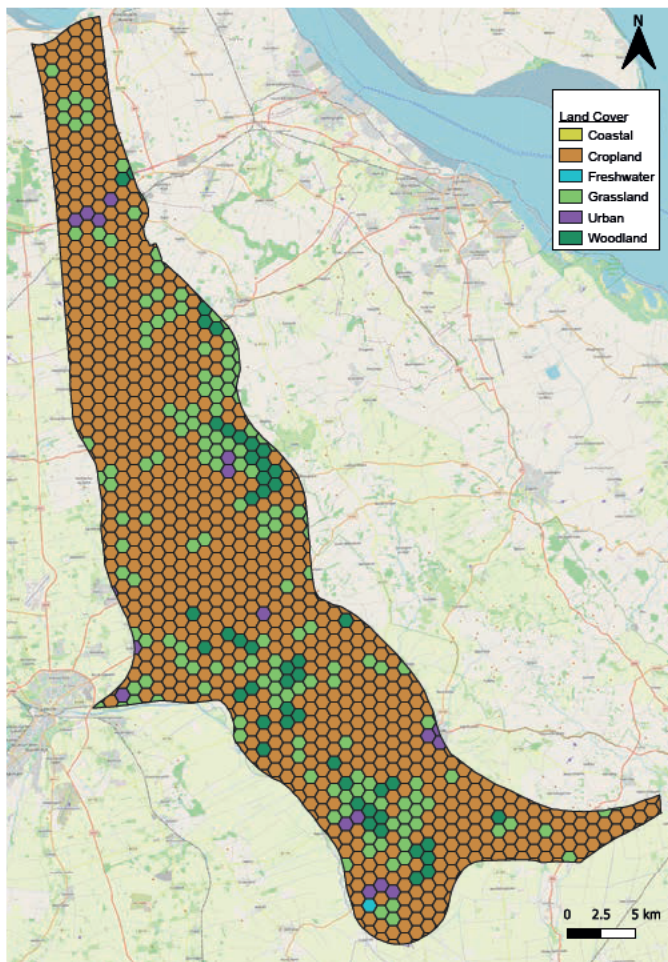
Habitats and Species**Key habitats include:**

- Lowland calcareous grassland
- Chalk streams
- Lowland meadow

Key species include:

- Farmland birds e.g.: Yellowhammer, corn bunting
- Freshwater fish e.g.: Brook lamprey
- Scarce arable plants e.g.: Shepherd's-needle



4.13 NCA – Central Lincolnshire Vale**Description**

The Central Lincolnshire Vale is a sparsely populated, rural, low-lying area spanning from central to northern Greater Lincolnshire. A gradual rise in the landscape across the centre of the NCA results in the northern half draining into the River Ancholme and out to the Humber, while the southern end drains into the River Witham and into The Wash. Localised contrasting landscapes, where soil is sandy, acidic and infertile, stem from pockets of wind-blown sand deposits and river-derived sands and gravel (the Fen Edge Gravels) giving rise to heathland habitats along with extensive coniferous plantations.

The Central Lincolnshire Vale has nationally important areas for biodiversity, although their overall extent is limited. Bardney Limewoods National Nature Reserve is a suite of nationally important woodland and provides the greatest concentration of ancient woodland in the area. The woodland cover across the NCA is variable, with little on the central and northern soils, but there is a higher concentration of ancient woodland and conifer plantations to the west. The south and east of the Central Lincolnshire Vale further supports remnants of lowland heath and acid grassland on the fen edge gravels.

Historically, the undulating arable landscape, would have supported wet grassland and woodlands. The landscape has largely changed due to heavily modified drainage for agricultural intensification. This has enabled increased productivity of seasonally waterlogged, loamy clay soils, resulting from predominantly boulder clay-derived soils. Hawthorn-dominated hedgerows enclose most fields, though field boundary trees are a feature, while the Ancholme Valley tends to have rectilinear fields divided by ditches.

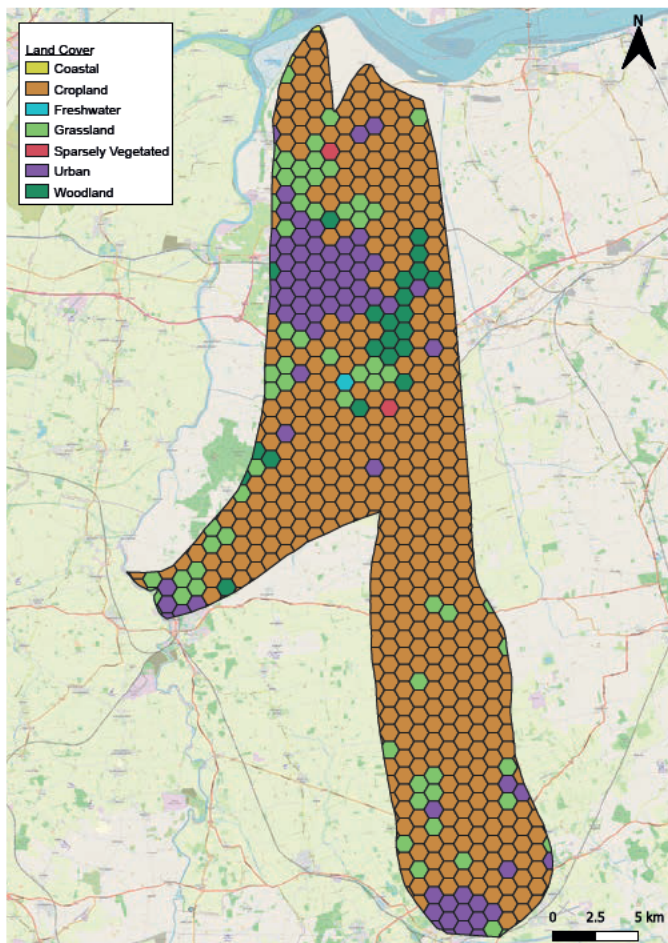
Habitats and Species**Key habitats include:**

- Woodland including ancient woodland
- Lowland heath
- Hedgerows

Key species include:

- Woodcock
- Tree pipits
- Hazel Dormouse



4.14 NCA - Northern Lincolnshire Edge with Coversands**Description**

The Northern Lincolnshire Edge with Coversands runs north from Lincoln to the Humber Estuary. The Coversands, near Scunthorpe, are post-glacial windblown sands which have given rise to mosaics of heathland, acid grassland and oak/birch woodland and support rare plant and animal communities. Many of the acid and calcareous grasslands, and woodland remaining within the Northern Lincolnshire Edge with Coversands are small and isolated from each other.

The NCA is characterised by large fields and tightly clipped hedges. To the north, there is a higher concentration of woodland, including ancient woodland, particularly on the sandy soils east of Scunthorpe and on the scarp slopes in the west, where mixed farming on the lower-lying land becomes more common. On the lower dip slope to the east, the land has been drained with farmland bounded by ditches.

The Edge forms a watershed between the major catchments of the Rivers Trent and Ancholme, both flowing to the Humber, and the Witham, which flows into The Wash.

The area to the south of the NCA contains limestone becks including Nettleham and Welton that are important tributaries of the Barlings Eau.

The NCA has large industrial areas, including the Scunthorpe Steelworks, resulting in significant areas of open mosaic habitat on previously developed land which can provide important refuges for biodiversity.

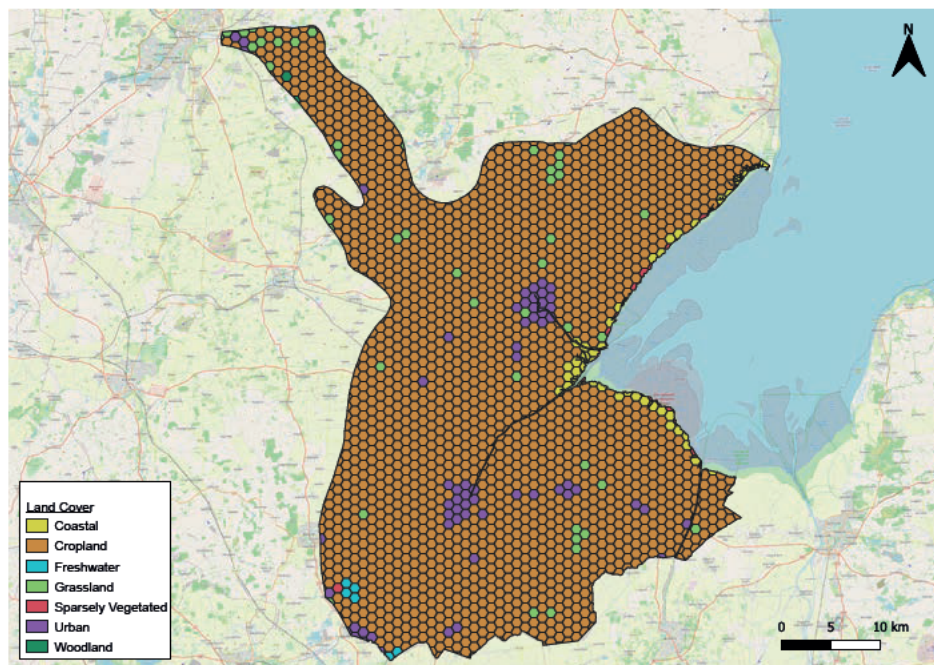
Habitats and Species**Key habitats include:**

- Open mosaics on previously developed land
- Heathland and acid grasslands
- Woodland

Key species include:

- Lapwing
- Purple milk vetch
- Grayling butterfly



4.15 NCA- The Fens**Description**

The Fens NCA is an area of wide, low-lying open landscapes stretching from the southern edge of Greater Lincolnshire, and the western shores of The Wash to central Greater Lincolnshire. Landward, it is a vast flatland surrounded on three sides by slightly raised, gently rolling hills and vales from which a few rivers flow across the plain to the sea.

Once the largest wetland area in England, it has been drained to become a nationally important farming landscape. The area is characterised by a network of heavily managed rivers, drains and ditches draining into The Wash. As a result of agriculture-related drainage, the range and extent of once abundant peatland habitats, such as fen and other wetland habitats, have greatly reduced.

Woodland cover is sparse, and trees and hedgerows are occasional, found mainly in the vicinity of farm buildings and older settlements. The area's drainage system is an important network of slow-moving waters and bank-side vegetation, often accompanied by roads, some railways, and their associated linear fringing, mainly grassland habitat. The waterways are important for connectivity with other NCAs in central England.

There are few significant urban areas, with widely dispersed villages along the roads and waterways, and isolated farms and dwellings across the rest of the area.

Habitats and Species**Key habitats include:**

- Lowland fen
- Saltmarsh
- Arable field margins
- Rivers, drains and their banks

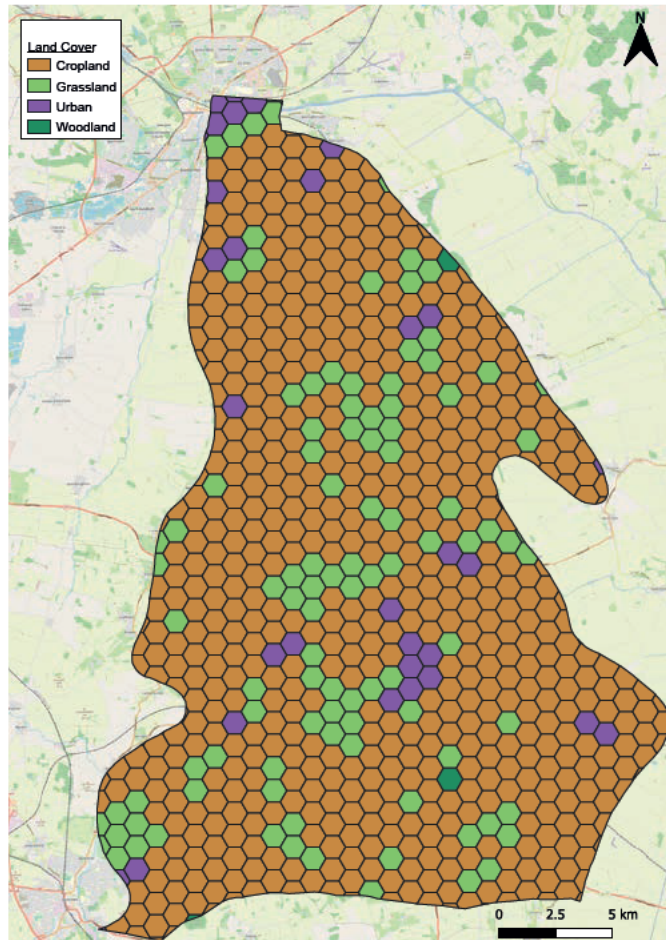
Key species include:

- Crane
- Migratory birds e.g. Whooper swan
- Rare and scarce aquatic marginal plants and fen plants e.g. Greater water parsnip



Picture courtesy of David Roberts.



4.16 NCA- Southern Lincolnshire Edge**Description**

The Southern Lincolnshire Edge NCA is in the south of Greater Lincolnshire. It has an area of higher limestone with a striking scarp slope up to 50m high ('The Cliff') defining the western boundary and a dip slope to the east. Well-drained soils lie over this higher ground ('The Heath'). Heavier clay soils are found to the east and south-west. The area is mostly used for arable agriculture on the higher ground with very large fields separated by hedgerows, though stone walls made from locally quarried limestone still mark some field boundaries. Woodland blocks are relatively small and scattered thinly across the area. Pasture is found more on the lower, clay soils and smaller fields are found in these areas.

The area is noted for its calcareous grassland, woodland and limestone becks. Species-rich grasslands are found in a few old fields, road verges and old quarries. The Rivers Sleas and Witham are the largest watercourses in the area.

Designated sites are few and cover less than 1% of the area. The limestone supports a regionally important aquifer and feeds some unique spring-fed watercourses with rare habitats including tufa formations.

Many of the settlements in this NCA have formed along the scarp slope. There is some fine parkland, e.g. at Belton House, and the airfields in the area support a significant number of breeding curlew.

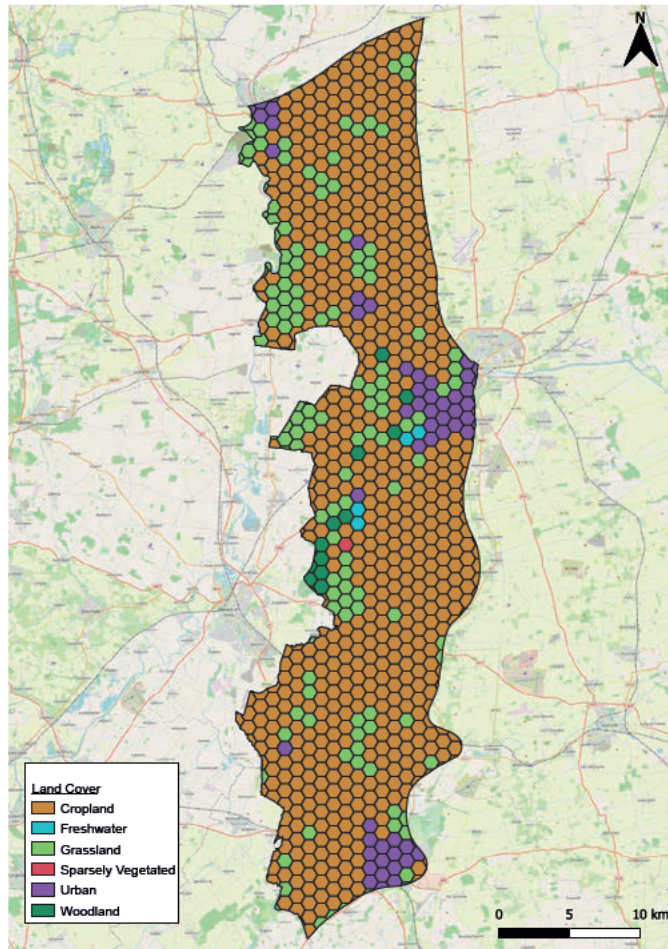
Habitats and Species**Key habitats include:**

- Calcareous grassland
- Limestone becks
- Wood pasture and parkland

Key species include:

- Skylark
- Brown hare
- Tall thrift
- Pasque flower



4.17 NCA- Trent and Belvoir Vales**Description**

The Trent and Belvoir Vales NCA is an undulating, rural and mainly arable landscape through which the River Trent flows, draining from the upper Trent valleys into the Humberhead Levels NCA. The part of the character area which lies in Greater Lincolnshire is mainly the floodplain on its eastern side, leading up to the foot of the Southern Lincolnshire Edge escarpment. It is a mixed farming landscape with floodplain grazing marsh and arable agriculture, characterised by large fields enclosed by hawthorn-hedgerows or dykes.

The sandlands which form part of this area are also important, and lead into the Northern Lincolnshire Edge with Coversands NCA. There are also small areas of heathland. The River Trent flows through the NCA from Nottingham to Gainsborough. It continues to be tidal upstream, until it reaches Cromwell Lock in Nottinghamshire. The character area also includes the middle reaches of the River Witham.

The area is also marked by sand and gravel extraction, some of which has created important wildlife sites as part of their restoration.

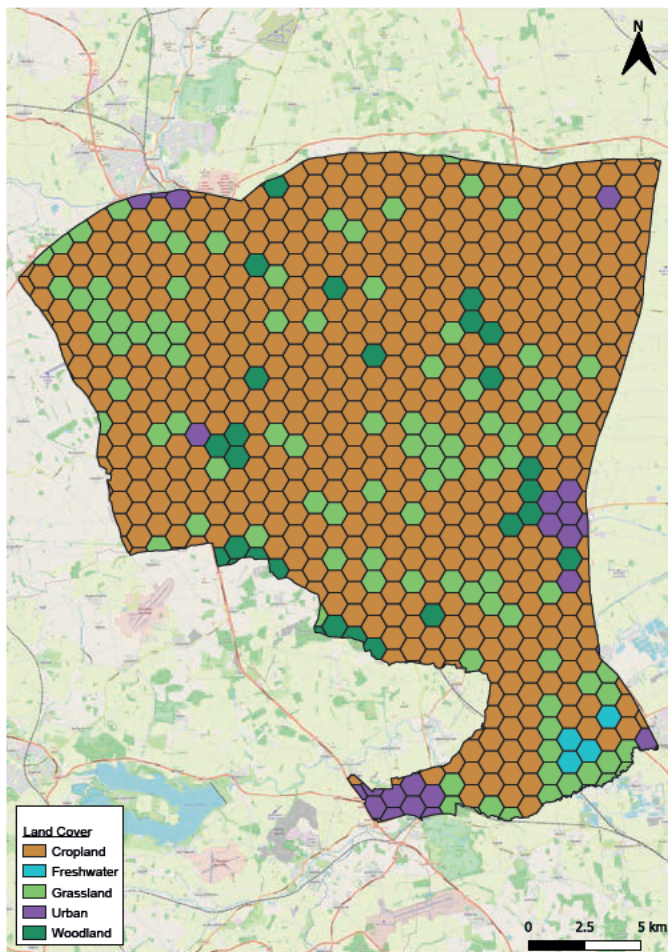
Habitats and Species**Key habitats include:**

- Rivers
- Eutrophic standing water – lakes, rivers
- Wet grassland

Key species include:

- White clawed crayfish
- Otter
- Redshank
- Brown hare



4.18 NCA- Kesteven Uplands**Description**

The Kesteven Uplands NCA is a gently rolling rural landscape of varied geology and soils – from calcareous loams to heavy clays. The NCA is characterised by mixed farming and scattered woodlands, including the second highest concentration of ancient woodland in Greater Lincolnshire.

The area is an integral component of the limestone ridge that runs from the Cotswolds to the Humber and on into Yorkshire. Within the underlying limestone is an extensive aquifer, which extends north to the Humber and beyond, and the area is dissected by rivers which run north to south, and which then feed into the Fens NCA to the east. Generally, the higher elevations are used for arable agriculture in large fields and the lower river valleys for grazing in a landscape of irregularly shaped fields bounded by hedge and stone. Grassland and scrubland are also important habitats, sometimes associated with sites where limestone, ironstone and sand has been extracted, or with the river valleys and with the network of roads. The Kesteven Uplands contains important rivers and becks, including the headwaters of the River Witham, which is joined by the Cringle Brook and the West and East Glen Rivers. Some limestone becks flow eastward to the Fens NCA where they are known as lodes.

Rivers have been significantly modified and disconnected from their floodplains. Significant restoration projects have been undertaken to restart natural river processes that complement existing high-quality sections including the Cringle Brook and the River Witham.

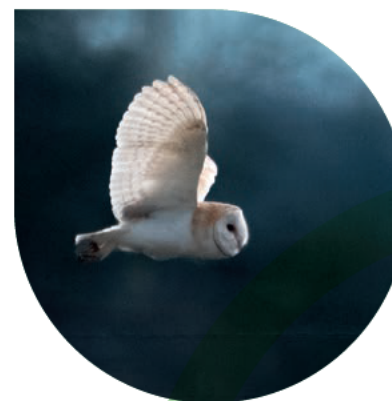
In the last 100 years or so, two of the most significant changes have been the reduction in country houses, and the conversion of their associated parkland to arable farmland, and significant numbers of new houses being built because of proximity to main roads and railways.

Habitats and Species**Key habitats include:**

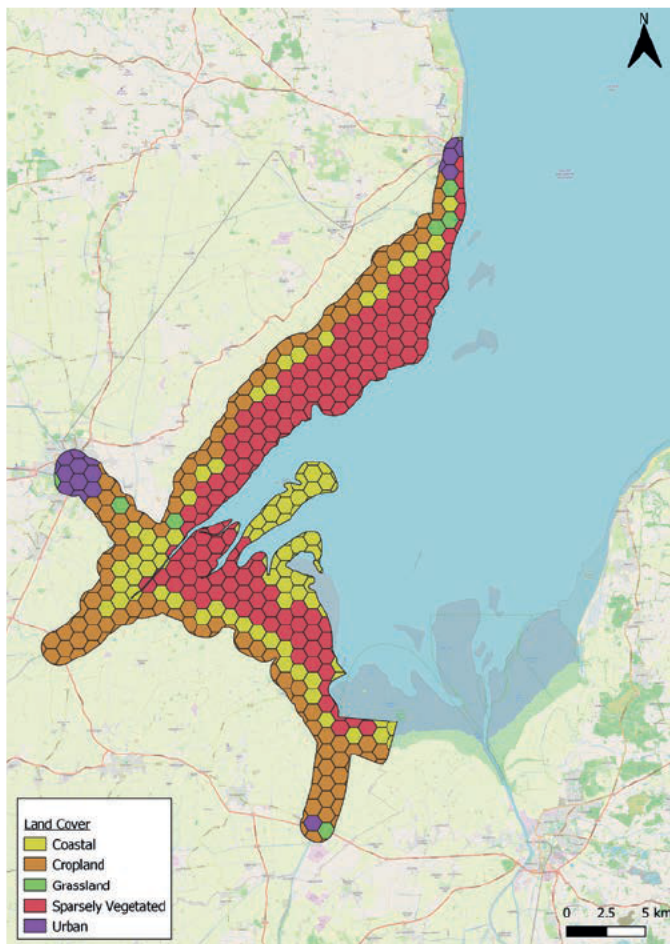
- Woodland including ancient woodland
- Wood pasture and parkland
- Calcareous grassland

Key species include:

- White clawed crayfish
- Dingy skipper
- Barn owl



4.19 The Wash



Description

The Wash is the largest bay in England and spans from Gibraltar Point in Greater Lincolnshire, around to the east of Guys Head and to Gore Point in Norfolk where it ends. It is fed by the rivers Steeping, Welland, Witham, Nene and Great Ouse. It covers around 62,000 ha and is the most important coastal site for birds in the UK, as well as being one of the most important and dynamic wetlands for wildlife in Europe.

The Wash also supports important estuarine habitats, including 10.6% of the UK's saltmarsh (4,800 ha), and 6% of the UK's mudflat and sandflats (18,000 ha), with the remaining areas made up of other habitats including small areas of sand dunes, vegetated shingle, and coastal lagoons.

The Wash's value to nature is recognised for its international and global importance. It is designated as Ramsar, Special Protection Area (SPA), Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI). It is the UK's largest site designated for wildlife.

The Wash is home to seven nature reserves, which are managed by the RSPB, Lincolnshire Wildlife Trust, Norfolk Wildlife Trust, and Wild Ken Hill, as well as being designated a National Nature Reserve.

The Wash is a key site used by birds migrating from Africa to the Arctic ('East Atlantic Flyway').

It supports a thriving fishery industry (primarily cockles, mussels, and brown shrimp), the busy ports of Boston and King's Lynn, and maintains the fertile soils of the surrounding farmland.

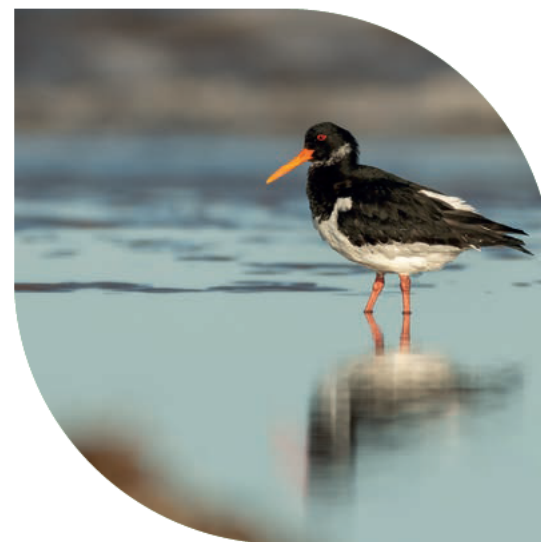
Habitats and Species

Key habitats include:

- Salt marshes
- Mudflats
- Sandflats

Key species include:

- Knot
- Dunlin
- Oystercatcher
- Curlew
- Common seal



5 Priorities and Actions

5.1 What are priorities and actions?

This section contains the Priorities for nature recovery in Greater Lincolnshire and the Actions needed to deliver them. It also identifies where nature recovery Priorities will deliver together with wider environmental benefits to meet broader aims.

Priorities are 'the end results that the LNRS is seeking to achieve'. These relate to the extent and condition of habitats and species. Most apply county-wide though some may only apply to specific areas, as not all habitats or species are appropriate for the whole of Greater Lincolnshire.

Actions are specific, practical actions intended to achieve the Priorities. Most are activities that will deliver bigger, better and more joined up habitat as well as increase and grow resilience into species populations and distribution. Other Actions are intended to support such outcomes. In many cases Actions will also deliver wider environmental benefits.

How the Priorities and Actions were developed is explained Appendix 9. As a result, 50 Priorities and 150 Actions have been agreed across eight broad habitat themes and a ninth theme for county-wide delivery at landscape scale and for ecological networks. There are also 34 additional Actions covering eight species.

The Priorities are designed to deliver:

- Across all 10 National Character Areas in Greater Lincolnshire
- Against many of the pressures identified in section 3.4
- For wider environmental benefits
- For the people of Greater Lincolnshire where they live, work and farm

The Actions proposed are:

- Effective methods of increasing habitat extent
- Well-established approaches to improving habitat condition
- Likely to increase the populations of the species in the species assemblages or individual species
- Likely to be deliverable in the period of this LNRS
- Applicable county-wide but clear enough to support any site-specific delivery plans

Actions may need funding and/or permission(s) from the relevant authorities. Ecological advice should be sought before commencement. Several Actions deliver for more than one Priority and these are highlighted.

The broad habitat themes have been chosen as they are easy to understand. Habitats don't always follow neat definitions and localities however, so local interpretation will be needed in places. Actions have a code to help identification throughout the LNRS and the map.

Species have been grouped into habitat assemblages (see appendix 3 Greater Lincolnshire LNRS species groups and habitat assemblages) and are highlighted with the relevant Priorities and Actions. The Actions should deliver for the species both by creating habitat and improving habitat condition. Eight species have their own Priorities and Actions; these species need individual recovery measures.

Wider environmental benefits are highlighted for the Priorities where they are most likely to be delivered. The benefits used for the purpose of this edition of the LNRS were derived from ecosystem services included within Natural England's Environmental Benefits from Nature Tool. They were attributed to Priorities through expert consultation.

Where appropriate, actions have been mapped in the Areas that Could be of particular importance for Biodiversity (ACB) mapping, to highlight strategic location based opportunities. Mapped Actions are marked with an (M) in their description. Why and how these areas were mapped, including the data used, is explained in *Appendix 1 Data and evidence used in mapping*.

The relationship between mapped and non-mapped actions can be found in the *Explanatory notes for the mapping of actions within the Areas that could be of particular importance for biodiversity*. This document along with guidance on how to use the mapping can be found on the website (<https://www.glinclnrs.org.uk/>).

5.2 What needs to happen for nature to recover? The Lawton Principles

Making Space for Nature, known as the Lawton Report, created the aims of 'more, bigger, better and joined up' to describe what was needed for nature recovery in England. This accurately reflects the principal pressure that nature faces, namely that our nature-rich sites are too small, vulnerable and far-apart to be safe homes for wildlife and need help if nature is to recover.

All of the Priorities and Actions that have been developed have been matched to the Lawton Principles. The Local Habitat Map shows graphically how the Actions will deliver at the scale of Greater Lincolnshire and which areas are expected to deliver most effectively for nature recovery and other environmental benefits. Existing habitat patches are at the core of the mapped opportunity areas as the places that will act as sources for new populations. Woodland areas will expand and join together, and habitat connectivity will increase for species that depend on this habitat. Riverside habitat creation will improve water quality and quantity and increase habitat connectivity along river valleys.



5.3 Priorities and actions tables**Woodland, Trees and Hedgerows (WT)**

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
WT 01	Create bigger, more, connected, native, climate resilient woodland to increase biodiversity and maximise wider environmental benefits. Species: Woodland assemblage. Wider Environmental Benefits: Reduced flooding, improved water quality, erosion protection and carbon sequestration.	Bigger More Joined Up	1	Buffer and link existing semi-natural woodland , including ancient semi-natural woodland , with a mix of appropriate native, climate resilient species. (M)
			2	Ensure newly created other woodland seeks to benefit biodiversity and maximise wider environmental benefits through compliance with relevant guidance and standards.
			3	Leave space to allow buffering of semi-natural woodland through natural regeneration, particularly around ancient semi-natural woodland and priority habitat woodland . (M)
			4	Create new semi-natural woodland by planting a mix of native, climate resilient species.
WT 02	Appropriately manage woodland to increase biodiversity and maximise wider environmental benefits. Species: Woodland assemblage. Wider Environmental Benefits: Reduced flooding, improved water quality, erosion protection and carbon sequestration.	Better	5	Implement sustainable woodland management in semi-natural and plantation woodland , compliant with relevant guidance and standards to bring all woodlands into good ecological condition.
			6	Restore and protect semi-natural woodland on Plantation on Ancient Woodland sites through a gradual process of thinning, removing non-natives, restocking and buffering, via natural regeneration and the planting of appropriate species. (M)
			7	Retain deadwood to support specialist invertebrate communities and other woodland wildlife such as bats.
			8	Create south-facing rides and glades to support woodland butterfly populations.
WT 03	Create bigger, more, connected native wet woodland , to increase biodiversity and maximise wider environmental benefits. Species: Woodland assemblage and wetland assemblage. Wider Environmental Benefits: Reduced flooding, improved water quality and carbon sequestration.	Bigger More Joined Up	9	Buffer and link existing wet woodland with native, climate resilient species. (M)
			10	Leave space for natural regeneration of wet woodland . (M)
			11	Create new wet woodlands by planting native, climate-resilient species. (M)



Woodland, Trees and Hedgerows (WT) continued

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
WT 04	Appropriately manage wet woodland to increase biodiversity and maximise wider environmental benefits. Species: Woodland assemblage and wetland assemblage. Wider Environmental Benefits: Reduced flooding, improved water quality and carbon sequestration.	Better	12	Identify and assess existing sites to inform appropriate water level management.
WT 05	Create bigger, more wood pasture and parkland to increase biodiversity and maximise wider environmental benefits. Species: Woodland assemblage and grassland assemblage. Wider Environmental Benefits: Pollination, reduced flooding, improved water quality, carbon sequestration.	Bigger More Joined Up	13	Create new wood pasture and parkland sites by planting and managing specimen trees within grazed grassland , as well as planting of boundary woodland belts.
			14	Buffer existing wood pastures and parklands by planting and managing specimen trees within grazed grassland. (M)
WT 06	Appropriately manage wood pasture and parkland to increase biodiversity and maximise wider environmental benefits. Species: Woodland assemblage and grassland assemblage. Wider Environmental Benefits: Pollination, reduced flooding, improved water quality, carbon sequestration.	Better	15	Implement appropriate grazing levels and draw up management plans to enhance structural and species diversity on wood pasture and parkland. (M)
			7	Retain deadwood to support specialist invertebrate communities and other woodland fauna such as bats.
WT 07	Create a connected network of diverse, native, climate resilient hedgerows to enhance biodiversity and maximise wider environmental benefits. Species: Hedgerow assemblage. Wider Environmental Benefits: Reduced flooding, improved water quality, erosion protection and carbon sequestration.	Bigger More Joined Up	16	Plant native species-rich hedgerows to connect habitat patches and plant-up gaps in existing hedgerows .



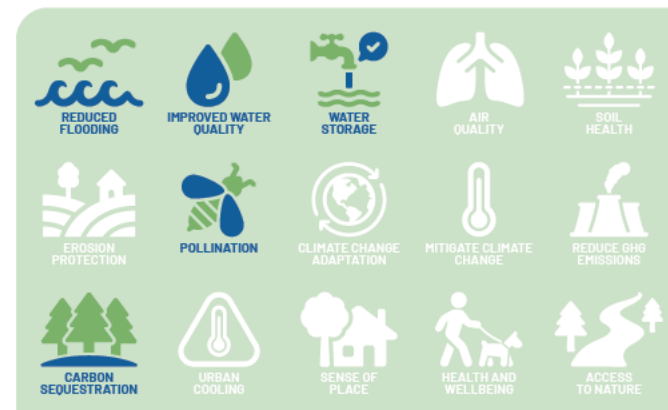
Woodland, Trees and Hedgerows (WT) continued

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
WT 08	Appropriately manage hedgerows to increase wildlife and maximise wider environmental benefits. Species: Hedgerow assemblage. Wider Environmental Benefits: Reduced flooding, improved water quality, erosion protection and carbon sequestration.	Better	17	Plant native, climate resilient trees within existing hedgerows and new hedgerow networks.
			18	Manage hedgerows on rotation to provide food sources, nesting sites and overwintering sites for wildlife.
			19	Allow wide margins at the base of hedgerows to support biodiversity and hedgerow health.
WT 09	Create more traditional and community orchards to enhance biodiversity.	More	20	Plant fruit trees to create new orchards , particularly of local varieties.
WT 10	Appropriately manage orchards to enhance biodiversity. Wider environmental benefits: pollination.	Better	21	Manage orchard trees sympathetically to retain features that support biodiversity.
			22	Replant lost orchard trees with suitable local varieties.
			23	Manage the field layer by grazing or hay cutting.
WT 11	Appropriately manage and retain ancient, veteran and mature trees in the urban and rural landscape to enhance biodiversity.	Better	24	Manage ancient and veteran trees sympathetically to maximise their lifespan and to retain features that support biodiversity.
			25	Retain standing deadwood to support specialist invertebrate communities and other woodland fauna such as bats.
			26	Manage ancient and veteran tree sites by planting new trees of local stock, and identify and retain mature trees to become the next generation.
			27	Record and map notable trees on the Ancient Tree Hunt website.



Grassland and Heathland (GH)

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
GH 01	Create bigger, more, connected, native species-rich grassland to increase biodiversity and maximise wider environmental benefits. Species: Grassland assemblage. Wider environmental benefits: Pollination, reduce flooding, improve water quality, carbon sequestration.	Bigger More Joined Up	28	Create acid grassland linking and/or buffering existing acid grassland . (M)
			29	Create neutral grassland linking and/or buffering existing neutral grassland sites. (M)
			30	Create calcareous grassland by linking and/or buffering existing calcareous grassland sites. (M)
			31	Create new species rich grasslands where appropriate conditions allow.
GH 02	Appropriately manage species-rich grassland to increase biodiversity and maximise wider environmental benefits. Species: Grassland assemblage.	Better	32	Maintain appropriate levels of grazing or cutting.
			33	Reduce the use of inputs on grasslands, verges and arable margins e.g. chemical fertilisers, pesticides and herbicides.
			34	Expose bare ground on acid grassland sites to appropriate levels.
			35	Manage scrub and bracken to appropriate levels.
GH 03	Appropriately manage other grassland to support biodiversity and maximise wider environmental benefits. Species: Grassland assemblage.	Better	36	Where appropriate, implement reduced cutting in patches and along borders of sites.
			37	Where appropriate, allow wildflowers to grow in patches and along borders of sites.
			38	Reduce use of pesticides.
GH 04	Connect existing heathland to enhance biodiversity and increase resilience. Species: Grassland assemblage and heathland assemblage.	Joined Up	39	Create acid grassland to connect or buffer existing fragmented heathland sites. (M)
GH 05	Restore heathland on plantation woodland sites to increase biodiversity and maximise wider environmental benefits. Species: Heathland assemblage.	More	40	Create open areas within plantation woodland sites by removing appropriate trees in strategic locations to create connectivity to surrounding heathland .
			41	Restore heathland where soils and ground vegetation indicate this would be successful, following the relevant guidance and standards and ensuring that sites with best prospects of landscape connectivity are prioritised.



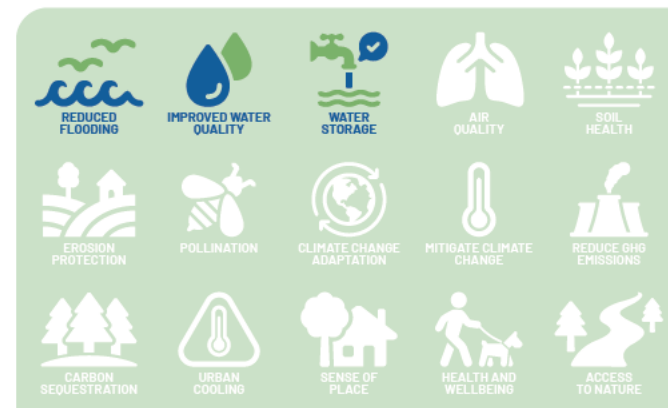
Grassland and Heathland (GH) continued

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
GH 06	Appropriately manage heathland to increase biodiversity and maximise wider environmental benefits. Species: Heathland assemblage. Wider environmental benefits: (same as grasslands).		42	Where appropriate, manage heathland in a way that increases structural diversity, provides suitable levels of bare ground and reduces high nutrient levels to support invertebrates, birds and reptiles.
			43	Identify wet heath sites and design appropriate management plans to maintain and enhance wet heath for invertebrates, birds and amphibians.
			44	Revisit Coversands project sites, monitor progress and improve future management. (M)
GH 07	Create more wet grassland to support breeding and wintering waders and waterfowl and maximise wider environmental benefits. Species: Wetland assemblage and grassland assemblage. Wider environmental benefits: Reduced flooding, improved water quality and water storage.		45	Install water level management structures to control flooding and improve water retention for wet ditch and wet scrape creation.
GH 08	Appropriately manage wet grassland to support breeding and wintering waders and waterfowl and wider environmental benefits. Species: Wetland assemblage and grassland assemblage. Wider environmental benefits: Reduced flooding, improved water quality and water storage.		32	Maintain appropriate levels of grazing or cutting.
			46	Manage water levels on wet grassland to ensure water retention and periodic wetting. (M)
			47	Install fencing to exclude ground predators at wet grassland sites with significant ground-nesting bird populations or the potential for supporting significant populations. (M)



Freshwater Wetlands (FW)

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
FW 01	Create more, bigger wetland mosaics to increase biodiversity and maximise wider environmental benefits. Species: Wetland assemblage and freshwater assemblage. Wider environmental benefits: Reduce flooding, improve water quality and water storage.	More Bigger	48	On suitable land, create a range of different wetland habitats , for example, high water-quality ditches , reedbeds , wet woodland , wet grassland , lowland fen and open water that support biodiversity.
			49	Identify suitable sites for wetland creation to reduce flood risk as part of natural flood management schemes.
			50	Identify suitable sites for wetland creation to address water quality improvement, such as diffuse agricultural and industrial pollution and urban run-off.
FW 02	Appropriately manage wetland mosaics to increase biodiversity and maximise wider environmental benefits. Species: Wetland assemblage and freshwater assemblage. Wider environmental benefits: Reduce flooding, improved water quality and water storage.	Better	51	Enhance and manage reedbeds for breeding birds and associated species by improving water quality inflows, rotational reed harvesting and water level management.
			32	Maintain appropriate levels of grazing or cutting.
			52	Manage ditches to maintain high-quality water and remain wet all year through water level management, low nutrient inputs and sensitive cutting and removal of vegetation.
			53	Appropriately manage wetland mosaics to maintain structural diversity for biodiversity and provision of wider environmental benefits, including improved water quality and reduced flood risk.
FW 03	Create winter-flooded washes for waterfowl and maximise wider environmental benefits. Species: Wetland assemblage.	More	54	Enable seasonal wetting of washland habitats.
FW 04	Appropriately manage blow wells to support biodiversity.	Better	55	Create buffer habitat around blow wells to protect against contamination from surface run off. (M)
			56	Survey known blow wells , and identify new sites, to improve understanding and inform future management.
FW 05	Appropriately manage ditches to increase population and range of rare and scarce aquatic and marginal plants . Species: Wetland assemblage and freshwater assemblage. Key NCAs: Fens and Humberhead Levels.	Better More	57	Manage ditches to maintain high-quality water and ensure they remain wet all year round, through water level management, low nutrient inputs and sensitive cutting and removal of vegetation within and around ditch.



Coastal and Estuarine (CE)

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
CE 01	Bigger, better-connected mosaic of coastal and estuarine habitats that increase biodiversity and maximise wider environmental benefits. Species: Coastal assemblage. Wider environmental benefits: reduce flood risk, improved water quality, carbon sequestration and mitigate climate change.	Bigger Joined Up	58	Within the operation of the current Shoreline Management Plan investigate opportunities for new intertidal habitats for when opportunities allow (LCC).
			59	Enable dynamic coastal and estuarine processes to support an adaptive and healthy ecosystem.
			60	Create saline lagoons and other intertidal habitat for breeding, migrating and wintering birds, and invertebrates such as lagoon sand shrimp .
CE 02	Appropriately manage coastal and estuarine habitats to increase biodiversity and maximise wider environmental benefits. Species: Coastal assemblage. Wider environmental benefits: reduce flood risk, improved water quality, carbon sequestration and mitigate climate change.	Better	61	Grazing saltmarsh at suitable levels to maintain plant species diversity and for breeding birds , particularly redshank , with consideration to where grazing has taken place historically'. (M)
			62	Manage sand dunes habitats for natterjack toads , including ponds and areas of bare sand. (M)
			63	Manage sand dunes by selectively controlling scrub , extending bare ground and appropriate grazing to maintain structural diversity, where appropriate. (M)
			64	Manage saline lagoons for breeding, migrating and wintering birds, and invertebrates such as lagoon sand shrimp by reducing nutrient inputs and ensuring regular seawater exchange. (M)
CE 03	Appropriately manage beach habitat to ensure successful breeding of little tern, oystercatcher and ringed plover . Species: Coastal assemblage.	Better	65	Raise awareness of the impact of human disturbance to beach-nesting birds .
			66	Install fencing to exclude ground predators at sites with significant beach-nesting bird populations.
CE 04	Create more, bigger seagrass meadow to increase biodiversity and maximise wider environmental benefits. Species: Coastal assemblage. Wider environmental benefits: Carbon sequestration.	More Better	67	Survey to find suitable areas for seagrass and plant new seagrass beds in areas identified.
CE 05	Appropriately manage sea banks to support invertebrate and plant populations.	Better	68	Maintain extent of grazing and mowing on sea banks to support invertebrates and plants, where appropriate. (M)
			69	Enhance nest site opportunities for sea aster mining bee , where appropriate. (M)



Rivers and streams (RS)

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
RS 01	Restore natural processes and morphologies of rivers and streams where appropriate, to increase biodiversity and maximise wider environmental benefits. Species: Freshwater assemblage and wetland assemblage. Wider environmental benefits: Reduce flooding, improve water quality and water storage.	Bigger Better Joined up	70	In appropriate locations, recreate meanders to slow the flow and encourage natural river processes, such as erosion and deposition.
			71	Enable rivers to reconnect with floodplains in appropriate places, for example, by removal of flood banks, as part of agreed schemes away from built-up areas. (M)
			72	Improve habitat connectivity along rivers by removing weirs, dams and redundant culverts to allow easier movement of fish and invertebrates.
RS 02	Appropriately manage rivers and their riparian and floodplain habitats to increase biodiversity and maximise wider environmental benefits. Species: Freshwater assemblage and wetland assemblage. Wider environmental benefits: Reduce flooding, improve water quality and storage	Better	73	Enhance in-channel habitat, e.g., by inserting features such as berms, deeps and pools, gravel beds and riffles and large woody materials.
			74	In appropriate locations enhance riparian habitat through planting native woody and non-woody species along riverbanks to provide dappled shade to cool the water and support invertebrates and bats.
			75	Enhance riparian habitat through the creation of offline ponds, backwaters and wetland features.
			76	Reduce nutrient and sediment run-off by creating habitat buffers along rivers, streams and connected water courses to improve water quality. (M)
			77	Maintain suitable river flows through catchment-based approaches to water level management and appropriate levels of abstraction.



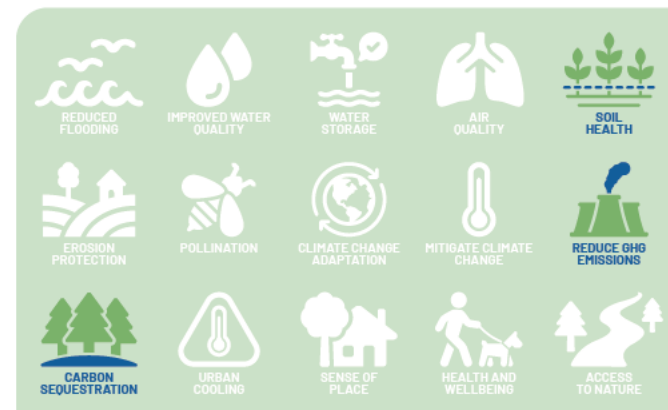
Rivers and streams (RS) continued

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
RS 03	Restore natural processes and morphologies of chalk streams and limestone becks to increase biodiversity and maximise wider environmental benefits. Species: Freshwater assemblage and wetland assemblage. Wider environmental benefits: Reduce flood (high and low flows), improve water quality and water storage.	Bigger Better Joined up	78	In appropriate locations, recreate meanders to slow the flow and encourage natural stream and beck processes, such as erosion and deposition.
			79	Enable streams and becks to reconnect with floodplains in appropriate places, for example by removal of flood banks, as part of agreed schemes away from built up areas. (M)
			80	Improve habitat connectivity along streams and becks by removing weirs, dams and redundant culverts to allow easier movement of fish and invertebrates.
RS 04	Appropriately manage chalk stream and limestone becks, including riparian and floodplain habitats , to increase biodiversity and maximise wider environmental benefits. Species: Freshwater assemblage and wetland assemblage. Wider environmental benefits: Reduce flooding, improve water quality and water storage.	Better	73	Enhance in-channel habitat, e.g., by inserting features such as berms, deeps and pools, gravel beds and riffles and large woody materials.
			74	In appropriate locations enhance riparian habitat through planting native woody and non-woody species along riverbanks to provide dappled shade to cool the water and support invertebrates and bats.
			75	Enhance riparian habitat through the creation of offline ponds, backwaters and wetland features .
			76	Reduce nutrient and sediment inputs by creating habitat buffers along rivers, streams and connected water courses to improve water quality. (M)
			81	Protect and retain tufa formations .
RS 05	Restore and appropriately manage chalk and limestone springs and seepages to support invertebrate populations.	Better	82	Maintain suitable stream and beck flows through catchment wide water level management and appropriate levels of abstraction.
			83	Ensure appropriate grazing levels in pasture fields .
			84	Remove capping and un-pipe springs in appropriate locations.
			81	Protect and retain tufa formations .



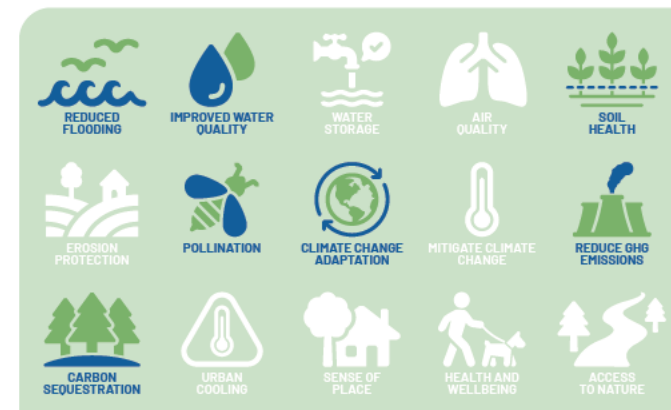
Lowland Fen & Raised Bog (FB)

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
FB 01	Restore and appropriately manage lowland fen to increase biodiversity and maximise wider environmental benefits. Species: Wetland assemblage. Wider environmental benefits: GHG emission reduction, carbon sequestration, water quality.	More Better	85	Improve water level management on lowland fen by blocking drains and damming ditches to raise the water table and re-wet the surface. (M)
			86	Buffer lowland fen sites by encouraging peat development through rewetting and creating supporting habitats. (M)
			87	Manage scrub and maintain appropriate grazing levels on lowland fen . (M)
FB 02	Restore and appropriately manage lowland raised bog to increase biodiversity, such as invertebrates (e.g. large heath) and plants (e.g. hare's tail cotton grass), and maximise wider environmental benefits. Species: Wetland assemblage. Wider environmental benefits: GHG emission reduction carbon sequestration, water quality.	Bigger Better	88	Improve water level management on lowland raised bog by blocking drains and damming ditches to raise the water table and re-wet the surface while ensuring there are higher, drier areas with hare's tail cottongrass to act as refugia for large heath larvae . (M)
			89	Buffer lowland raised bog sites by encouraging peat development through rewetting and creating supporting habitats. (M)
			90	Plant cotton grass and/or sphagnum on rewetted bog surfaces , to stabilise the peat and keep it wet. (M)
			91	Manage scrub to increase suitable habitat for large heath butterfly and other members of the lowland bog species assemblage. (M)



Farmland (Agricultural land) (FL)

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
FL 01	Adopt more nature friendly farming and land management practices to improve biodiversity and maximise wider environmental benefits. Species: Farmland assemblage. Wider environmental benefits: soil health, water quality and reduced flood risk, carbon sequestration.	More Better	92	Increase tree canopy cover on farmland to improve landscape connectivity by tree planting which can include, in field trees, shelter belts and agroforestry.
			76	Reduce nutrient and sediment run-off by creating habitat buffers along rivers, streams and ditches to improve water quality.
			93	Creation of permanent pasture or enhanced herbal leys managed with low nutrient inputs.
			94	Creation of wildflower species-rich field margins for pollinators and farmland birds.
			95	Sympathetically manage field margins to support scarce arable plants, for example through reduced spraying.
			96	Reduced frequency or magnitude of tillage for plants and birds, increased soil carbon storage, natural flood management and reduced silt run-off.
			97	Use of cover crops to improve the organic matter content of soil, reduce soil erosion and improve bird populations.
			98	Create wildlife-friendly ponds with wide buffer strips for water quality.
			99	Practice integrated pest management and reduced pesticide use.
			100	Carry out nutrient management plans to reduce nutrient inputs.
FL 02	Restore and conserve peat soils on farmed peatland areas, where appropriate, to maximise wider environmental benefits. Species: Farmland assemblage. Wider environmental benefits: Climate change mitigation, GHG emission reduction, soil health, water quality.	Better	101	Encourage alternative farming practices and/or crops to enable the raising of water levels to approximately 15-10cms below the surface (paludiculture, namely farming on wet soils).
			102	Encourage the use of regenerative farming practices that minimise soil disturbance and improve the organic matter content of soils.
			103	Encourage the use of green cover crops.



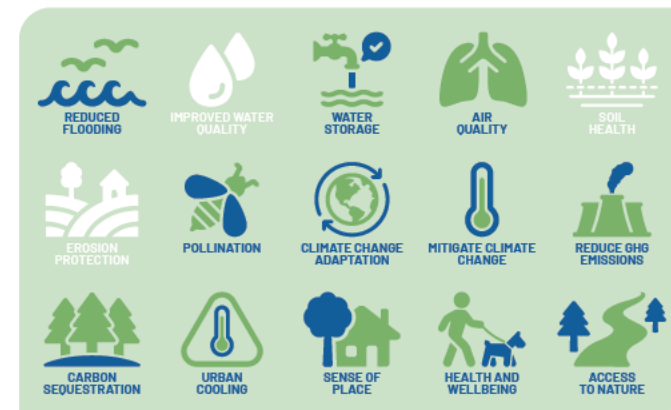
Farmland (Agricultural land) (FL) continued

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
FL 03	Appropriately manage farmland to increase the population and range of farmland birds . Species: Farmland assemblage.	Better	104	Create lapwing and/or skylark plots in arable fields.
			105	Increase over-wintering stubble for linnet and grey partridge and reduce pesticide use to support invertebrate populations.
			106	Create and sympathetically manage areas of dense scrub (such as bramble, hawthorn and/or blackthorn) to support turtle dove and linnet.
			107	Plant seed-rich wild bird crops for feeding birds, including turtle dove.
			108	Manage hedgerows and ditches on rotation to provide food sources, nesting sites and overwintering sites for wildlife.
			109	Encourage low input cereal options for breeding birds and arable flowers.
FL 04	Appropriately manage farmland to support pollinator and invertebrate populations. Species: Farmland assemblage. Wider environmental benefits: Pollination.	Better	110	Manage hedgerows , hedgerow bases and ditches on rotation to provide food source, nesting sites and overwintering sites.
			19	Allow wide margins at the base of hedgerows to support biodiversity and hedgerow health.
			111	Reduce the use of inputs on grasslands, verges and arable margins e.g. chemical fertilisers, pesticides and herbicides.
			112	Provide nectar-rich habitat on farm reservoir banks and unproductive/awkward field corners.
			113	Maintain areas of bare ground for invertebrates, particularly on sandy soils.
			114	Rebuild and maintain dry stone wall habitat and buffer with grass strips or margins.



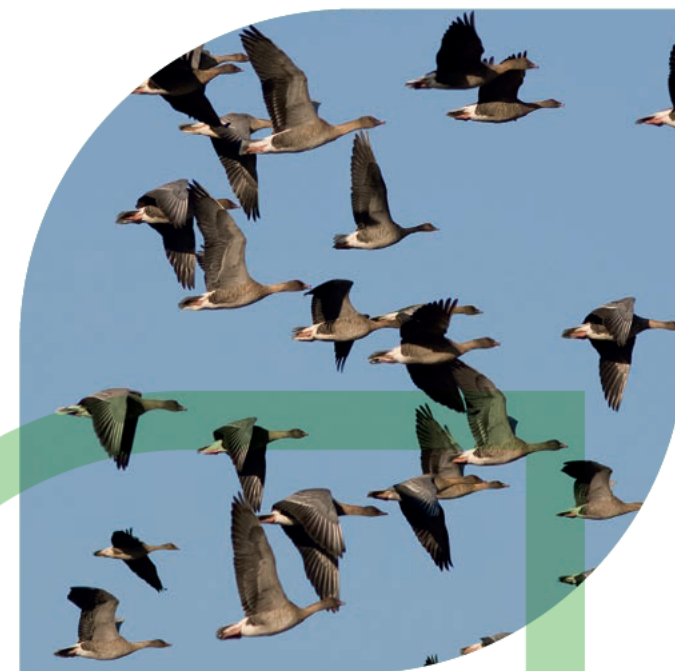
Nature in built environments (NB)

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
NB 01	Create a network of high-quality green and blue infrastructure and wildlife friendly developments to increase biodiversity, improve habitat connectivity and maximise wider environmental benefits. Species: Urban assemblage, woodland assemblage and freshwater assemblage. Wider environmental benefits: Clean air, flood protection GHG emission reduction carbon sequestration, climate change adaptation. Co-benefits: Access to nature	More Joined up	116	Plant and maintain diverse, native, climate resilient trees to increase canopy cover and, for the benefit of local communities' mental and physical health and wellbeing.
			117	Remove redundant culverts where feasible to re-open watercourses.
			118	Incorporate and maintain nature-friendly sustainable drainage systems in development where appropriate.
			119	Design and build developments to ensure habitat connectivity is maintained.
			120	Incorporate features on buildings that support urban birds (such as swifts, house sparrow and house martin) bat and invertebrate populations.
			121	Limit the impacts of light and noise pollution on wildlife through careful design of new developments and improvement of existing facilities of developments.
			122	Ensure quarry operation and restoration seeks to increase biodiversity, maximise wider environmental benefits and provide study opportunities for geodiversity.
			123	Seek opportunities to incorporate accessible green and blue infrastructure within existing and new industrial, residential and commercial areas.
NB 02	Appropriately manage green and blue infrastructure to support wildlife, improve habitat connectivity and maximise wider environmental benefits. Species: Urban assemblage and freshwater assemblage. Wider environmental benefits: Clean air, flood protection, GHG emission reduction carbon sequestration, climate change adaptation.	Better	124	Introduce floating habitats in urban rivers to support wildlife, where appropriate.
			125	Appropriately manage sustainable drainage systems to reduce flooding and support wildlife.
			126	Incorporate nature friendly practices in allotments (within the stipulations of the local authorities' rules and regulations).



Nature in built environments continued

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
NB 03	Appropriately manage ecologically important previously developed land to increase biodiversity and maximise wider environmental benefits. Species: Mosaic habitat assemblage. Wider environmental benefits: Pollination, air quality, urban cooling.	Better	127	Manage ecologically important quarries and previously developed sites to maintain structural diversity, flower-rich early successional communities and nutrient-limited soils to increase the population and range of invertebrates e.g. wall butterfly.
NB 04	Appropriately manage the built environment to support biodiversity and maximise wider environmental benefits. Species: Urban assemblage and freshwater assemblage. Wider environmental benefits: Flood reduction, air quality, urban cooling. Co-benefits: Sense of place, physical and mental health and wellbeing	Better	128	Encourage nature-friendly practices in private gardens such as suitable tree and shrub planting and leaving grass areas unmown.
			129	Appropriately manage parks, churchyards and recreational and community sites, e.g. caravan parks, fishing lakes and golf courses, to support biodiversity.
			130	Encourage urban greening within community spaces.
			131	Create wildlife-friendly ponds with suitable margins and manage appropriately.
NB 05	Appropriately manage lakes to increase biodiversity and maximise wider environmental benefits. Species: Freshwater assemblage. Wider environmental benefits: Water quality and water storage. Co-benefits: Access to nature, sense of place.	Better	132	Reduce nutrient and sediment run-off into lakes by creating appropriate buffer habitat. (M)
			133	Create marginal habitat in shallow water for plants, invertebrates and birds.



Landscape scale and ecological networks (LE)

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
LE 01	Design and manage NSIPs to minimise the impacts on, and increase, biodiversity and maximise wider environmental benefits. Species: Multiple assemblages relevant to location and habitat type. Wider environmental benefits: Pollination, water quality, air quality, reduced flooding, carbon sequestration.	Better	134	Ensure that new NSIPs , such as the South Lincolnshire Reservoir and energy infrastructure, maximise opportunities for biodiversity.
			135	Design NSIP development to ensure habitat connectivity is enhanced and management is secured to increase biodiversity.
LE 02	Create a connected and appropriately managed ecological network across all habitat types to increase biodiversity and to maximise wider environmental benefits. Species: Multiple assemblages relevant to location and habitat type.	More Better Joined up	136	Connect areas of existing habitat and designated sites by creating appropriate habitat managed for biodiversity.
			137	Create habitat patches that can act as stepping stones to strengthen the ecological network.
			138	Appropriately manage linear features e.g. road verges (including roadside nature reserves), railways, cycling routes, canal tow paths and wayleaves, to deliver for biodiversity and strengthen the ecological network.
			139	Create green crossings of major transport infrastructure in key locations to maintain and enhance ecological connectivity.
LE 03	More landscape scale nature recovery to enhance and support the resilience of the ecological network, increase biodiversity and maximise wider environmental benefits. Species: Multiple assemblages relevant to location and habitat type.	More Joined up	140	Identify, develop and deliver landscape scale projects which contain a mix of habitats, suitable to the site, to benefit wildlife and maximise wider environmental benefits.
			141	Deliver landscape scale habitat creation projects using large herbivores and other ecosystem engineers, for example beavers.
			142	Engage in river catchment wide approaches to improve biodiversity and maximise wider environmental benefits.
			143	Strategically manage deer at a landscape scale in accordance with appropriate plans and guidance to reduce browsing pressure while maintaining their value for the wider natural environment.
			144	Implement catchment wide slow the flow actions and appropriate levels of ground water abstraction to reduce saline intrusion and improve the quality and availability of ground water.



Landscape scale and ecological networks continued

#	Priority Statement	Lawton Principles	#	Actions (M) Mapped Action
LE 04	More and better managed Local Wildlife Sites (LWS) to enhance and support the resilience of the ecological network, increase biodiversity and maximise wider environmental benefits. Species: Multiple assemblages relevant to location and habitat type.	More Better	145	Target advice to landowners to support bringing LWSs into positive management.
			146	Create buffers around and link existing LWSs using appropriate semi-natural habitat to build resilience. (M) Email info@glnp.org.uk for more detail on LWS and their habitats.
			147	Re-assess and monitor sites to inform management strategies.
LE 05	Strategically control invasive species to support wildlife. Species: Multiple assemblages relevant to location, habitat and invasive species type.	Better	148	Continue to deliver strategic American mink control to support Water vole populations and other biodiversity.
			149	Identify and undertake opportunities for strategic management of invasive species e.g. grey squirrel, floating pennywort, Himalayan balsam.
			150	Prevent the future spread of invasive species by using appropriate biosecurity protocols e.g. cleaning of equipment between sites.



5.4 Species Priorities and Actions (SP)

Species	#	Priority	Lawton Principles	#	Actions
Hedgehog (<i>Erinaceus europaeus</i>)	SP 01	Increase Hedgehog population in Lincolnshire	More	151	Develop understanding of where hedgehog populations are in Lincolnshire by encouraging people to record their presence
				152	Create and improve suitable scrub, grassland and damp habitat in gardens, parks and farmland
				153	Create gaps in fencing around gardens to allow hedgehogs access and reduce road collision risk
				154	Encourage building hibernacula in gardens
Pool Frog (<i>Pelophylax lessonae</i>)	SP 02	Create a population of Pool frogs in Lincolnshire	More	155	Assess possible sites for pool frog in Lincolnshire and discuss potential for reintroduction with landowners
				156	Coordinate with national pool frog project to secure pool frogs for release
				157	Create and manage habitat to create suitable conditions for reintroduction
				158	Release animals into the habitat and monitor populations and habitat condition
Beaver (<i>Castor fiber</i>)	SP 03	Increase Beaver Populations in Lincolnshire	More	159	Identify suitable site(s) for beaver reintroduction in Lincolnshire
				160	Secure landowner support for beaver introduction and consult with the local community to gain their support and address their concerns
				161	Manage any licensing requirements to ensure legal compliance
				162	Prepare and manage site(s) for beaver introduction
				163	Release beavers into the site(s) and monitor beaver activity and other species groups
				164	Adjust site management as required
Marsh Fritillary (<i>Euphydryas aurinia</i>)	SP 04	Increase Marsh Fritillary Butterfly populations in Lincolnshire	More	165	Identify suitable grassland sites for marsh fritillary and its food plant devil's bit scabious and ensure management of the site(s) is suitable to support a viable population in that area.
				166	Ensure landowner support for marsh fritillary introduction onto their land
				167	Find UK-sourced marsh fritillaries to introduce to Lincolnshire
				168	Release marsh fritillaries onto the site(s) and monitor their establishment, adjusting management as needed
Tall Thrift (<i>Armeria maritima</i> ssp. <i>elongata</i>)	SP 05	Increase Tall Thrift population at several sites in southern Lincolnshire	More	169	Propagate tall thrift from stock and grow enough seedlings to create new populations
				170	Find suitable donor sites for seedlings to be planted out and secure landowner agreement for seedlings to be planted, focusing on the Rauceby/Ancaster area.
				171	Monitor new population success and site management to ensure population viability

5.4 Species Priorities and Actions (SP)

Species	#	Priority	Lawton Principles	#	Actions
Redshanks (<i>Tringa totanus</i>)	SP 06	Halt the decline and increase the population of Redshanks in coastal and inland areas	More	172	Create wet grassland by raising water levels and managing sward height to maintain extensive wet areas throughout spring and summer
				173	Remove or significantly reduce grazing and avoid mowing in the breeding season
				174	Avoid high disturbance to breeding areas from humans or farming activities
				175	Use predator fencing where practical to exclude ground predators.
				176	Survey inland breeding populations to better understand where habitat creation and management should be targeted
Stone Curlews (<i>Burhinus oedicnemus</i>)	SP 07	Encourage Stone Curlews to breed in Lincolnshire	More	177	Survey for stone curlew in suitable areas of the county including lapwing plots and (re-)forested areas (Lincolnshire Bird Club members and farmers)
				178	Encourage local residents to listen for night-time displays by stone curlew and report them to Lincolnshire Bird Club
				179	Encourage interested landowners to create lapwing plots in arable fields to attract breeding stone curlews in south and mid-Lincolnshire on well drained soils
Natterjack Toads (<i>Epidalea calamita</i>)	SP 08	To increase the number of Natterjack Toad populations in Lincolnshire	More	180	Create suitable habitat for breeding and wintering natterjack toads
				181	Identify suitable populations to support introduction into receptor areas
				182	Secure any legal and landowner permissions required
				183	Introduce natterjack toads into receptor areas
				184	Monitor natterjack population size and spread to any suitable habitat nearby

5.5 Moving from Strategy to Delivery

Following the publication of the Greater Lincolnshire Local Nature Recovery Strategy, the focus will shift from development to delivery. This marks the beginning of a long-term, collaborative effort to turn the LNRS's priorities and mapped opportunities into meaningful action on the ground.

The LNRS is not a prescriptive plan, but a shared vision and framework to guide where nature recovery efforts can have the greatest impact. It will support decision-making across sectors, informing land management, planning, investment, and community action.

Delivery will be led by a wide range of partners, including local authorities, farmers and landowners, developers, conservation organisations, and communities. The Responsible Authority will continue to play a key role in coordinating progress, monitoring outcomes, and preparing for future iterations of the LNRS.

National policy and funding mechanisms are expected to support delivery of the LNRS. Public authorities now have a legal duty to have regard to the LNRS, and actions aligned with the strategy will be recognised as strategically significant under the biodiversity net gain metric, and will receive 1.15x unit uplift. The LNRS will also help inform Local Plans and planning decisions, and guide applications to Environmental Land Management (ELM) schemes and other funding sources.

As delivery progresses, the LNRS will help build momentum, attract investment, and strengthen partnerships - laying the foundation for a connected, resilient nature recovery network across Greater Lincolnshire.

5.6 Landscape Recovery Projects

Landscape Recovery projects are large scale, Defra funded, nature recovery schemes which seek to enhance biodiversity, using a natural capital approach to support a blended finance model while providing benefits for people and society.

In Greater Lincolnshire three Landscape Recovery projects, from the first and second rounds of funding, are working to deliver important enhancements to biodiversity and improve the benefits that the natural environment provides for the people that live in the area. They are:

- Boothby Wildland
- Greater Frampton Vision
- Lincoln and Witham Landscape Recovery Project

Landscape recovery projects have been considered in the development and mapping of priorities actions and will play a key role in the delivery of the Greater Lincolnshire LNRS.



5.7 Glossary

Accretion: The gradual build-up of sediment in coastal or river environments, leading to land formation or shoreline expansion.

Agri-environment: Schemes or practices that support environmentally friendly farming, encouraging biodiversity, soil health, and water quality.

Ancient, veteran and mature trees:

- **Ancient:** Very old trees with high ecological, cultural, or historical value.
- **Veteran:** Trees with ancient features (e.g. hollow trunks), regardless of age.
- **Mature:** Fully grown trees, not necessarily old or ecologically significant.

Areas of particular importance: strategically designated areas in the LNRS for their value to nature.

Biodiversity: The variety of all living organisms in a designated area, including species, ecosystems, and genetic diversity, which supports ecosystem resilience and services.

Biodiversity net gain: The act of leaving biodiversity in a measurably better state. It refers to the mandatory requirement for development to result in a minimum of 10% more biodiversity units after completion.

Biodiversity Net Gain Site Register: Register of sites created to achieve biodiversity net gain.
Blue infrastructure: Water features like rivers, lakes, wetlands, and SuDS.

Carbon sequestration: The process of capturing and storing atmospheric carbon dioxide in plants, soils, oceans, or geological formations to mitigate climate change.

Chalk aquifer: A water-bearing layer of chalk rock that stores and transmits groundwater, often used for public water supply in the UK.

Climate adaptation: Adjusting systems to cope with climate impacts (e.g. flood defences).

Climate mitigation: Reducing greenhouse gas emissions or enhancing carbon sinks.

Connected watercourses: Refers to the less natural watercourses within a catchment, this can include canals, drains and ditches. Due to the connectivity between all watercourses, it is important that they are considered when seeking to deliver nature recovery.

Conservation covenants: A voluntary agreement between a landowner and a responsible authority to manage land for biodiversity. While voluntary they are legally binding.

Environmental Improvement Plan: A plan required by the Environment Act 2021, prepared by the Secretary of State setting out how the Government will improve the environment over a period no shorter than 15 years. For example, the 25 Year Environment Plan.

Environmental Land Management Schemes (ELMs): UK government programmes that pay land managers for delivering public goods like improved biodiversity, water quality, and carbon storage.

Environmental net gain: The act of leaving the environment in a measurably better state. Links into natural capital and ecosystem services.

Green infrastructure: Vegetated areas like parks, woodlands, and green roofs.

Green infrastructure strategies: Planning and managing networks of green spaces (e.g. parks, hedgerows, wetlands) to deliver environmental, social, and economic benefits.

Invasive species: Non-native species that spread rapidly and negatively impact native ecosystems, biodiversity, or human interests.

Local Natural Capital Plan: Strategic, place based plans that take a natural capital approach to articulate local vision for and the societal benefits of meeting objectives set out in the 25 Year Environment Plan.

Local Nature Recovery Strategy: spatial strategies that will establish priorities and map proposals for specific actions to drive nature's recovery and provide wider environmental benefits.

Natural capital: The stock of natural resources (e.g. soil, water, air, species) that provide ecosystem services essential for human wellbeing and economic activity.

Nature based solutions: Defined by the IUCN as "actions to protect, sustainably manage, and restore natural and modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits.

Net Zero: A state where human carbon emissions are at a relative zero through a process of reducing emissions where possible and offsetting any non reducible emissions.

NSIPs (Nationally Significant Infrastructure Projects): Large-scale infrastructure developments (e.g. energy, transport) that require special planning processes due to their national importance.

OEP strategy: Outlining how Office of Environmental Protection work will contribute to improving the natural environment and environmental protection, including the protection of people from the effects of human activity on the environment.

Office for Environmental Protection (OEP): Statutory body created through the Environment Act 2021 with the intention of holding the Government accountable in regards to environmental duties and targets set out in legislation.

Outmarsh and Middlemarsh: Local historic term for distinct areas within the Lincolnshire Coast and Marshes NCA.

Priority habitats: Specific habitat types identified as needing conservation action under the UK Biodiversity Framework.

Species assemblages: Groups of species that coexist in a particular habitat, often used to assess ecological health or conservation value.

Supralittoral, sublittoral, littoral rock:

- **Supralittoral rock:** rock above the high tide line, only occasionally splashed by waves.
- **Littoral rock:** rock between the intertidal zone between high and low tide.
- **Sublittoral rock:** rock below the low tide line, always submerged.

5.8 Habitat Definitions

Arable field margins – Grass strips surrounding arable fields that are managed for wildlife. They are particularly important for pollinators and invertebrates as well as farmland bird assemblages. Found in the Central Lincolnshire Vale, Southern Lincolnshire Edge and The Fens.

Coastal and floodplain grazing marsh – Coastal and Floodplain grazing marsh are important habitats for wintering wildfowl and breeding waders, particularly threatened curlews and lapwings. Found in the Lincolnshire Coast and Marshes, The Fens, Trent and Belvoir Vales, Southern Lincolnshire Edge, Northern Lincolnshire Edge with Coversands, Lincolnshire Wolds, Kesteven Uplands, Humberhead Levels, Humber Estuary, Central Lincolnshire Vale, (Rockingham Forest).

Coastal saltmarsh – Upper vegetated areas of intertidal mudflats, they are particularly important for bird communities including rare terns and waders which use them as breeding sites. Saltmarshes also provide sheltered nursery sites for several species of fish. Found in the Humber Estuary, The Fens, Lincolnshire Coast and Marshes, Humberhead Levels, Northern Lincolnshire Edge with Coversands.

Coastal sand dunes – Coastal sand dunes that are particularly important for rare plant and invertebrate communities, including butterflies, moths and burrowing bees and wasps. Found in the Lincolnshire Coast and Marshes and The Fens.

Eutrophic standing water – Lakes that tend to have large algal populations during the summer. They are particularly important for marginal plants, amphibians, waterfowl and fish communities. Found in the Central Lincolnshire Vale, Humber Estuary, Humberhead Levels, Kesteven Uplands, Northern Lincolnshire Edge with Coversands, The Fens, Trent and Belvoir Vales.

Hedgerows – any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide. They are particularly important for connecting habitats. Found in the Central Lincolnshire Vale, Humberhead Levels and The Fens.

Intertidal mudflats – Areas of intertidal sediments that are characterised by high biological productivity and abundance of organisms, but low diversity with few rare species. Found in the Humber Estuary, The Fens, Humberhead Levels, Lincolnshire Coast and Marshes.

Lowland calcareous grassland – An important habitat for biodiversity in Greater Lincolnshire found on shallow soils, typically limestone and chalk. Vital for floral and invertebrate communities. Found in the Lincolnshire Wolds, Kesteven uplands, Southern Lincolnshire Edge, Northern Lincolnshire Edge, Central Lincolnshire Vale, Humber Estuary, The Fens and the Trent and Belvoir Vales.

Lowland dry acid grassland – An important habitat in Greater Lincolnshire, typically occurs on nutrient poor, acidic rocks, sands, or gravels. Important for rare plant and invertebrate communities. Found in the Trent and Belvoir Vales, Northern Lincolnshire edge with Coversands, Central Lincolnshire Vale, Southern Lincolnshire Edge, Lincolnshire Wolds, Humber Estuary and the Humberhead Levels.

Lowland fen – Lowland fens are rare peatland habitats characterised by high proportions of bog mosses. Fen habitats support diverse communities. Some can contain up to 550 species of higher plants, a third of our native plant species; up to more than half the UK's species of dragonflies, several thousand other insect species, as well as being an important habitat for a range of aquatic beetles. Found in the Fens, Kesteven Uplands, Southern Lincolnshire Edge, Central Lincolnshire Vale, Lincolnshire Wolds, Lincolnshire Coast and Marshes, Northern Lincolnshire Edge with Coversands, Humber Estuary and the Humberhead Levels.

Lowland heathland – Lowland heathland is a threatened habitat across the UK that is particularly important for characteristic birds, reptiles, invertebrates, vascular plants, bryophytes and lichens. Found in the Trent and Belvoir Vales, Northern Lincolnshire Edge with Coversands, Central Lincolnshire Vale and the Humberhead Levels.

Lowland meadows – Lowland meadows and pastures are important habitats for skylark and a number of other farmland birds, notably corncrake which has experienced a major range contraction across the UK. Found in the Lincolnshire Coast and Marshes, Central Lincolnshire Vale, The Fens, Trent and Belvoir Vale, Southern Lincolnshire Edge, Northern Lincolnshire Edge with Coversands, Lincolnshire Wolds, Humberhead Levels, and the Humber Estuary.

Lowland mixed deciduous woodland – Lowland mixed deciduous woodland includes most ancient semi natural woodland in Southern and Eastern England. It is a particularly important habitat for characteristic tree species, including oak and birch as well as being particularly important for floral, invertebrate, bird and bat communities. Found in the Kesteven Uplands, Central Lincolnshire Vale, Lincolnshire Wolds, Lincolnshire Coast and Marshes, Trent and Belvoir Vales, The Fens, Southern Lincolnshire Edge, Northern Lincolnshire Edge with Coversands, Humberhead Levels, and the Humber Estuary.

Lowland raised bog – Peatland habitats with waterlogged boggy soils formed through 'paludification'. Supports rare plants, breeding waders, wildfowl and invertebrates and is particularly important for carbon sequestration. Found in the Humberhead Levels, Northern Lincolnshire Edge with Coversands.

Mesotrophic lakes – Rare nutrient-poor lakes that are important for biodiversity, particularly macrophytes, macroinvertebrates and rare fish.

Traditional orchards – Sensitively or traditionally managed orchards. Orchards are hotspots for biodiversity, supporting a wide range of wildlife and containing UK BAP priority habitats and species, as well as an array of Nationally Rare and Nationally Scarce species. They are also important for social and communal species. Found in the Lincolnshire Coast and Marshes, The Fens, Lincolnshire Wolds, Kesteven Uplands, Southern Lincolnshire Edge, Northern Lincolnshire Edge with Coversands, Trent and Belvoir Vales, Central Lincolnshire Vale, Humber Estuary and the Humberhead Levels.

Open mosaic habitats on previously developed land – Areas of land with evidence of serious modification or development that are of ecological importance. Examples include open mosaic wetlands on disused quarries. Found in the Central Lincolnshire Vale, Humber Estuary, Humberhead Levels, Kesteven Uplands, Lincolnshire Coast and Marshes, Lincolnshire Wolds, Northern Lincolnshire Edge with Coversands, Southern Lincolnshire Edge, The Fens, Trent and Belvoir Vales.

Peat and clay exposures with piddocks – Rare, fragile habitats where peat and clay sediments are exposed, allowing piddock species to bore in, it supports key biodiversity, including a broad range of plants, molluscs and crabs. Found in the Lincolnshire Coast and Marshes (NCA42).

Ponds – Ponds are typically small, either seasonal or permanent areas of standing water. They are particularly important habitats for biodiversity, including nationally scarce plants and invertebrates. Found in the Central Lincolnshire Vale, Humber Estuary, Kesteven Uplands, Lincolnshire Coast and Marshes, Lincolnshire Wolds, Northern Lincolnshire Edge with Coversands, Southern Lincolnshire Edge, The Fens, Trent and Belvoir Vales, (Rockingham Forest).

Purple moor-grass and rush pastures – Purple moor-grass and rush pastures are characterized by poorly drained, acidic soils with high abundances of purple moor grass and rush plants. Important habitats for rare plant, invertebrate and bird communities. Found in the Northern Lincolnshire Edge with Coversands, Humberhead Levels and the Central Lincolnshire Vale.

Reedbeds – Reedbeds are areas of wet ground dominated by reeds. Reedbeds are important habitats for rare birds and invertebrates, including 6 nationally rare Red Data Birds and 5 GB Red Data Book Invertebrates. Found in the Humber Estuary, Trent and Belvoir Vales, The Fens, Northern Lincolnshire Edge with Coversands, Lincolnshire Wolds, Lincolnshire Coast and Marshes, Humberhead Levels and the Central Lincolnshire Vale.

Rivers and streams – Priority rivers and streams are defined as high quality natural and ‘near-natural’ running waters. They are important habitats for nature and for human wellbeing, and support broad aquatic, invertebrate, floral and bird communities. Found in the Lincolnshire Wolds, Humberhead Levels, Trent and Belvoir Vales, The Fens, Southern Lincolnshire Edge, Northern Lincolnshire Edge with Coversands, Lincolnshire Coast and Marshes, Kesteven Uplands, Humber Estuary and the Central Lincolnshire Vale.

Sabellaria spinosa reefs – Seafloor reefs of interconnected polychaete tubes. They are particularly important for rare epibenthic and benthic communities within these habitats. Found in The Wash.

Saline lagoons – Saline water bodies that are partially separated from the adjacent sea, they retain a proportion of their seawater at low tide they contain rare invertebrates as well as providing important habitats for aquatic flora, waterfowl, marshland birds and seabirds. Found in The Wash, Humber Estuary, Lincolnshire Coast and Marshes and The Fens.

Seagrass beds – Seagrass beds (*Zostera* spp.) are important habitats that are particularly important for marine species assemblages, providing important nursery grounds for fish species and in some areas, for cephalopods. Found in The Wash and The Humber.

Tufa formations – a limestone formation formed when calcium carbonate precipitates out of the water in unheated rivers or lakes.

Wetland mosaics – Wetland mosaics are habitats made of a ‘mosaic’ of small wetland habitats.

Wet woodland – Wet woodland is an important habitat that occurs on poorly drained or seasonally wet soils. Wet woodlands are important habitats for biodiversity, including bryophytes, invertebrates, rare plants and otters. Found in the Central Lincolnshire Vale, Humber Estuary, Humberhead Levels, Kesteven Uplands, Lincolnshire Coast and Marshes, Lincolnshire Wolds, Northern Lincolnshire Edge with Coversands, Southern Lincolnshire Edge, The Fens and the Trent and Belvoir Vales.

Wood pasture and parkland – Wood-pasture and parkland are mosaic habitats valued for their trees, especially veteran and ancient trees, and supports biodiverse plant and animal communities. Also, they are often areas of cultural and historical importance. Found in the Trent and Belvoir Vales, The Fens, Kesteven Uplands, Southern Lincolnshire Edge, Lincolnshire Wolds, Northern Lincolnshire Edge with Coversands, Lincolnshire Coast and Marshes, (Leicestershire and Nottinghamshire Wolds).

