

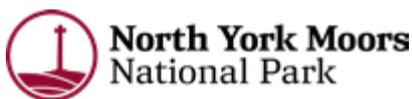


North Yorkshire and York Local Nature Recovery Strategy (LNRS)

Document 1: Thriving Nature in North Yorkshire
and York

Short Summary

Consultation Draft | June 2025



Contents

- What is a LNRS? 4
- Why do we need a LNRS? 4
- Who has been involved? 5
- Vision and principles 6
- Our priorities..... 8
- Benefits from nature 10
- Focus species..... 11
- Our nature network - Local Habitat Map 12
- Ways to help nature thrive - what you can do 14
- Find out more 16

What is a LNRS?

A Local Nature Recovery Strategy (LNRS) is a new type of plan to reverse the decline in nature, while bringing many other benefits to people.

We are required by law to prepare an LNRS for North Yorkshire and York and its main purpose is to restore existing natural areas and propose new ones to help our wildlife flourish.

Our LNRS must:

- Agree what is most important for nature’s recovery
- Map the most valuable existing natural areas
- Map proposals for improving or creating natural areas along with other benefits

The strategy does not force landowners or land managers to make any changes or undertake any actions on the land that they own or manage, nor does it change any existing protections or restrictions. Instead, the strategy seeks to encourage working together for nature across our region.



Curlew

Picture credit: Paul Harris

Why do we need a LNRS?

- In Yorkshire over 25% of species have declined in the last 30 years
- Our area contains over 800 species considered to be endangered or vulnerable to extinction, including adder, curlew, European eel, water vole and burnt orchid
- Only 15% of our Sites of Special Scientific Interest (SSSI) sites are in ‘favourable’ condition, with 71% assessed as ‘unfavourable – recovering’, 8.77% ‘unfavourable – no change’ and 4.54% ‘unfavourable – declining’
- Less than 20% of North Yorkshire and York’s rivers are classed as having good ecological status



Water Vole

Picture credit: Natural England - Paul Lacey



Workshop with farmers, Selby Auction Mart

Who has been involved?

Preparation of the LNRS has been led by North Yorkshire Council with support from a wide range of organisations and stakeholders, including:

- Natural England
- Forestry Commission
- Environment Agency
- York and North Yorkshire Mayoral Combined Authority
- City of York Council
- North York Moors National Park Authority
- Yorkshire Dales National Park Authority
- Forest of Bowland, Howardian Hills and Nidderdale National Landscapes’ teams
- Yorkshire Wildlife Trust
- White Rose Forest
- Dales to Vales River Network
- National Farmers Union (NFU)

During the development of the strategy, we have included the views and expertise of many interest groups and individuals across our geography. We have facilitated five webinars, three in-person briefings for councillors, 30 in-person workshops, 30 stakeholder one-to-one interviews, and engaged with 80 different organisations and over 1,500 individuals.

Vision and principles

Our vision for restoring nature is:

To work together to enhance, expand, restore and connect our region's habitats for thriving nature across North Yorkshire and York.

Our ambition is that by 2035 our area will be an example for abundant nature, and we will leave our natural environment in a better state for people and wildlife species, while supporting a prospering economy and addressing climate change.

Working with our stakeholders we have co-created 10 principles that underpin our vision. They are:

Principles: What we need to do:

- 1 Restore nature's way of doing things, like recreating floodplains to manage flooding better
- 2 Produce food, fuel and timber in a nature friendly way
- 3 Connect people to nature by helping people become more aware of it, our responsibility to it and the health and wellbeing benefits it can provide
- 4 Manage our water sustainably for both people and wildlife
- 5 Enhance the character of our area



Picture credit: Colin Aldred



Picture credit: Simon Vine



Picture credit: Charlie Fox, North York Moors National Park Authority

Principles: How we can do it:

- 6 Work across communities, businesses, public bodies and not-for-profit organisations to help nature to thrive
- 7 Put nature at the heart of political decision making
- 8 Attract funding and green finance into nature
- 9 Promote jobs, education, apprenticeships, and skills in delivering nature recovery
- 10 Monitor change by recording any changes in numbers of wildlife species, tree cover area and other habitats



Picture credit: White Rose Forest

Our priorities

Our priorities for nature recovery across North Yorkshire and York have been developed by working with a wide range of experts, community groups, farmers, landowners and others. Our priorities set out what we are seeking to do, and why we are seeking to do it.



Bat box building

Picture credit: Andy Steele

Priorities across North Yorkshire and York

We agreed with stakeholders several priorities that would apply across our whole geography. These are:

- Ensure the join up of habitats like woodlands and wetlands so wildlife species can move more easily
- Undertake actions to benefit key species (for example: Adder, Curlew and Water Vole)
- Control invasive species (for example Himalayan Balsam and Japanese Knotweed)
- Work with residents, communities and organisations for opportunities to get involved with nature recovery
- Improve methods for recording nature and share knowledge between organisations for improving nature

Habitat priorities

Alongside the above priorities, we have 39 nature recovery priorities, which are organised into the seven categories below:

-  Farmland
-  Upland
-  Grassland
-  Woodland
-  Water and wetlands
-  Urban
-  Coast

Measures (actions)

Each priority has a number of measures, which are the practical 'on the ground' actions that would help to deliver the aims of the priority. In other words, how we could do nature recovery and where we could do it.

For example, in farmland areas, one of our priorities is to expand the hedgerow network. One of the measures (actions) to achieve this is to improve existing hedgerows by planting up gaps, carrying out hedge laying and planting trees within the hedgerow.



Planting up gaps of an existing hedgerow

Picture credit: Natural England, Peter Roworth



Rawcliffe Lake, York

Benefits from nature

Our society and economy depend upon a whole range of wider benefits from nature that help us meet our daily needs, as well as support our ability to manage the effects of climate change.

Examples of these wider benefits from nature include:¹

-  Supporting pollination of our plants and crops
-  Cooling and shading from trees and plants
-  Lowering of noise levels through absorption by trees and plants
-  Helping to regulate our climate
-  Providing us with clean water

As well as enhancing and creating habitat for nature, the priorities contained within the strategy will also make positive contributions to these wider benefits from nature that we all enjoy.

¹ Icons supplied by Natural England



Insects accessing wildflowers also support pollination of our plants and crops

Picture credit: Natural England



Cooling and shading from trees at Derwenthorpe, York

Picture credit: Tris Terry

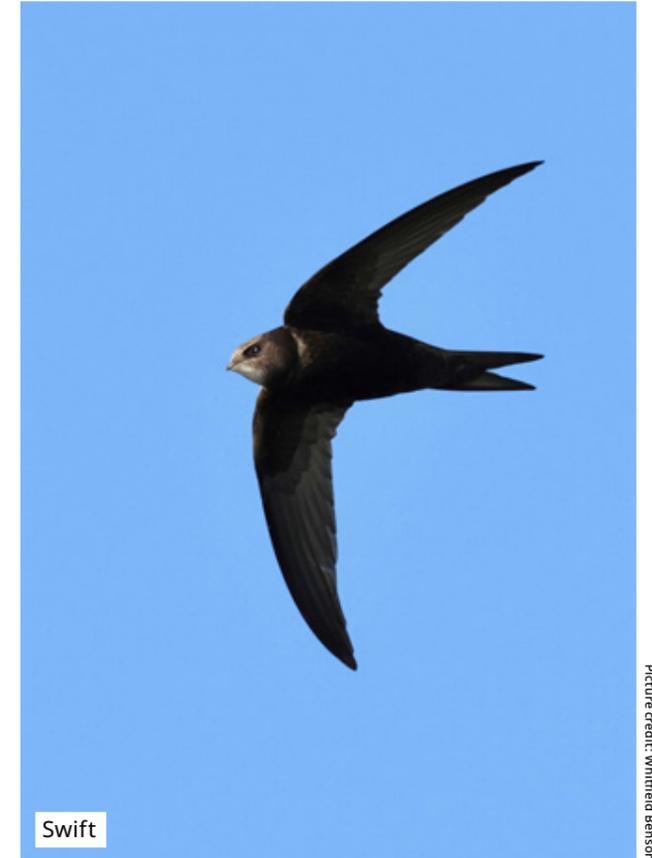
Focus species

There are many rare and threatened species in North Yorkshire and York, however the declines that we have seen in these species can be reversed by enhancing, creating and connecting habitats across our geography.

Working with experts we have drawn up a list of 83 focus species that would benefit from improvements to habitats and we plan to record and monitor any increase in the number of those species in our area, to help understand if our strategy is making a difference.

Our focus species list includes:

- Adder
- Burnt Orchid
- Swift
- Hen Harrier
- Curlew
- White-clawed Crayfish
- Tansy Beetle
- Red Squirrel



Swift

Picture credit: Whitfield Benson

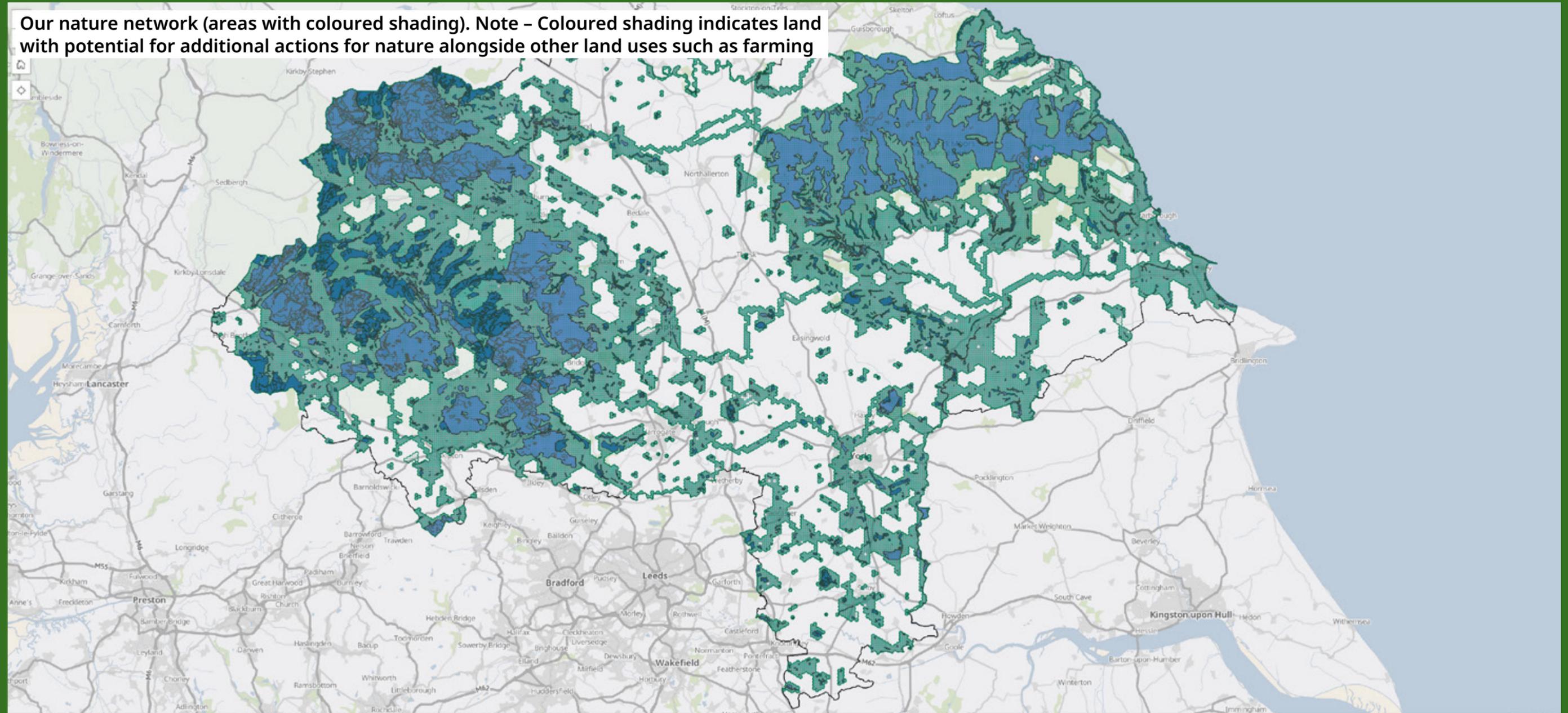


Red Squirrel

Picture credit: Gareth Atkinson

Our nature network - Local Habitat Map

Our nature network (Local Habitat Map) provides a vision to create a connected network of habitats across North Yorkshire and York. It will form part of the proposed national nature recovery network across England.



Ways to help nature thrive – what you can do

Everyone in North Yorkshire and York can contribute to our vision 'to work together to enhance, expand, restore and connect our region's habitats for thriving nature across North Yorkshire and York'

Residents and community groups can help nature to thrive in their local area, while landowners, land managers, farmers and non-governmental organisations (NGOs) can work at a bigger scale to aid nature recovery, particularly by working in partnership.

Residents

Private gardens make up a significant proportion of our total land area and there are several measures within the strategy that can be undertaken in gardens to benefit nature, such as planting native trees, shrubs and wildflowers, reducing the frequency of lawn mowing, and creating small areas of water such as ponds and rainwater gardens. Action across a neighbourhood can also expand and connect natural habitats, supporting a wide variety of species.

Residents can use the strategy to:

- Inform the measures (actions) they can carry out in their gardens and local parks
- Join a citizen science group involved in recording and monitoring increases in the number of those species in our area
- Join a volunteer programme run by organisations such as Yorkshire Wildlife Trust (Team Wilder) across Yorkshire, St Nicks (Green Corridors) in York, and the Lower Ure Conservation Trust (LUCT) near Ripon

Landowners, land managers and farmers

Over 70% of our land area is farmed and we also have many large estates across our geography. Much of this land is managed for food, fuel or timber, but there is great potential to better integrate natural habitats alongside these productive uses, bringing down costs for farmers through reduced input costs, supporting nature and making our land more resilient to climate change.

Landowners, land managers and farmers can use the LNRS to:

- Understand how their land fits within the Local Habitat Map and the nature network
- Inform the measures (actions) they could carry out on their land
- Inform and support applications for funding and delivery of projects



Monitoring water quality

Picture credit: Charlie Fox



TadCrafters meadow creation

Picture credit: Andy Steele



Team Wilder Empowerment Day - Urban Tree Huggers

Picture credit: Jo Rawson, Yorkshire Wildlife Trust



Forestry Commission woodland advisor working with farmer

Picture credit: Forestry Commission

Find out more

We hope you found this short summary document informative. Please do consider exploring the Local Habitat Map for North Yorkshire and York and completing our online consultation survey by accessing the consultation page on our website.

www.northyorks.gov.uk/local-nature-recovery-strategy-consultation

Contact us

Online: **northyorks.gov.uk/contact-us**

By telephone: For further information call **0300 131 2131** and say 'nature recovery' when prompted

North Yorkshire Council, County Hall, Northallerton, North Yorkshire, DL7 8AD

You can request this information in another language or format at **northyorks.gov.uk/accessibility**

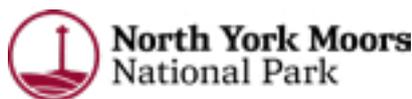


North Yorkshire and York Local Nature Recovery Strategy (LNRS)

Document 2: Thriving Nature in North Yorkshire
and York – Our Local Nature Recovery Strategy



Consultation Draft | June 2025



LNRS Document Navigation

The North Yorkshire and York Local Nature Recovery Strategy (LNRS) is split into 5 separate parts to help users of the strategy easily find the information that is most relevant to them. The 5 parts are set out in the table below, with a brief description of each one. Please click on one of the other parts in the table to access it.

This is: **Document 2 Thriving Nature in North Yorkshire and York – Our Local Nature Recovery Strategy**

1	Thriving Nature in North Yorkshire and York – Non-Technical Summary Provides a non-technical summary of the North Yorkshire and York Local Nature Recovery Strategy
2	Thriving Nature in North Yorkshire and York – Our Local Nature Recovery Strategy Provides a detailed overview of the North Yorkshire and York Local Nature Recovery Strategy
3	Statement of Biodiversity Priorities Part I – Description of Our Strategy Area Provides a detailed description of the strategy area of the North Yorkshire and York Local Nature Recovery Strategy
4	Statement of Biodiversity Priorities Part II – Priorities and Measures Sets out the priorities and measures for the North Yorkshire and York Local Nature Recovery Strategy
5	The Local Habitat Map Online mapping platform providing the Local Habitat Map for the North Yorkshire and York Local Nature Recovery Strategy, including existing Areas of Particular Importance for Biodiversity (APIBs) and Areas that Could Become of Particular Importance for Biodiversity (ACBs)
Appendix 1	LNRS Prioritisation methodology and scoring criteria
Appendix 2	LNRS Species prioritisation methodology
Appendix 3	LNRS Mapping methodology and datasets
Appendix 4	LNRS Nature recovery opportunities longlist
Appendix 5	LNRS Priority species list
Appendix 6	LNRS online survey responses summary, February 2024

Contents

1. What is the purpose of this document?	4
2. What is a Local Nature Recovery Strategy?	5
3. Vision	11
4. Our Natural Environment	15
5. Our State of Nature	20
6. Links to other plans and strategies	31
7. Priorities and Measures (Actions)	37
8. Our Nature Network – the Local Habitat Map	55
9. Delivery – who can do what?	62

1. What is the purpose of this document?

The intention of this document is to provide an overview of the scope of the LNRS, whilst also forming a signpost to, and summary of, more detailed information that can be found in the Description of Strategy Area (Document 3), Statement of Biodiversity Priorities (Document 4), the Local Habitat Map and the supporting appendices.

2. What is a Local Nature Recovery Strategy?

Local Nature Recovery Strategies (LNRS) are a new system of spatial strategies intended to drive nature recovery, along with associated environmental improvements. Their preparation is a statutory requirement under the Environment Act 2021 and their main purpose is to identify appropriate actions and suitable locations to enhance existing habitats, or create new habitats, where this is most likely to provide the greatest benefits for nature and the wider environment.

Each strategy must:

- Agree priorities for nature's recovery
- Map the most valuable existing areas for nature
- Map specific proposals for enhancing or creating habitat for nature, along with wider environmental goals

This document is the LNRS for North Yorkshire and York, which has been led by North Yorkshire Council following appointment by Defra as the responsible authority for its preparation, in collaboration with a wide range of regional stakeholders.

In due course, Defra will require the responsible authority to review and republish their strategy as part of an ongoing cycle which considers what has been achieved and proposes what further work is needed for nature to recover. It is expected that the first published LNRS will be reviewed within 5-10 years.

The strategy does not force landowners or land managers to make any changes or undertake any actions on the land that they own or manage. In addition, it does not confer any additional protections or change existing protections and restrictions. Instead, the strategy seeks to drive collaborative, coordinated action for nature by setting out the most beneficial priorities and measures (actions) to enhance and create habitat, and identify where these could be carried out to have the greatest positive impact.

What does the strategy contain?

- Vision and principles – with our stakeholders we have co-created a vision statement with 10 supporting principles
- A description of our natural environment
- The state of nature across North Yorkshire and York – where are we now?
- Links to other plans and strategies
- The priorities and measures (actions) for nature recovery that we have established with our stakeholders
- The nature network and Local Habitat Map – online map (spatial representation of the LNRS)
- How we go about delivery of the LNRS

How has it been prepared?

Preparation of the LNRS has been led by North Yorkshire Council (NYC), as the responsible authority, with work having commenced in September 2023. NYC has been supported by an advisory group (steering group) with representation from the Defra arm's length bodies (Natural England, Forestry Commission and the Environment Agency), the protected landscapes in North Yorkshire (two National Parks and three National Landscapes), City of York Council, Yorkshire

Wildlife Trust, White Rose Forest, Dales to Vales River Network and the National Farmers Union (NFU). During the development of the strategy, NYC has also elicited the views and expertise of many wider stakeholders across our geography. We have facilitated five webinars, nine briefings to Council Members, 33 in-person workshops, 33 stakeholder one-to-one interviews and engaged with 90 organisations and over 1500 individuals.

Key statistics from engagement undertaken up to May 2025.



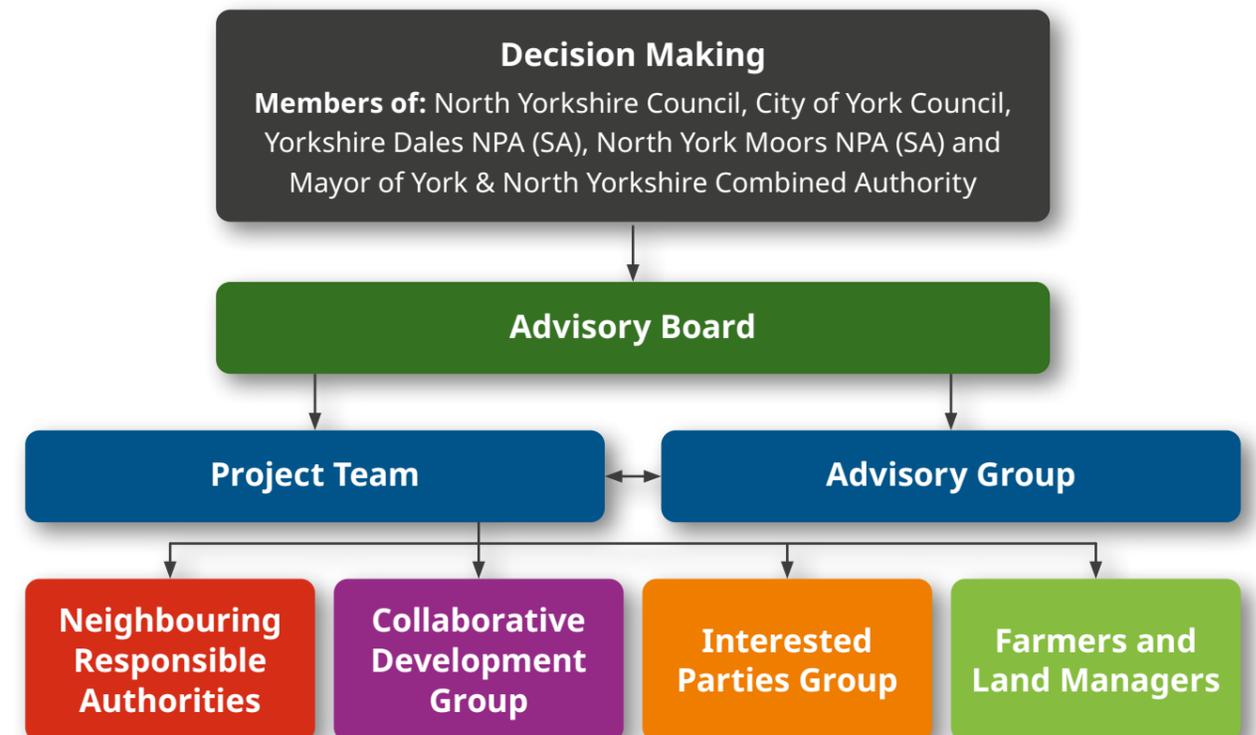
Who has been involved?

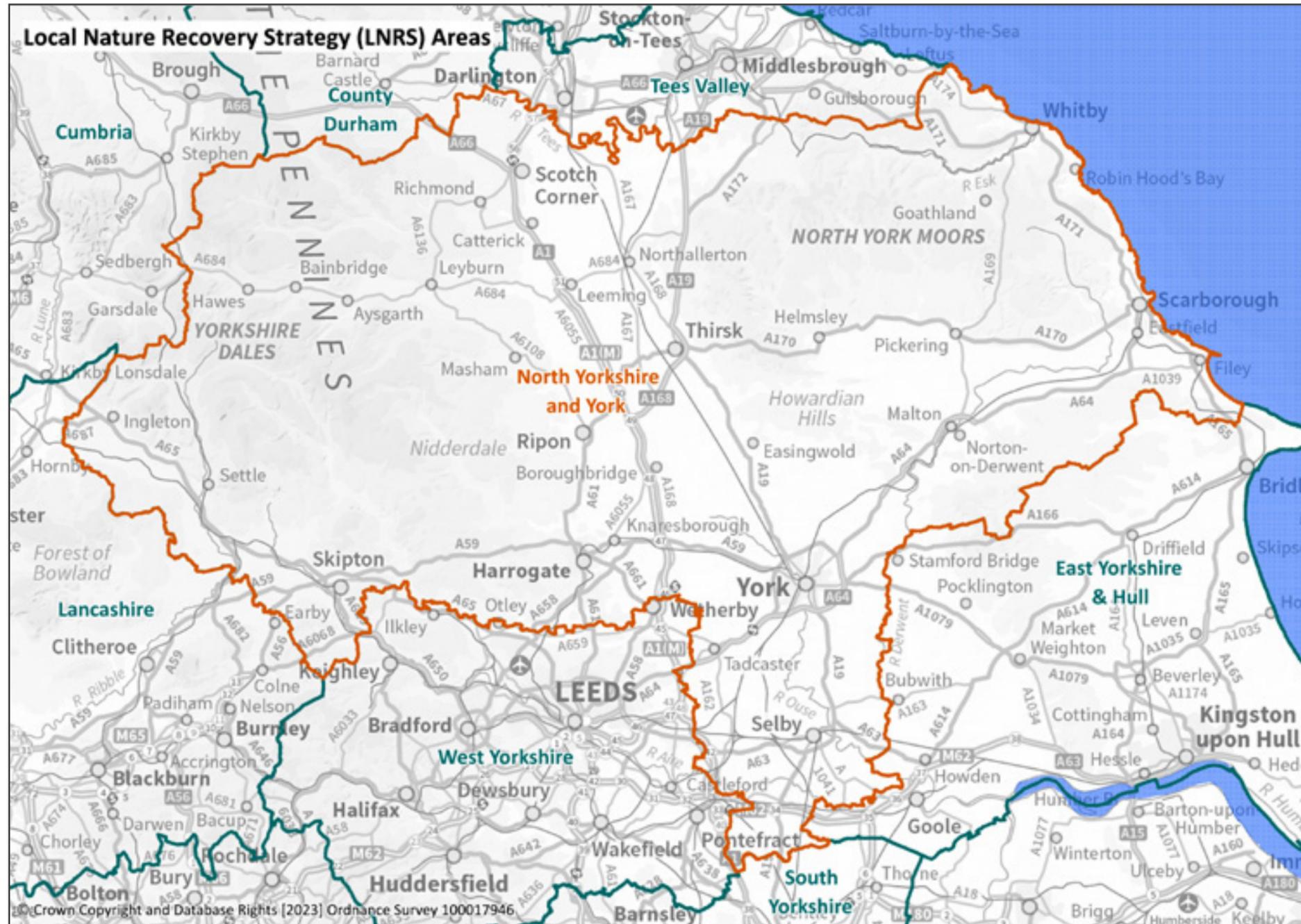
NYC developed a stakeholder engagement plan during summer 2023 to establish governance (working procedures and accountability), to raise awareness about LNRS, and determine which stakeholders to engage with. A working group from North Yorkshire Council and Natural England established a governance model for the LNRS (see diagram below), with the key groupings being:

- Lead Members from the responsible authority and supporting authorities – key decision makers
- Advisory Board – officers at director level, representing the responsible authority and supporting authorities (Natural England, City of York Council, Yorkshire Dales National Park Authority and North York Moors National Park Authority)

- Project Team – officers from NYC and the North Yorkshire and York Local Nature Partnership (LNP)
- Advisory Group – 18 advisory group members representing key stakeholder organisations
- Seven neighbouring LNRS responsible authorities (see plan overleaf)
- Two collaborative development groups – (i) habitat and species specialists (ii) experts from public health, climate change, natural capital, and economy
- Over 200 land managers and farmers
- Interested parties - local politicians, local authority senior officers, town and parish councils, environmental organisations, youth councils, our LNRS mailing list (over 400 contacts) and members of the public

Governance and stakeholder engagement





Who is the strategy for?

Everyone can take action for nature and play a part in local nature recovery. This strategy is for everyone across North Yorkshire and York, whether you are a landowner, farmer or local business owner, an environmental charity, developer or planner, a local resident, parks manager or community group.

How should it be used?

- **To encourage collaboration:** working across communities, businesses, public bodies and non-governmental organisations (NGOs) to help nature to thrive
- **To inform and evidence:** understand the local state of nature and the best actions we can all take to help nature recover, alongside other land use and development
- **To direct investment:** by setting out the best locations to focus action and resources to enhance habitat, including the delivery of environmental land management schemes (ELMs), biodiversity net gain (BNG) and local investment in natural capital (LINC).
- **To deliver wider benefits from nature:** Natural England's State of Natural Capital (SoNC)¹ report demonstrates how the stock of ecosystem assets underpins the provision of a suite of benefits from nature, which in turn contribute to the economy (see page 22)
- **To raise awareness:** encourage our citizens to appreciate the state of nature and to get involved in action on the ground
- **Monitor progress:** government will require us to review and republish our LNRS periodically, so we will need to monitor progress and map areas where action for nature recovery has been undertaken and those actions are having an impact



St Nicks launch of Wild York programme



Yorkshire Wildlife Trust's Team Wilder empowerment day

Picture credit: Yorkshire Wildlife Trusts

¹ State of Natural Capital Report for England – Natural England <https://publications.naturalengland.org.uk/publication/6683489974616064>

3. Vision



3. Vision

Vision

Our vision for restoring nature is:

To work together to enhance, expand, restore and connect our region's habitats for thriving nature across North Yorkshire and York.

Our LNRS identifies locations to improve biodiversity and deliver wider benefits from nature, such as capturing carbon from the atmosphere, flood regulation, and providing greater access to nature-rich spaces where this is most needed for health and wellbeing.

Since embarking on the preparation of the LNRS we have worked collaboratively with a wide range of stakeholders including farmers, landowners, habitat experts, local politicians, town planners and residents to ask what nature means to them, how we can reverse its decline and what many wider benefits nature recovery can bring to both people and wildlife. Together we have established a vision 'strap line' and an ambition for the coming decade.

Our ambition is that by 2035 our sub region will be an exemplar for abundant nature, and we will leave our natural environment in a better state for people and wildlife species, while supporting a prospering economy and addressing climate change.



Long Preston Floodplain project, near Settle

Principles: What we need to do

We have co-created 10 principles that will underpin our vision, statement of biodiversity priorities, and local habitat map. Principles 1 to 5 focus on what we need to do, with principles 6 to 10 focusing on how we can do it, they are:

1	Restore natural processes – restoring nature’s way of doing things, where people and wildlife are better able to thrive in a prospering economy, while addressing climate change
2	Produce food, fuel and timber in a nature friendly way
3	Connect people to nature – helping people become more aware of nature, our responsibility to it and the health and wellbeing benefits it can provide
4	Manage our water sustainably for both people and wildlife
5	Enhance our sense of place, with a thriving natural environment

Principles 1-5 align closely with the natural benefits referred to in the State of Natural Capital Report for England and this is covered in more detail on page 22.



Picture credit: Simon Vine

Sowerby Sport Village, Thirsk



Picture credit: Forestry Commission

Woodland planting in an upland landscape

Principles: How we can do it

6	Work across communities, businesses, public bodies and non-governmental organisations (NGOs) to help nature to thrive
7	Put nature at the heart of policy and decision-making
8	Attract funding and green finance into nature
9	Promote jobs, education, apprenticeships, and skills in delivering nature recovery
10	Monitor and evaluating change – recording uplifts to species, tree cover and habitats over time

Principles 6-10 are considered in more detail in Section 9.0 Delivery – who can do what?



Picture credit: North York Moors National Park Authority

Monitoring river fly species to assess water quality



Decision making session in Council Chamber

4. Our Natural Environment

4. Our Natural Environment

Our Description of Strategy Area (Document 3) covers the natural environment in more detail, the text below provides a summary from that document.

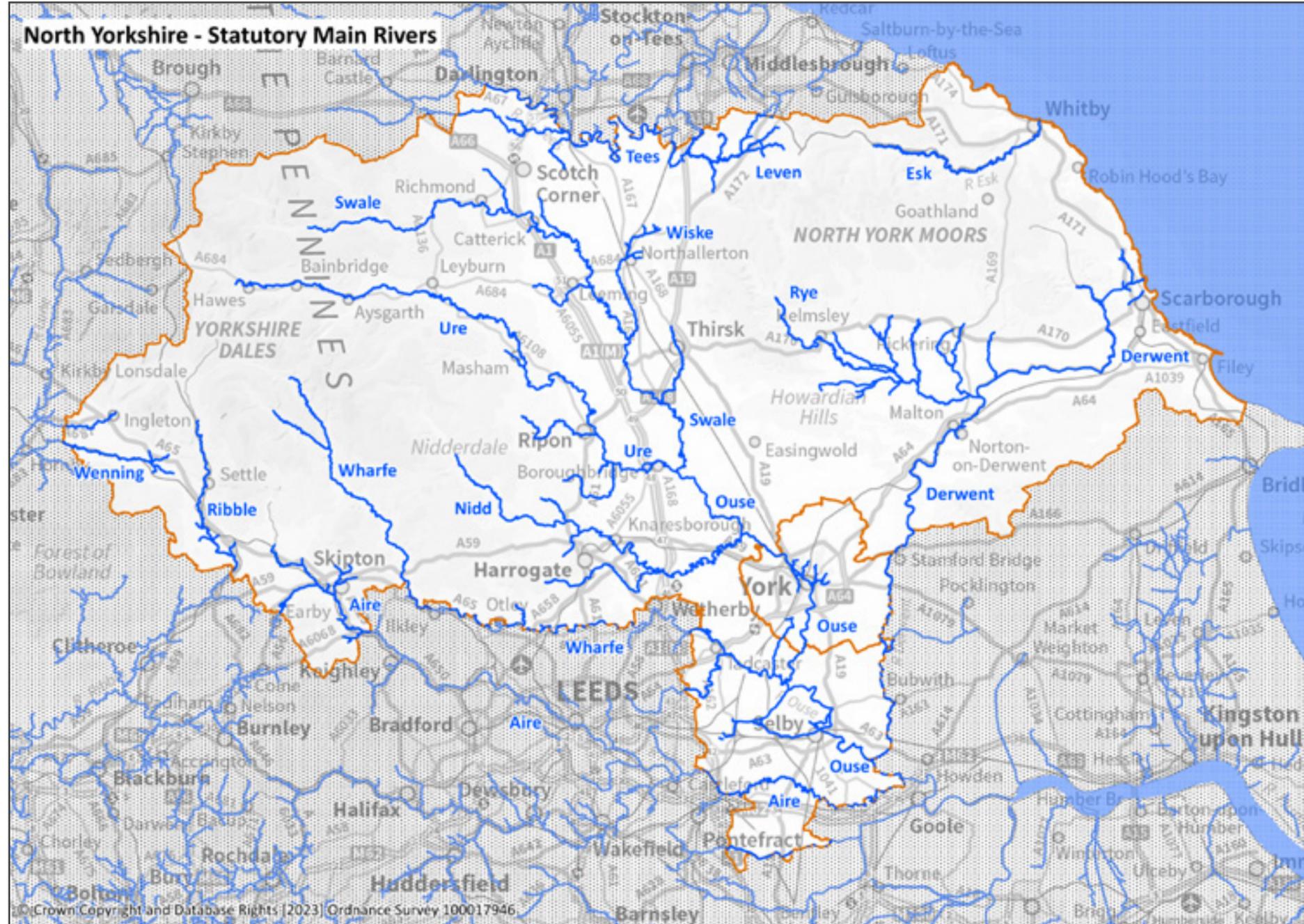
Our land area of over 850,000 hectares (8,500 square kilometres) covers a range of geologies including limestone, sandstone and ironstone. Long term interactions between land, climate, and hydrology have resulted in distinctive topography, with uplands characterised by the Yorkshire Dales, North York Moors and Yorkshire Wolds, and neighbouring lowlands including the Vale of Mowbray, Vale of York and Vale of Pickering.

North Yorkshire and York has an extensive river network (see plan overleaf), with the rivers Swale, Ure, Nidd and Ouse flowing in a south-easterly direction towards York and then on into the Humber estuary. Other rivers joining the Ouse downstream of York include the Aire, Wharfe and Derwent. In the north, the Tees and Esk form their own, separate river catchments, while in the west the river Ribble finds its source in the Dales before flowing into neighbouring Lancashire.

Our rivers support a diverse range of habitats, including floodplain meadows, with approximately 15% of the national floodplain meadow resource being found within the North Yorkshire and York area. The Lower Derwent Valley, south east of York, supports one of the best examples of traditionally managed species-rich floodplain meadow habitat in the UK and supports internationally important populations of wintering waterfowl.

North Yorkshire is noted for its upland landscapes, dominated by heather moorland and blanket bog that support rare species such as Hen Harrier, Merlin, and Bog Asphodel. The upland areas of the county contains 27% of England's blanket bog resource² and around 25% of the upland heathland resource; the North York Moors has the largest block of continuous heather moorland in England. The Yorkshire Dales National Park contains approximately half of all Britain's limestone pavement and contains a significant proportion of the national upland hay meadow habitat, which the area is also famous for.

² Our peatlands - Yorkshire Peat Partnership www.yppartnership.org.uk/our-peatlands



Lowland heathland is a rare habitat in England, and the York and Selby areas contain 2% of the country's resource, supporting rare species such as Pillwort, Slender Pond Snail, Adder and Nightjar.

Limestone habitats are especially rich in wildlife, and North Yorkshire is unique in having four different limestone types, each supporting unique habitats and species. These include the largest area of Carboniferous limestone in the Yorkshire Dales, the Permian Magnesian limestone running north to south through the centre of North Yorkshire, the Jurassic limestone on the southern edge of the North York Moors, and Britain's most northerly chalk outcrop (Cretaceous) in the Yorkshire Wolds. These support unique flora such as Lady's Slipper Orchid, Purple Milk-vetch and Perennial Flax. Almost half the plants of Conservation Concern in Yorkshire were linked with limestone and chalk³. The Yorkshire Dales contains more than 40% of England's upland calcareous grassland resource⁴.

As a percentage of our total land area, woodland cover across North Yorkshire and York is 11.48% compared with the England average of 14.87%⁵, nevertheless we have important areas of ancient and long-established woodlands across our geography. The North York Moors National Park has the highest density of Plantation on Ancient Woodland Sites (PAWS) in the North of England. North Yorkshire and York is known for its large number of country estates and associated parkland, including Fountains Abbey & Studley Royal, Duncombe Park, and Castle Howard, which support large numbers of veteran and ancient trees, an irreplaceable habitat.

The LNRS area encompasses the North Yorkshire coastline from Staithes to Filey, a highly distinctive heritage coast, with internationally recognised Jurassic and Cretaceous geology, and cliffs containing an array of fossils. Coastal grasslands support specialist invertebrates and plant species such as Bithynian Vetch and the hard cliffs provide an important nesting habitat for declining sea birds such as Kittiwake, whilst marine mammals such as Minke Whale and Bottlenose Dolphin can be seen out to sea.



Curlew

Picture credit: Paul Harris

³ State of Yorkshire's Nature - Yorkshire Wildlife Trust www.ywt.org.uk/StateofNature

⁴ Flagship Habitats in North Yorkshire (2019), M Hammond

⁵ National Forest Inventory (NFI) and Outside Woods (TOW) data, Forest Research

North Yorkshire and York hosts a range of rare and iconic species from birds such as the Curlew and Barn Owl, to the Tansy Beetle, also known as 'the Jewel of York', as one of only two places it is found in the UK. The North York Moors National Park is now home

to the only significant breeding population of Turtle Dove in the north of the UK and our area is one of few places in the country left for endangered species such as Tassel Stonewort and Freshwater Pearl Mussel.



Adder

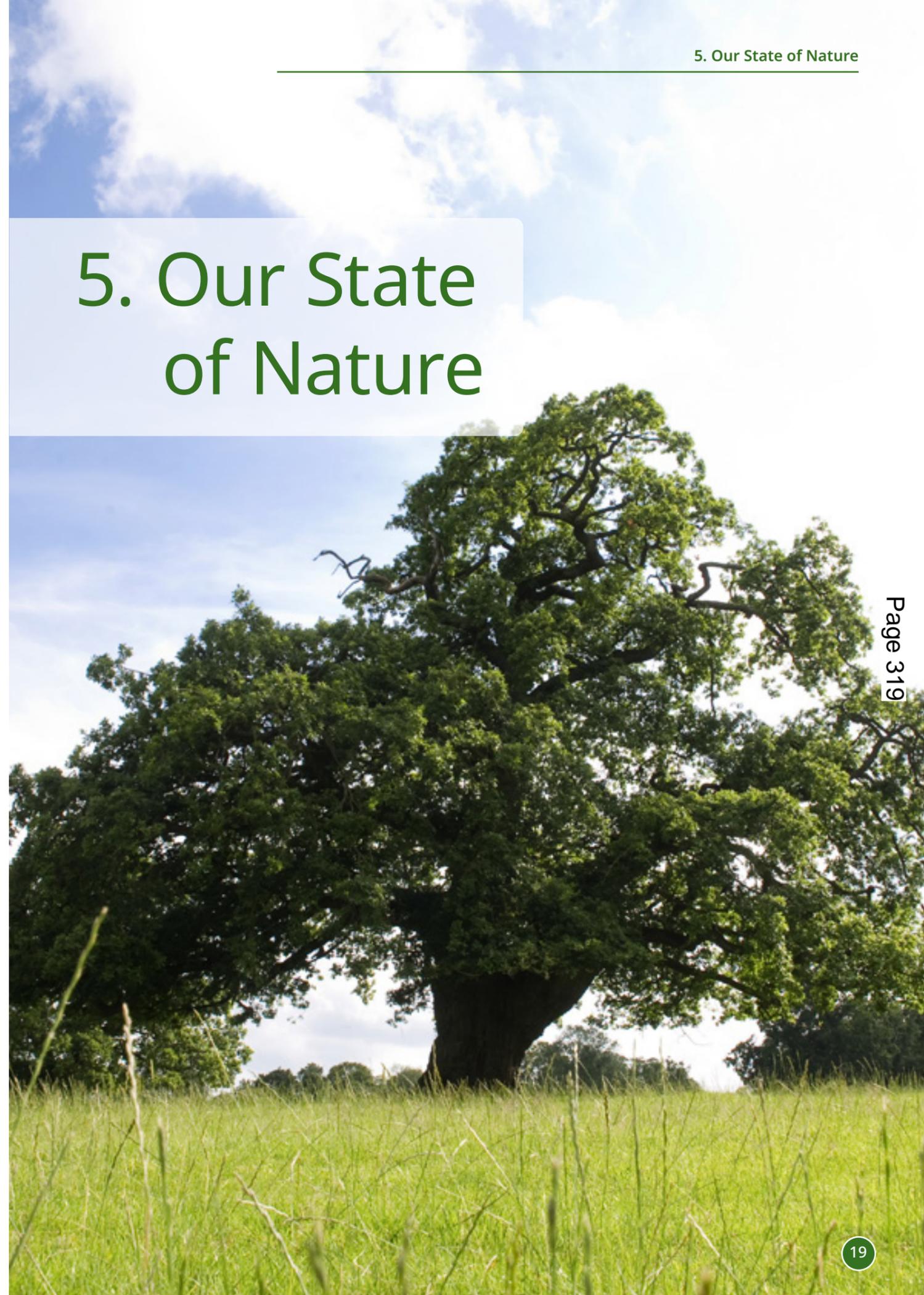
Picture credit: Will Askew



Kittiwake

Picture credit: Gareth Atkinson

5. Our State of Nature



Page 319

5. Our State of Nature

Our Description of Strategy Area (Document 3) covers the state of nature in North Yorkshire and York in more detail and the text below provides selective information from that document.

Species

In Yorkshire over 25% of species have declined in the last 30 years⁶ and this change can be seen in North Yorkshire and York by the dramatic decline of species such as Turtle Dove, White-Clawed Crayfish, Red Squirrel and Lady's Slipper Orchid. Our area contains over 8600 species considered to be endangered or vulnerable to extinction, including Adder, Curlew, European Eel, Water Vole and Burnt Orchid. Species that may be thought of as common such as the Common Toad, European Hedgehog or Swift are classed as priority species due to their dramatic declines in numbers in recent years.

Designated Sites

23% of the total area of North Yorkshire and York is internationally designated as either Special Protection Area (SPA), Special Areas for Conservation (SAC) or Ramsar. These range from the extensive upland heathland habitat in the North York Moors National Park, blanket bog habitat in the Yorkshire Dales National

Park, and floodplain meadow in the lower River Derwent. 13.8% of our total area is designated as Sites of Special Scientific Interest (SSSI) including areas of floodplain meadow along the River Ribble near Settle and lowland heath in the York and Selby area. Alongside these are Local Wildlife Sites (LWS) covering 1.2% of our total area, Local Nature Reserves (0.04%) and National Nature Reserves (0.2%). Irreplaceable habitats found within North Yorkshire and York include ancient woodland, blanket bog, limestone pavement and lowland fen.

However, these designations do not ensure that this land is in good quality for nature, due to a wide range of pressures. For example, only 15% our SSSI sites are in 'favourable' condition, with 71% assessed as 'unfavourable – recovering', 8.77% 'unfavourable – no change' and 4.54% 'unfavourable – declining'.



Picture credit: Gareth Atkinson

Pressures

Pressures that have led to the decline in species and the condition of designated sites will continue to impact into the future if not addressed, some of these include:

Land use – urbanisation and agricultural intensification since World War II have historically led to the direct loss in habitat, as well as a reduction in the quality of remaining habitat. This has created a fragmented network of sites for nature that have reduced the ability of species to migrate and made them more at risk of localised extinctions.

In the UK, the many demands on our land is an ongoing issue, including the needs of agricultural production, employment and residential development, strategic infrastructure including renewable energy, nature recovery and leisure and recreation. In January 2025, Government launched the consultation on its Land Use Framework (LUF) applicable to England. North Yorkshire and York faces all of these competing demands across its geography and it will need tools like the LUF and the planning system to help manage competing demands on land effectively.

Water Pollution – less than 20% of North Yorkshire and York's waterbodies are classed as having good ecological status, highlighting the impact issues such as pollution are still having on these ecosystems. More work is required to reduce the input of unwanted chemicals and nutrients from sewage treatment and runoff from roads and agriculture into our watercourses, to support the recovery of our river wildlife.

Air Pollution - In England, the two main sources of atmospheric pollutants are nitrogen oxides and ammonia. Nitrogen oxides result from the burning of fossil fuels, in both power stations and motor vehicles, while ammonia and methane are mainly emitted from agriculture. Overall, 96% of the England's most sensitive wildlife habitats are affected by excessive nitrogen deposition⁷.

Invasive species – There are estimated to be around 2,000 Invasive Non-Native Species (INNS) in the UK, with many being well established, such as the Grey Squirrel. Collectively, INNS are estimated to cost our national economy £1.84 billion a year and are a major threat to our nature. Some directly target our native wildlife (e.g. American Mink, Signal Crayfish), whilst others cause indirect harm, including undermining our riverbanks (Himalayan Balsam), damaging our property (Japanese Knotweed), or impacting on human health (Giant Hogweed). Control of INNS has been identified as one of our overarching priorities within the strategy (see priority OVR_P03).

Pests and diseases – These are prevalent throughout our natural world, with more entering our country through human activity and climate change. Warmer average temperatures and wetter environments could increase the presence of pests and disease even further. Ash dieback was accidentally introduced to England back in 2012 and is expected to kill up to 80% of ash trees across the UK⁸, which will change the landscape and threaten many species which rely on ash.

⁶ State of Yorkshire's Nature - Yorkshire Wildlife Trust www.ywt.org.uk/StateofNature

⁷ We need to talk about Nitrogen - British Ecological Society www.britishecologicalsociety.org/need-talk-nitrogen

⁸ Ash Dieback (Hymenoscyphus fraxineus) - Woodland Trust www.woodlandtrust.org.uk/trees-woods-and-wildlife/tree-pests-and-diseases/key-tree-pests-and-diseases/ash-dieback

Habitats

Farmland

Overview

Farmland makes up over 70% of the land area of North Yorkshire and York and, with over 6,900 farms⁹ across our LNRS area, farming plays a significant role in community life. Agriculture also has an essential role in managing our region's landscapes, flora and fauna, alongside its significant contribution to the local economy.

In broad terms, our flatter lowland areas and some parts of the coast tend to be occupied by larger arable and mixed farms, with our upland areas and foothills being occupied by smaller hill farms, typically focussed on livestock and mixed farming. Our engagement with farmers during 2024 suggests that across our geography there are pockets of land where landowners and farmers are taking action to help nature by including natural habitat alongside their farm business activity. This applies particularly in the protected landscapes, which have benefitted from the Farming in Protected Landscapes (FiPL) scheme, an initiative which provides advice and grants in respect of nature recovery and other objectives.

Elsewhere there is evidence that post-war agricultural intensification has resulted in field amalgamation through the removal of features such as hedgerows, trees, copses and ponds resulting in an environment with smaller and more fragmented areas of natural habitat, which is less able to support nature and wildlife.

Nature recovery in action – Birkdale Farm

Birkdale Farm in the Howardian Hills National Landscape is a 300-acre farm utilising regenerative agriculture principles to improve soil health and support biodiversity. The farm produces winter wheat with herbal leys as a 'break crop'. 150 breeding New Zealand Romney ewes support the management of various environmental options, improving the diversity of grassland and grazing wheat in February to reduce the risk of virus and therefore use of fungicide spray. No insecticides have been used on the farm for the past eight years. A mid-tier stewardship and Sustainable Farming Incentive (SFI) agreement supports rare arable plants, wildflowers, birds, invertebrates and newts whilst also protecting soil, water and hedgerows.

The farm has reduced its reliance on inputs (fertilisers and pesticides), extended the hedgerow network and implemented traditional management, incorporated flower-rich field margins and plots to support pollinators and predatory insects. 18 species of dragonfly and 10 species of bat have been recorded on the site, and rare moths, Great Crested Newt and arable plants such as Corn Buttercup and Field Pennycress have also been recorded through regular surveys.



Pollen and nectar mix, Birkdale Farm

Picture credit: Frances Standen

Picture credit: Becky Dennison, Yorkshire Wildlife Trust



Hay meadow, Ashes Pasture

Upland

Overview

Our upland landscapes are a stronghold for nationally and internationally important habitats, such as limestone pavement, upland heathland, blanket bog, upland hay meadows, calcareous grasslands, mires, flushes and other wetland features. These are home to a vast number of specialist species reliant upon these unique habitats. Our uplands are the source of multiple river systems in our area, and are thereby linked to opportunities to reduce water pollution and the impacts of flood events by storing more water upstream. Many of our upland habitats excel at storing carbon, essential to our ambitions to reduce carbon emissions and adapt to climate change.

However, these areas have also been subject to past policies that encouraged the drainage of upland habitats, resulting in de-wetting and drying out. Historically some of our upland habitats have been converted to grassland and some agricultural practices have resulted in overgrazing.

Nature recovery in action – Yorkshire Peat Partnership

Yorkshire Peat Partnership (YPP) is restoring peatlands at scale in the Yorkshire Dales and North York Moors National Parks and Nidderdale National Landscape. Their goal is to restore and conserve upland peat resources to ensure the long-term future of these unique and valuable habitats. To date YPP has been particularly active in peatland restoration in areas such as Swaledale, Wensleydale, Nidderdale and lower Wharfedale in the Yorkshire Dales, and Eskdale in the North York Moors. By the end of March 2024 YPP had delivered 46,952 ha of peat restoration work which is 50% of the estimated 94,220 ha peatland in their operational area¹⁰.

YPP is monitoring plots throughout their operational area to better understand how their work is affecting the peatlands they are restoring.



Peatland restoration

Picture credit: Yorkshire Peat Partnership

⁹ Defra (2021), Farm type and farm size, Structure of the agricultural industry in England and the UK at June

¹⁰ Resources – Yorkshire Peat Partnership www.yppartnership.org.uk/resources

Grassland

Overview

Grasslands are important habitats for wildlife, both in their own right and through connecting and buffering other habitat types. Some of our grasslands are fantastically rich in wildflowers which make them vital homes and stepping stones for pollinators, whilst others are important feeding and nesting sites for species such as farmland birds and wading birds. Good populations of fungi, such as waxcaps, can highlight unimproved, low-nutrient grasslands, which are a rare and threatened habitat in England. However, these diverse grasslands tend to be found in small, fragmented sites lacking wider connectivity.

Mirroring trends across England over recent decades, our geography has lost a significant proportion of its species-rich grassland. There has been a tendency for diverse grassland to be converted to less diverse 'improved' grassland for grazing and silage and some associated field amalgamation has also occurred, with the loss of networks of hedgerow, hedgerow trees, copses and field margins.



Main Lake, Nosterfield Nature Reserve

Picture credit: Tris Terry

In other areas, species-poor grasslands have often been lost in favour of creating other habitat types, such as woodland, or for other land uses such as housing, renewable energy or more 'productive' farmland. It is important we recognise their inherent value to support and connect nature in decision-making.

Nature recovery in action – Nosterfield Nature Reserve

The main Nosterfield Nature Reserve is 150 acres of wet grassland and open water situated between the Rivers Ure and Swale in North Yorkshire and it is managed by the Lower Ure Conservation Trust (LUCT). The underlying magnesian limestone and its associated aquifer makes the location particularly distinctive. Sand and gravel were produced from a former quarry here until the late 1980s and it was designated a local nature reserve (LNR) in 2001. A dramatic rise and fall in the water levels, associated with the natural water table and rainfall, results in a huge range in water levels, typically 2.5 m per year, creating ideal conditions for many breeding waders, such as Curlew, Redshank and Avocet. LUCT also manages the west end of Nosterfield Quarry (100 acres), including reedbed (breeding Bittern and Marsh Harrier) and magnesian limestone grassland. In a survey carried out in 2018, more than 1,100 species were recorded in 24 hours, evidencing the growth in biodiversity in the nature reserve since its restoration.



Flasks Lake, Nosterfield Nature Reserve

Picture credit: Tris Terry

Woodland

Overview

North Yorkshire and York contains a variety of wooded habitats of different ages and types. Our ancient woodlands have persisted since the 1600s, and long-established woodlands since 1893. These may have had their tree cover and structures changed from the original tree species to conifer plantations (often after the Second World War), but still retain important woodland flora. Woodland cover is more prevalent in our eastern geography, particularly in the North York Moors and Howardian Hills, with two-thirds of woodland in the North York Moors National Park being managed as productive forestry.

Elsewhere woodlands tend to occur in isolated pockets, lacking wider connectivity. Across our total land area woodland cover is 11.5% compared with 8.5% coverage in Nidderdale National Landscape and 5% coverage of the Yorkshire Dales National Park.

Parkland is an important habitat for our area as it is not only important historically and culturally, but hosts important populations of veteran and ancient trees. Each of these historic trees acts as an ecosystem, with some species such as oak supporting as many as 2,300 species¹¹ including bats, birds, fungi, and invertebrates that can only survive on dead or dying wood. However, our veteran and ancient trees tend to be isolated and vulnerable to felling or toppling caused by high winds.

¹¹ Oak trees and wildlife - Woodland Trust www.woodlandtrust.org.uk/trees-woods-and-wildlife/british-trees/oak-tree-wildlife

Nature recovery in action - Snaizeholme

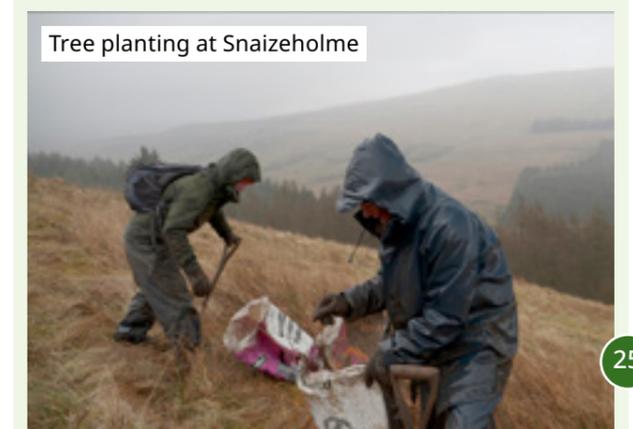
Snaizeholme is a unique and complex habitat restoration and nature recovery project in the Yorkshire Dales National Park, south of Hawes, and is being led by the Woodland Trust. In the first phase there is a plan to plant almost 291 hectares (719 acres) with native tree saplings, creating one of the largest new native woodlands in England. It will join riverside pasture, wooded valley sides, peat bogs and limestone pavement to form a diverse mix of wildlife-rich habitats. The careful approach to planting will create groves, glades and open woodlands that gently transition into and connect with the other habitats, all delivered without the use of plastic tree guards or herbicides.

This phase has been funded by the White Rose Forest through its Trees for Climate funding programme. Trees for Climate, part of Defra's Nature for Climate fund, provides grants for woodland creation within all Community Forest areas in England.



Snaizeholme, Yorkshire Dales National Park

Picture credit: Woodland Trust



Tree planting at Snaizeholme

Picture credit: Woodland Trust

Water and wetlands

Overview

A series of major rivers have shaped North Yorkshire and York’s landscape, with many having their source in the uplands of the Yorkshire Dales and North York Moors and flowing into the Humber Estuary or to the coast. Much of our lowlands were historically covered by fens, marshes, bogs, ponds, and wet grasslands. Millennia of human activity has altered the shape and flow of all our rivers and in many cases disconnected them from their floodplains, created wildlife barriers such as weirs, and drained huge areas of wetland. Drainage of wetlands has occurred particularly in our low-lying areas such as the Vale of Mowbray, Vale of York and Vale of Pickering and this has largely impacted negatively on our wildlife.

Our rivers face many pressures, including impacts from intensive land-use, modifications, invasive non-native species, water pollution, and climate change. Resulting habitat degradation and fragmentation threatens local wildlife both within our rivers and across the wider landscape. These pressures can be addressed at a whole catchment scale by considering not only the river channel itself, but the surrounding landscape with measures such as reducing water run-off from neighbouring fields and ‘slow the flow’ interventions such as tree and hedgerow planting.



Installed wooden weir allowing fish passage

Picture credit: North York Moors National Park Authority

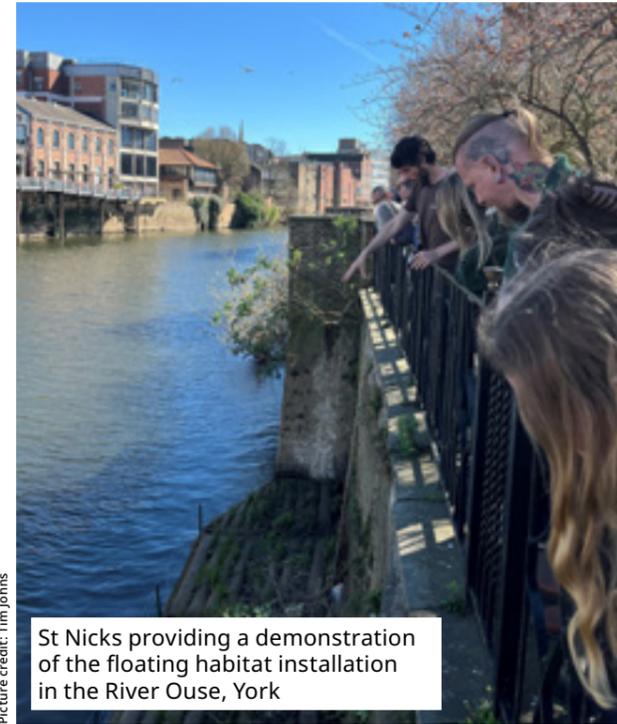
Nature recovery in action – Ryevitalise

Ryevitalise is a National Lottery Heritage Fund landscape partnership scheme aiming to restore the western River Rye catchment focussing on conserving, enhancing and reconnecting habitats to the river system. Part of the work has involved engaging with landowners and farmers to encourage habitat improvements on the land they manage in the catchment. These stakeholders have received payments for works to habitats and these are underpinned by conservation agreements. Alongside the catchment restoration is a citizen science programme which has been supporting work on species and habitats including bats, ancient and veteran trees, aquatic invertebrates and juvenile fish. The Ryevitalise programme, running from 2019-2025, also aims to revitalise the Rye’s natural and cultural heritage, reconnecting people to the river, the history and wildlife of the area, and supporting the restoration of the landscape. From April 2025 the programme will be entering a legacy phase, however payments forming part of conservation agreements will continue until 2031. The partnership has prepared a number of ‘shovel ready’ projects for legacy delivery when future funding pots become available.



Citizen science - riverfly monitoring to assist with water quality assessment

Picture credit: North York Moors National Park Authority



Picture credit: Tim Johns

St Nicks providing a demonstration of the floating habitat installation in the River Ouse, York

Urban

Overview

The city of York, along with our large towns such as Harrogate and Scarborough, and the smaller market towns spread across the county, have all been shaped by the landscapes they sit within and by many phases of development over time. Infrastructure such as buildings, roads and railways have created barriers for nature and contributed to the decline in many species over the decades.

Wildlife can be found in a variety of places in our settlements, within the remnants of semi-natural habitats such as woodlands, meadows and ponds, as well as human-created spaces such as parks, gardens, schools and business parks. Many of these spaces can be low in biodiversity due to intensive management and a limited number of tree, shrub and flower species, with many of these being non-native and less suitable for pollinators.

12 St Nicks - Green Corridors York www.stnicks.org.uk/green-corridors-york

Nature recovery in action - Green Corridors York

York has a rich abundance of green spaces, and these green corridors act as vital green ‘lungs’ breathing life into the city. Connecting these are the city’s two main rivers, their surrounding floodplains, disused railway lines, medieval strays and city wall embankments. The biodiversity of these crucial green ‘lungs’ and connecting corridors are declining due to human pressures, pollution and lack of resources affecting their management.

Green Corridors York¹², led by the environmental charity St Nicks, strives for “more, bigger, better and more joined up” green spaces by conserving nature whilst supporting neighbouring communities. The initiative, started in 2018, encourages collaboration between land managers, conservation groups and volunteers to improve land management, reduce pollution and challenge harmful developments. It is supporting the expansion of habitats and species such as floodplain meadow, Water Vole and Tansy Beetle.



Picture credit: St Nicks

Team from St Nicks carrying out maintenance in a watercourse



North Yorkshire coast south of Scarborough

Picture credit: Yorkshire Marine Nature Partnership

Coast

Overview

Yorkshire’s coastal environment is diverse and unique. It is connected to both inland environments through coastal streams and estuaries, and to offshore environments via important tidal systems and currents. Human influences and associated pressures are felt across the coastline, with multiple industries being reliant on services provided by our marine ecosystems (such as fishing, offshore developments, mineral extraction and shipping), combined with a large coastal tourism sector centred around our seaside towns like Whitby, Scarborough and Filey.

These pressures can result in the displacement of species due to offshore developments and underwater noise, less prey available due to intensive fishing practices, toxins and litter resulting in poor water quality, and changes in tidal currents, temperatures and storm events due to climate change. The impacts of these pressures are most often reflected in the health and populations of charismatic species such as whales and seabirds.

North Yorkshire’s coast is a mix of hard cliffs and soft coastal slopes made of calcareous clays. Beyond these slopes, the area is characterised by sheltered sandy bays which

disappear into rocky shore and wave-cut platforms. The River Esk, culminating in the natural harbour formed by its mouth in Whitby, where it flows into the North Sea, provides an important migratory route for salmon and sea trout. Smaller coastal streams, such as Staithes Beck and Scalby Beck in Scarborough also provide key migratory routes for fish and discharge nutrients directly into coastal waters.

The extensive intertidal rocky shore communities are an important source of food for migratory and over-wintering birds, which feed on a variety of molluscs and coastal invertebrates. The rocky outcrops and platforms also provide valuable space for Grey and Common Seals to rest, breed and pup at various locations. In the subtidal area, large swathes of kelp habitat offer food and shelter for a wide variety of wildlife, including commercially important lobsters and edible crabs. This underwater forest also plays a key role in nutrient and carbon cycling.

Further offshore, Bottlenose Dolphins and Minke Whales follow the shoals of North Sea mackerel and herring, joining the resident populations of Harbour Porpoise and seals. Each spring, breeding seabirds return to the sheer cliffs scattered along North Yorkshire’s coastline, attracted by the nutrient-rich seas.

Nature recovery in action – Concrete Coast

Yorkshire Marine Nature Partnership’s Concrete Coast programme¹³ is working to create new opportunities for intertidal species to thrive on our coast. By adapting man-made coastal structures (such as coastal defences and harbour walls) through appropriate habitat creation measures we will encourage coastal wildlife like limpets, mussels and shore crabs to return to the shorelines they once lived on.

Sections of Yorkshire’s coastline remain in a natural state, however there are also extents of man-made infrastructure including sea defences to protect towns and businesses, and harbours and slipways to provide safe havens for the fishing fleets. In creating such infrastructure, we change the natural landscape of the coastline and reduce the amount of habitat available to wildlife.

Many intertidal habitats are shrinking in size or being lost altogether due to sea level rise. Natural coastal habitats are unable to retreat further inland because of the walls, barriers and structures we have built. This project explores how we can encourage wildlife to colonise artificial habitats fixed onto man-made infrastructure through simple and cost-effective methods, without changing the function or integrity of coastal structures. In the future, these methods could be used to support intertidal communities where habitat is being lost through the impacts of climate change.



Groyne adapted to encourage marine wildlife



Mussel box installed on piling to encourage colonisation by intertidal species

Picture credit: Julian Blumenroeder

¹³ Concrete Coast Project – Yorkshire Marine Nature Partnership - YMNP
<https://yorkshiremarinenaturepartnership.org.uk/discover/research-and-active-projects/concrete-coast-project>

6. Links to other plans and strategies



6. Links to other plans and strategies

Many organisations are already engaged in nature recovery activity in the North Yorkshire and York area and we have engaged with them and the associated documentation to ensure that the LNRS aligns with their work.

Nature North

Nature North is a cross sector, pan-regional partnership of businesses and agencies working for nature recovery across the North of England. The collaboration is led by Environment Agency; Natural England; National Landscapes in the North of England; the National Parks in the North of England; The National Trust; The Wildlife Trusts; RSPB England; The Rivers Trust; The Woodland Trust; The National Lottery Heritage Fund and Esmée Fairbairn Foundation. Nature North's 'Investing in Nature for the North, A Strategic Plan for a Nature Positive Regional Economy'¹⁴, launched in February 2025, aims to scale up green investment across the region.



14 Strategy - Nature North www.naturenorth.org.uk/strategy

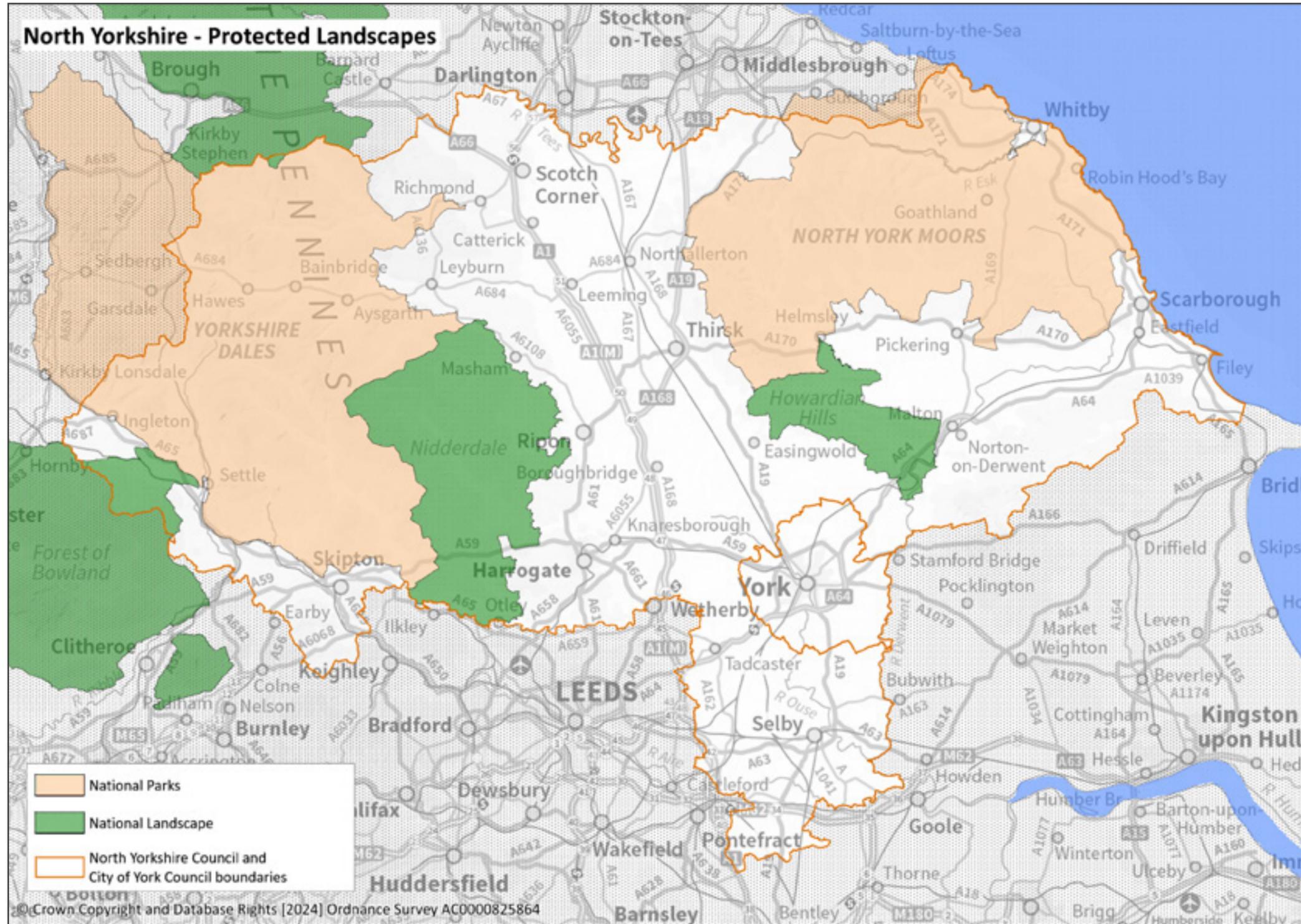
River Basin Management Plans

North Yorkshire and York's river network fall under three river basin districts - the Humber, Northumbria and the North West. The Humber River Basin District is the largest and covers the majority of the LNRS plan area. Within the Humber River Basin there are five management catchments: Derwent, Esk and Coast, Wharfe and Lower Ouse, SUNO (Swale, Ure Nidd and Upper Ouse), Aire and Calder in addition to the Tees (Northumbria), Lune and Ribble (North West). The Humber River Basin is the largest in England and drains approximately 20% of the total land area. The Catchment Based Approach is a policy framework that established catchment partnerships to work collaboratively across each of the River Management Catchment to help deliver water quality and River Basin Management Plan objectives whilst involving local communities in decision making.

Flood Risk Management Plans

These set out how flood risk management authorities and stakeholders will work together to manage flood risk in England. Land use and management is closely linked to flood risk management. Land drainage can speed up the rate at which water can get into rivers and land management can increase erosion. Natural flood management and working with natural processes play an increasingly important role in managing flood risk at catchment scale and often go hand in hand with benefits for ecology and water quality.

Protected landscapes



Nature Recovery Plans

Each of North Yorkshire’s five protected landscapes, which cover approximately 50% of the county’s footprint, has its own Nature Recovery Plan. These set out a vision for an enhanced natural environment and describe what action is needed, within a prescribed period. Like the LNRS, the Nature Recovery Plans are underpinned by the principle of *‘More, bigger, better and more joined-up wildlife habitats’* and recognise that larger areas of semi-natural habitat are lacking a more natural diversity of structure. Nature Recovery Plans also recognise the importance of connections outside the respective protected landscape boundaries, as habitats and species do not recognise human-made boundaries.

State of Yorkshire’s Nature

Yorkshire Wildlife Trust’s (YWT) State of Yorkshire’s Nature Report (2024) is based on new analyses of the distribution and abundance of Yorkshire’s biodiversity. It recognises that Yorkshire is important for British biodiversity, but that the region’s nature is under threat. YWT’s goal is for a nature network extending across the region with a broad range of habitats. YWT considers that all areas of Yorkshire have a role to play in nature’s recovery, including farmland, urban, protected landscapes and the coast and sea, but highlight that water and limestone are significant key habitats in the national context.



White Rose Forest led community tree planting at Broughton Hall Sanctuary, near Skipton

Picture credit: White Rose Forest

White Rose Forest

The White Rose Forest is the community forest for North and West Yorkshire, working in partnership with local authorities, landowners, businesses and communities to increase woodland across the region and improve our natural environment. The White Rose Forest Strategic Plan 2025-50 sets out the vision, aspirations and targets for tree and woodland establishment and management in North and West Yorkshire over the next 25 years.

York and North Yorkshire's Routemap to Carbon Negative

York and North Yorkshire's Routemap to Carbon Negative¹⁵ sets out the region's ambitious plans to be net zero carbon by 2034 and carbon negative by 2040. The Routemap provides an ambitious pathway for local authorities, businesses, charities, academia and communities to come together to deliver carbon reduction at the necessary pace and scale to reach net zero by 2034, and net negative by 2040.

Climate Change Strategies

Our constituent local authorities (North Yorkshire Council and City of York Council) have recently adopted Climate Change Strategies arising from their declared climate emergencies. The three pillars of the strategy in North Yorkshire (2023 to 2030) sets out the plan to:

- reduce greenhouse gas emissions;
- prepare for the changing climate; and
- support nature to thrive

Underpinning the strategy is for the Council to work with partners to achieve the ambition to be a carbon negative region by 2040 and encourage residents, businesses and visitors to take climate responsible actions.

City of York Council announced a climate emergency in 2019 and set an ambition for York to be a net-zero carbon city by 2030.

Local Investment in Natural Capital

The Local Investment in Natural Capital (LINC) programme is a Defra and Environment Agency initiative designed to mobilise private investment to deliver nature recovery, climate adaptation and climate resilience across the region. North Yorkshire and York LINC was one of four pilots set up in 2023. It aims to unlock institutional investment into nature across our geography and is developing over 50 nature-led infrastructure schemes that will become investible. Initial investments into the pipeline are likely to be on a project-by-project basis matching those projects ready for investment to investors' mandates, returns horizons and risk appetite. Initial investments will aim to dovetail with other strategic programmes such as the LNRS.

Planning Practice Guidance

In February 2025, the Ministry of Housing, Communities and Local Government (MHCLG) published the planning practice guidance (PPG) providing guidance on the role of LNRSs in planning¹⁶. The guidance explains how local planning authorities (LPAs) should interpret their legal duty to "have regard" to LNRSs and how LNRSs should be used to help meet existing national planning policy on protecting and enhancing biodiversity.

Local Plan

North Yorkshire Council (NYC) started work on its Local Plan following its investiture in April 2023 and plans for its adoption within five years. We have worked closely with a group of NYC planning policy officers to keep them updated on the strategy. NYC will be preparing a green and blue infrastructure strategy (GBIS) as an evidence base for the Local Plan and we are establishing links with the officer team leading on the GBIS to create alignment with the LNRS.

City of York Council's (CYC) Local Plan was adopted in February 2025 and we have worked closely with the CYC Planning Policy team to ensure they have been engaged with the process of preparing the LNRS.

Alignment to other plans and strategies

We are confident that our LNRS aligns with other plans and strategies in our locality following our document and policy review and through ongoing engagement with representatives from the protected landscapes, Yorkshire Wildlife Trust, river catchment partnerships and local authorities. These representatives have been involved in key decisions during the development of the strategy, to ensure the outputs of their own plans and strategies inform the LNRS.

¹⁵ Routemap to Carbon Negative > Mayoral Combined Authority <https://yorknorthyorks-ca.gov.uk/project/routemap-to-carbon-negative/>

¹⁶ Natural environment - GOV.UK <https://www.gov.uk/guidance/natural-environment#local-nature-recovery-strategies>

7. Priorities and Measures (Actions)

7. Priorities and Measures (Actions)

Priorities and measures are covered extensively in the Statement of Biodiversity Priorities (Document 4). This Section provides selective information from that document, with the full list of measures (actions), benefits from nature and focus species set out in Document 4.

Working with a wide range of experts, community groups, farmers, landowners and others we have established a range of priorities to help nature recover, alongside benefits from nature. These priorities are considered the 'what' and the 'why' of nature recovery; what we are seeking to do, and why we are seeking to do it. With our

regional stakeholders, we have co-created five high-level 'overarching' priorities which are relevant to all nature recovery activity (see page 24). Each priority delivers wider benefits from nature and we confirm what these are in Chapter 7 (see examples overleaf) These are supplemented by 39 priorities spread across our seven habitat categories:

-  Farmland
-  Upland
-  Grassland
-  Woodland
-  Water and wetlands
-  Urban
-  Coast

Measures (actions)

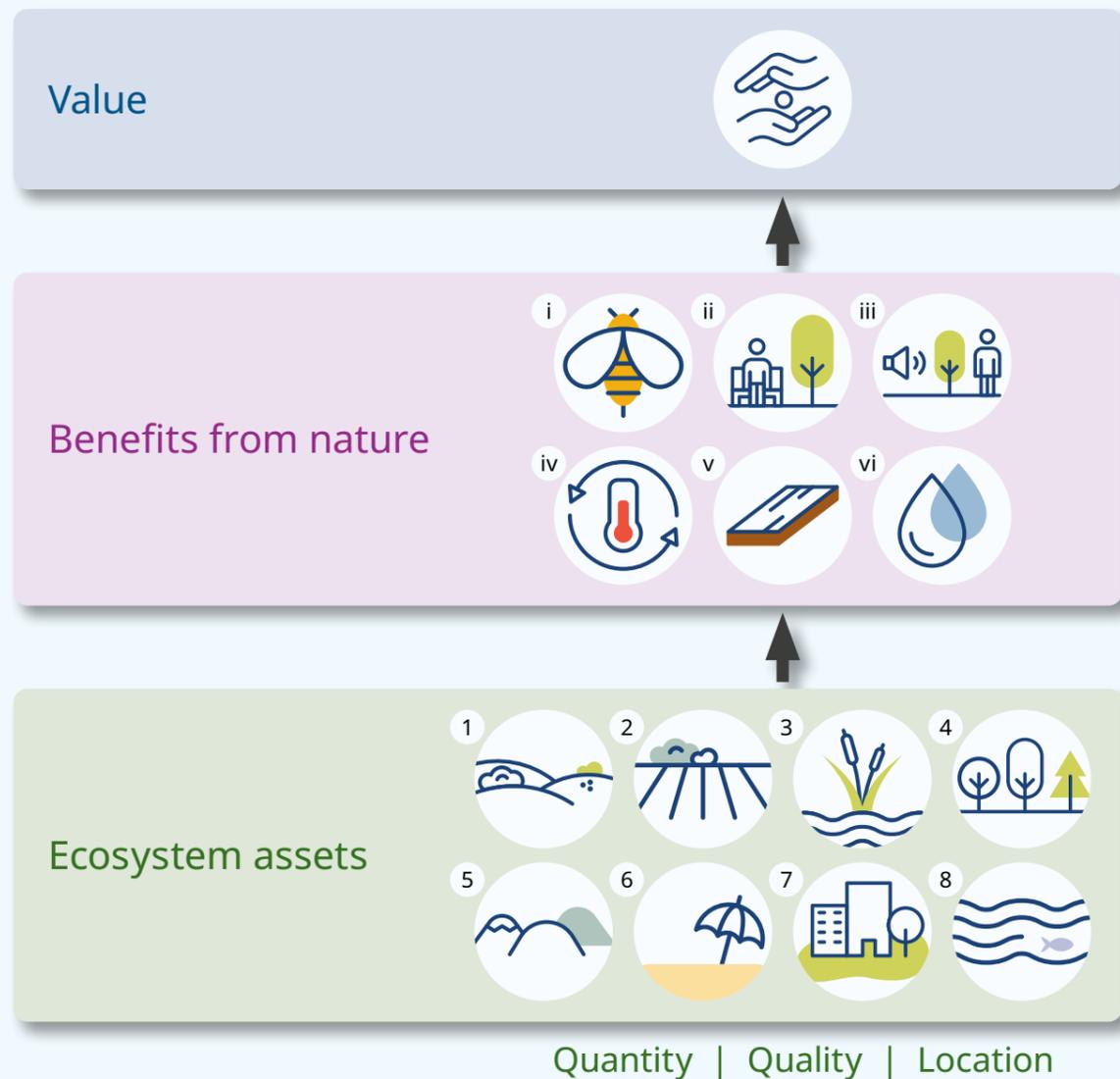
Each priority has a number of associated measures, which are the practical ‘on the ground’ actions that would help to deliver the aims of the priority. They can be considered as the ‘how’ and the ‘where’ of nature recovery; how we could do it, and where we could do it.

Benefits from nature

We have also stated which wider benefits from nature are relevant to each priority, using concepts from Natural England’s State

of Natural Capital (SONC) Report for England 2024. This makes the case that our economy and society depend on complex natural systems for our daily needs and our ability to regulate climate change. It refers to the natural capital logic chain where ecosystems are the natural capital assets that underpin the benefits on which society depends (see reference to natural capital logic chain below). How much we have (quantity), what condition it is in (quality) and where it is (location), determine the benefits the asset provides.

Benefits from nature¹⁷ (examples)



17 State of Natural Capital (2024), Natural England



Overarching priorities

Through discussion with stakeholders, we decided that the strategy needed to include several high-level ‘overarching’ priorities, which are relevant across all habitat types. These priorities followed recurring themes that emerged during stakeholder workshops, such as enhancing habitat connectivity and controlling invasive non-native species (INNS) across our geography.

Key to graphic opposite:

Benefits from nature

(i) pollination (ii) urban cooling (iii) noise regulation (iv) climate regulation (v) timber & other wood products (vi) clean water

Ecosystem assets

(1) semi-natural grasslands (2) enclosed farmland (3) freshwaters & wetlands (4) woodlands (5) mountains, moorlands & heaths (6) coastal margins (7) urban (8) marine

Each overarching priority contains wider objectives that would help to support nature recovery across North Yorkshire and York.

- Enhance the connectivity between areas of good-quality existing habitat through the creation of appropriate new habitat between existing sites, to improve connectivity for key species.
- Undertake actions to benefit key species, particularly those requiring specific interventions.
- Control and seek to eradicate invasive non-native species (INNS).
- Work collaboratively with all sectors to enhance coordinated regional action to benefit nature and seek to increase public knowledge, awareness and understanding of nature and its wider benefits.
- Enhance the ecological data and evidence base and share knowledge between all organisations and individuals undertaking actions to benefit nature.

Habitat priorities



Farmland

Around 70% of North Yorkshire and York’s land area is farmed. To achieve our ambition to better connect our important habitats and allow species to move freely, we must maximise opportunities to create additional connecting habitat such as hedgerows and trees, flower-rich field margins and ditches within our farmed landscapes. We can make small and big changes to the way our farms are managed which can make farm businesses more resilient to pests, diseases, drought and flood events, whilst also creating more space for nature to thrive in these working landscapes.

Our engagement with landowners and farmers indicated an appetite to work more closely with their neighbours, so that priorities and their associated measures (actions) can extend across land ownership boundaries and our wider geography. There are several farmer clusters in our geography that share ideas, best practice and implement measures on a landscape scale, across land ownership boundaries, with the opportunity to set up more of these in the future.

Priorities & example measures (actions)

Priority (short name)	Example Measure (action)
Enhance and expand arable field margins	Increase the floristic value of field margins under agri-environment schemes
Expand trees outside woodlands	Infield agroforestry on less sensitive pasture to benefit animal welfare, cultivated crops, carbon storage and connectivity for wildlife;
Promote high nature value farming practices	Promote precision farming and use of drones to reduce the use of artificial and chemical application;
Promote changes in grassland management	Encourage uptake of more diverse and sympathetic grazing practices such as rotation of stock and use of different livestock breed;
Expand the hedgerow network	Identify and map fragmented patches of woodland that would benefit from being connected by hedgerows;

Benefits from nature include:

- Carbon storage
- Reduced chemical use
- Soil health
- Water quality
- Flood protection
- Cultivated crops
- Erosion control
- Pest and disease control
- Animal welfare

Focus species include:

- Harvest Mouse
- Turtle Dove
- Tree Sparrow
- Rare arable flowers



Harvest Mouse

Picture credit: Natural England/Julian Dowse



Hedgerow establishing

Picture credit: Leanne Fox

 **Upland**

The upland areas of the county contain 27% of England’s blanket bog resource, which not only provides valuable wildlife habitat but also wider ecosystem services such as regulating water quality, mitigating flood risk and sequestering carbon. The ongoing enhancement of blanket bog is highlighted as a priority through enhancing the wetness of existing sites, and adjacent land, to prevent drying out. Related habitats include dry and

wet heath which, depending on location, tend to sit at the margins of blanket bog. Priorities for dry and wet heath include restoring and creating new areas of upland dry heathland and enhancing and expanding wet heath adjacent to existing blanket bog. Stakeholders have also highlighted our region’s limestone-related habitats as priorities and the need to expand species-rich connecting habitat between their existing core areas.

Priorities & example measures (actions)

Priority (short name)	Example Measure (action)
Management and connection of Limestone Pavement habitats	Identify and map Limestone Pavement coverage to understand its current state and potential location for calcareous grassland to be restored as a buffer
Enhance and restore upland calcareous grassland	Enhance lowland calcareous grassland through optimal grazing management (reduce stock numbers, alter stock type to include more cattle), and manage scrub to an appropriate percentage
Enhance upland hay meadows	Enhance and maintain existing upland hay meadows through traditional management e.g. cut and collect with aftermath grazing.
Enhance acid grassland	Enhance existing upland acid grassland through appropriate grazing, no mechanical operations in breeding season, and re-wetting or adding scrapes where required.
Enhance upland dry heath	Enhance and restore existing upland dry heathland by amending grassland grazing regimes and grazing species to encourage the development of heath,
Enhance wet heath	Enhance existing wet heath by amending grazing regime and type where required (e.g. reduction in sheep, increase in cattle) and introduce species (e.g. sphagnum and cotton grass) where required.
Enhance blanket bog	Use peat maps to identify former extent of peat resource and understand ability to restore active hydrological processes to identify areas where blanket bog has been lost, and where peat formation could be re-started.
Expand moorland fringe habitats	Create a suitable mix of habitats adjacent to existing sites via different mechanisms, e.g. natural regeneration, deer control, livestock exclusion, vegetation management to mitigate against wildfires.



Picture credit: Natural England/Neil Pike

Limestone pavement, Ingleborough National Nature Reserve

Benefits from nature include:

- Access to nature
- Sense of place
- Carbon storage
- Climate regulation
- Pollination
- Soil health
- Plentiful water
- Water quality
- Flood protection

Focus species include:

- Adder
- Black Grouse
- Curlew



Picture credit: Whitfield Benson

Black Grouse



Picture credit: Caroline Thorogood, Yorkshire Wildlife Trust

Magnesium limestone grassland, Sherburn Willows



Grassland

Over recent decades we have lost a significant proportion of our species rich grassland and stakeholders have prioritised the enhancement of our distinctive grassland habitats, including species-rich grassland, lowland calcareous grassland, acid grassland, and roadside verges. We are seeking to expand our areas of species-rich grassland through alternative management practices, and to enhance our lowland calcareous grassland with appropriate

grazing and mowing regimes. Expanding acid grassland can be achieved by buffering our lowland heath sites using appropriate grazing and other management measures. Our large geography is served by an extensive road network and so we have also prioritised the enhancement of our roadside verges for improved biodiversity and better connectivity for species across North Yorkshire and York.

Priorities & example measures (actions)

Priority (short name)	Example measures (actions) include:
Enhance species-rich grassland	Implement alternative management practices to maximise biodiversity, including favourable cutting regimes
Enhance and connect strategically important grasslands	Enhance strategically important grassland sites by utilising existing funding schemes, thus increasing the diversity of structure and species.
Enhance lowland calcareous grassland	Enhance existing lowland calcareous grassland sites through appropriate grazing / mowing regimes and scrub management as required
Enhance and expand magnesian limestone grassland	Create species-rich grassland at suitable sites across the Magnesian Limestone. Use arable reversion methods, seeding/ green hay spreading, plug planting of specific key species
Expand acid grassland	Buffer lowland heath by managing adjacent grassland sites, using appropriate grazing and other management measures.
Restore and re-create lowland heath	Undertake creation/restoration of lowland heath utilising seed-rich brash, green hay and other material from appropriate local donor sites, and ongoing sensitive management.
Enhance road verges	Expand the cut and collect of verge arisings, learning from the 2024 North Yorkshire Highways pilot



Lowland Heath, Strensall Common

Picture credit: The Terry

Benefits from nature include:

- Carbon storage
- Soil health
- Pollination
- Flood protection

Focus species include:

- Curlew
- Lapwing
- Short-eared Owl
- Tormentil Mining Bee



Short-eared Owl

Picture credit: Gareth Atkinson

 **Woodland**

In quantitative terms, woodland coverage is 11.5% of the land area of North Yorkshire and York, somewhat lower than the national figure of 14.9%, with the UK legally binding target being to achieve 16.5% coverage across England by 2050. During the delivery phase of the LNRS process, it is envisaged that shorter-term woodland coverage targets for North Yorkshire and York will be considered and our stakeholders have identified a range of priorities for our woodland habitats that are both quantitative and qualitative.

Veteran trees are identified as important habitats, both in their own right and to facilitate the movement of species, and we propose to both protect our existing resource and plant trees that will become the veterans

of the future. We propose the enhancement and expansion of wood pasture, wood meadows and open mosaic habitats, as they provide good connecting habitats between existing woodland and grassland sites. Our ancient woodlands are rich in biodiversity, however they are geographically fragmented and negatively impacted by conifer plantations. We plan to enhance and better connect these isolated woodlands and to restructure existing conifer plantations, providing greater habitat diversity and improved species movement. We have set out to increase tree and woodland cover across North Yorkshire and York by enhancing all types of existing woodland and creating new species-diverse woodland, where appropriate, across the region.

Priorities & example measures (actions)

Priority (short name)	Example measure (action)
Protect and expand veteran tree resource	Protect existing veteran trees and newly-planted future veterans with suitable fenced enclosures to protect from livestock and other herbivores.
Enhance and expand wood pasture, wood meadows and open mosaic habitats	Create and expand wood pasture habitat as an appropriate buffer and connecting habitat between woodland and grassland sites.
Enhance and connect ancient woodland	Restructure existing conifer plantations to buffer and connect patches of ancient woodland to maximise biodiversity
Enhance, expand and connect new and existing woodland	Buffer, improve and protect existing woodland and create new woodland with resilient tree species

Benefits from nature include:

- Access to nature
- Health and wellbeing
- Educational resource
- Sense of place
- Carbon storage
- Climate regulation

Focus species include:

- Red Squirrel
- Hawfinch
- Juniper



Picture credit: White Rose Forest

Picture credit: Robyn Guppy



Water and wetlands

Reinstating natural processes in our river catchments, by making more space for water, will not only increase the diversity of species and the size of their populations, but will also reduce the impacts of flood events in our settlements. Many wetland habitats are also excellent carbon sinks, helping to reduce our carbon emissions. Implementing nature-based solutions in our rivers and adjacent landscapes can also help to reduce water pollution, creating healthier rivers for both humans and wildlife.

Working with stakeholders, our priorities for water and wetland habitats include enhancing and expanding river habitats, by extending waterside vegetation beyond the riverbank. We are also seeking to restore natural river processes, which includes the reconnection of rivers to their floodplains by amending existing engineered barriers. Our region's ponds tend to be isolated, with limited marginal habitat, and so we plan to enhance and expand the



Picture credit: Adam Harland

Wet woodland in Askham Bog nature reserve

pond network to support the resilience of our wetland species. Our geography hosts a significant proportion of the national resource of floodplain meadow habitat (15%) and we intend to restore our existing poor quality sites and expand meadow habitat onto neighbouring land, whilst accommodating the needs of agriculture. A further priority is to expand the amount of riparian woodland along our watercourses, at all elevations, providing better habitat connectivity across our region.

Priorities & example measures (actions)

Priority (short name)	Example Measure (action)
Enhance and expand river habitats	Implement in-channel mitigation measures for heavily-modified water bodies and improve in-channel habitat diversity
Restore natural river processes	Remove or realign artificial and engineered barriers and modifications where feasible to allow re-establishment of natural river processes
Expand and restore pond networks	Buffer existing ponds by increasing and improving the quality of marginal habitat and encourage creation/restoration of surrounding terrestrial habitat
Enhance, expand and connect fen habitats	Create fen habitat where feasible, e.g. by expanding fen species into neighbouring ditches,
Restore, enhance and expand existing flushes	Enlarge wetlands at known key areas for breeding and wintering bird populations
Restore floodplain meadows	Increase floodplain meadow habitat, where appropriate, by allowing flooding to take place on appropriate grassland sites
Expand riparian woodland	Create new riparian woodland (within a minimum of 15-20m of planting both sides of watercourse
Restore, enhance and expand wet woodland	Identify wet areas of land around existing wet woodland that has scope to become new habitat

Benefits from nature include:

- Access to nature
- Health and wellbeing
- Educational resource
- Plentiful water
- Water quality
- Flood protection

Focus species include:

- Tansy Beetle
- Curlew
- Lapwing
- Water Vole
- Common Frog



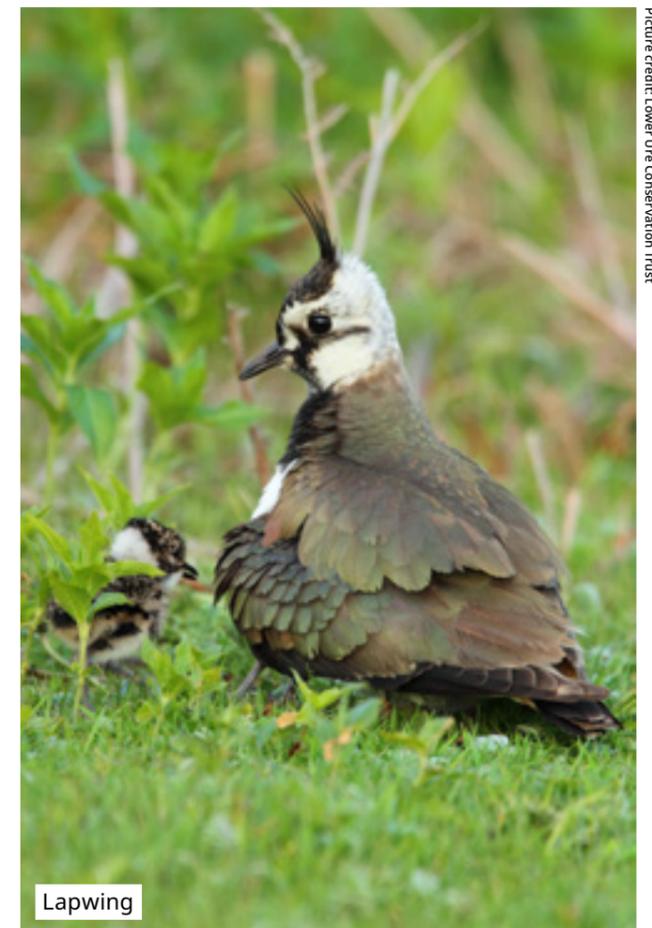
Water Vole

Picture credit: Natural England - Paul Lacey



Picture credit: Martin Hammond

Fen habitat, Lower Ure Conservation Trust



Lapwing

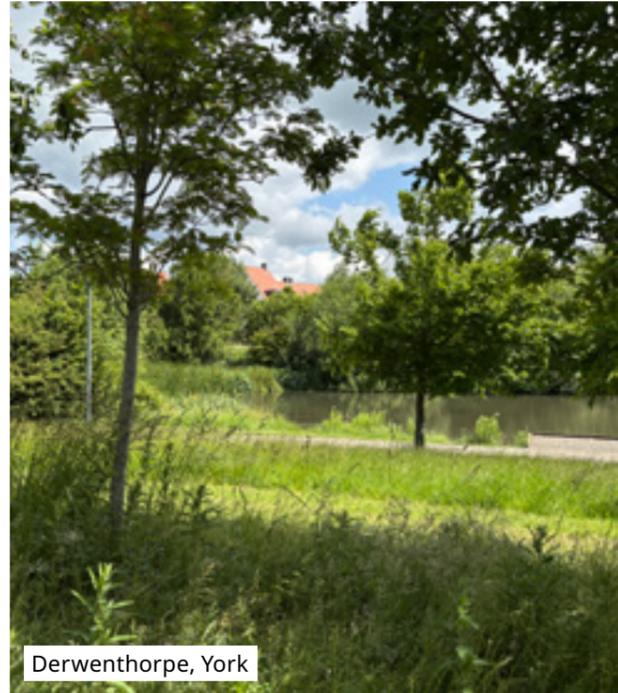
Picture credit: Lower Ure Conservation Trust



Urban

Across the built environment of North Yorkshire and York, there is scope to introduce more habitat for species to make homes alongside people. Implementing these kinds of changes, alongside enhancing and creating more green spaces in urban areas, will support human health and wellbeing, through improvements to air and water quality, cooling down our urban environments and helping to store water, to reduce the impacts of flood events.

We intend to incorporate more green infrastructure into our built environment by providing more habitat for nature, and plan to do this at a strategic level by working with our local authorities in their preparation of green and blue infrastructure strategies that will inform their Local Plans. On a more practical level, we will recommend that features for birds and bats are incorporated into both our new and existing buildings, and we intend to enhance and expand our existing nature-rich urban spaces, such as churchyards. Our areas of urban grassland tend to be intensively managed and we propose that maintenance



Derwenthorpe, York

Picture credit: Tris Terry

and mowing regimes are modified to improve the diversity of these habitats. In terms of our human resource, there is great potential for our citizens to engage in nature-friendly practices within private gardens, schools and other publicly accessible spaces. We intend to promote public action in this regard to achieve better connectivity for nature.

Priorities & example measures (actions)

Priority (short name)	Example Measure (action)
Incorporate nature into the built environment	Work with local planning authorities in the development of their Green and Blue Infrastructure Strategies
Enhance urban nature-rich spaces	Buffer and connect urban nature-rich spaces by identifying neighbouring land with partners to restore or create suitable habitat
Modify the management of urban grassland	Reduce the size of amenity grassland through changes to mowing regimes
Promote public action for better nature connectivity	Promote nature and climate change adaptive options for residential properties

- Benefits from nature include:
- Access to nature
 - Health and wellbeing
 - Educational resource
 - Sense of place
 - Carbon storage
 - Climate regulation
 - Pollination
 - Plentiful water
 - Water quality
 - Flood protection
 - Clean air
 - Noise regulation
 - Urban cooling Species

- supported include:
- Common Toad
 - Garden Tiger
 - Hedgehog
 - Swift
 - Emerald Damselfly
 - Bats



Emerald Damselfly

Picture credit: Natural England, Allan Drewitt



Picture credit: Natural England, Allan Drewitt



Coast

Our rocky shores are home to a huge variety of wildlife and are an important way for people to learn about marine life. Many residents and visitors enjoy the diversity of our coastal habitats, but associated disturbance can put pressure on the wildlife that lives within these places. Sea birds, whose populations are rapidly declining, nest on the region’s cliffs and within our coastal towns, where their presence can lead to conflict between humans and the bird life of the coast.

The coastal priorities devised with our stakeholders cover rocky shores, habitats for seabirds, and a unique area of saltmarsh along the North Yorkshire coast. In the earlier ‘Our State of Nature’ section, we highlighted

the work of the Concrete Coast programme and we plan to continue to prioritise this work of adapting man-made coastal structures, with the necessary consents, to encourage coastal wildlife like limpets, mussels and shore crabs to return to the shorelines they once lived on. We propose the enhancement of habitats for our seabirds, both on our cliffs and in our urban areas, to help resolve pressures from human activity and the impacts of climate change. North Yorkshire has a very small area of existing saltmarsh near Whitby, which is unique to the coast between Middlesbrough and Spurn Point. We plan to enhance this existing habitat with appropriate management and establish the feasibility of further expanding the resource in the locality.

Priorities & example measures (actions)

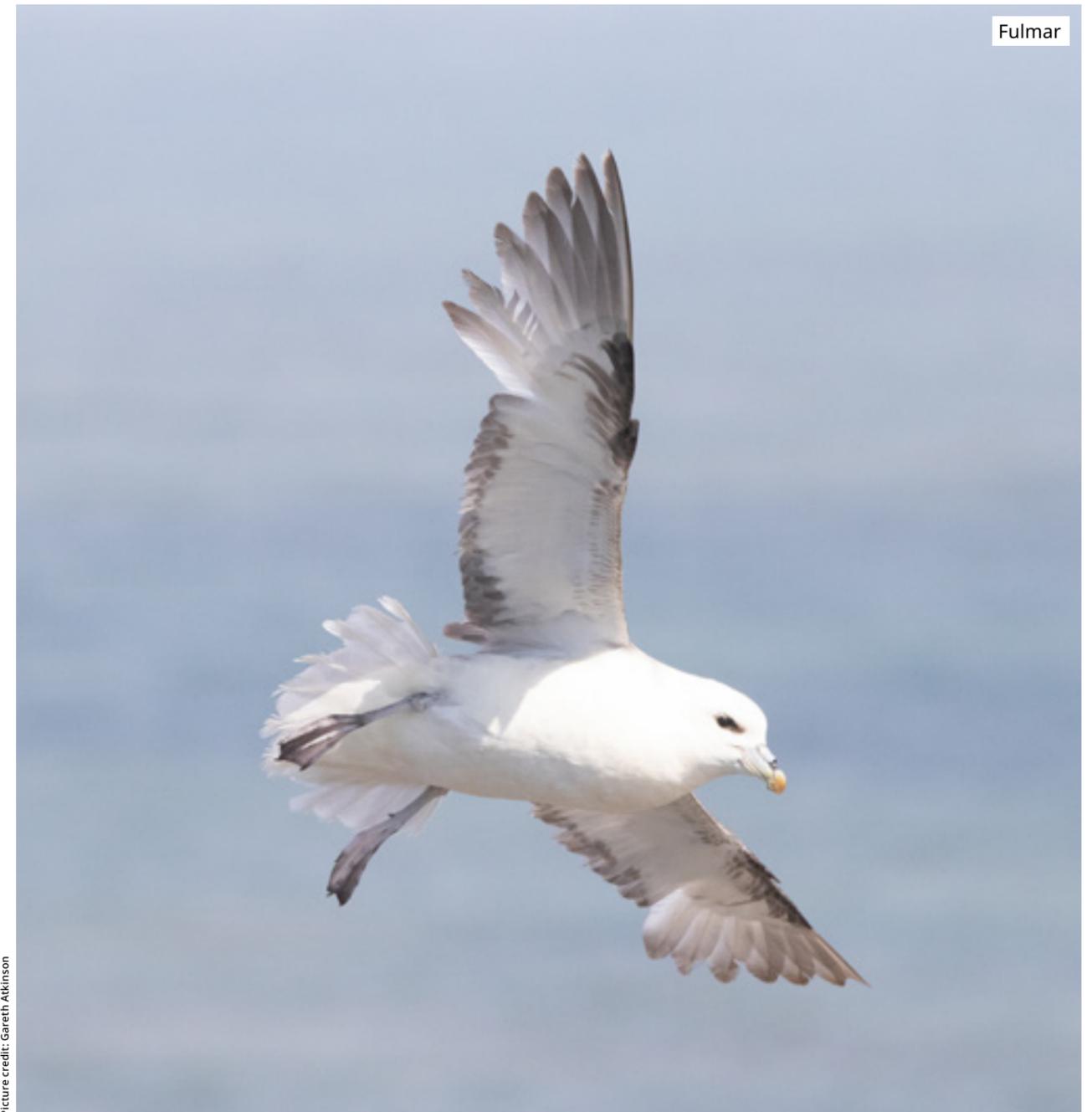
Priority (short name)	Example Measure (action)
Enhance rocky shore habitat	Work with the Concrete Coast programme to install ecological enhancements on ‘hard’ infrastructure, where ecologically and structurally appropriate, to create new habitat.
Enhance habitats for seabirds	Create and enhance suitable habitat for seabirds on the North Yorkshire coast, both on our cliffs and in our urban settlements
Enhance and expand existing saltmarsh	Enhance existing saltmarsh through sympathetic management and identify opportunities to expand this resource.

Benefits from nature include:

- Access to nature
- Health and wellbeing
- Educational resource
- Sense of place
- Carbon storage
- Climate regulation

Species supported include:

- Kittiwake
- Fulmar
- Adder
- Blue Mussel



Picture credit: Gareth Atkinson

8. Our Nature Network – the Local Habitat Map

8. Our Nature Network – the Local Habitat Map

Spatial vision

Our nature network (Local Habitat Map) provides a spatial vision for this first iteration of the LNRS with the ambition to create a comprehensive and connected network across North Yorkshire and York. It will form a component of the national nature recovery network¹⁸ across England.

The nature network is made up of existing core sites, priority habitat within our National Parks and potential nature recovery areas. We define each of these elements below and set out the principle of ‘bigger, better, more, and more joined’ up from Making Space for Nature¹⁹ that underpins the nature network. This guiding principle is also reflected in our vision: *‘To work together to enhance, expand, restore and connect our region’s habitats for thriving nature across North Yorkshire and York’*.

We also explain the use of hexagonal ‘planning units’ in the Local Habitat Map, and how our priorities and measures (actions), introduced in Section 7.0, relate to the nature network.

Core sites – Areas of Particular Importance for Biodiversity (APIBs)

In preparing the LNRS, we are required to identify and map all nationally-designated conservation sites (e.g. Sites of Special Scientific Interest (SSSI)), local nature reserves, Local Wildlife Sites and areas of irreplaceable habitat, which form the core of our nature network.

Priority habitat within our National Parks

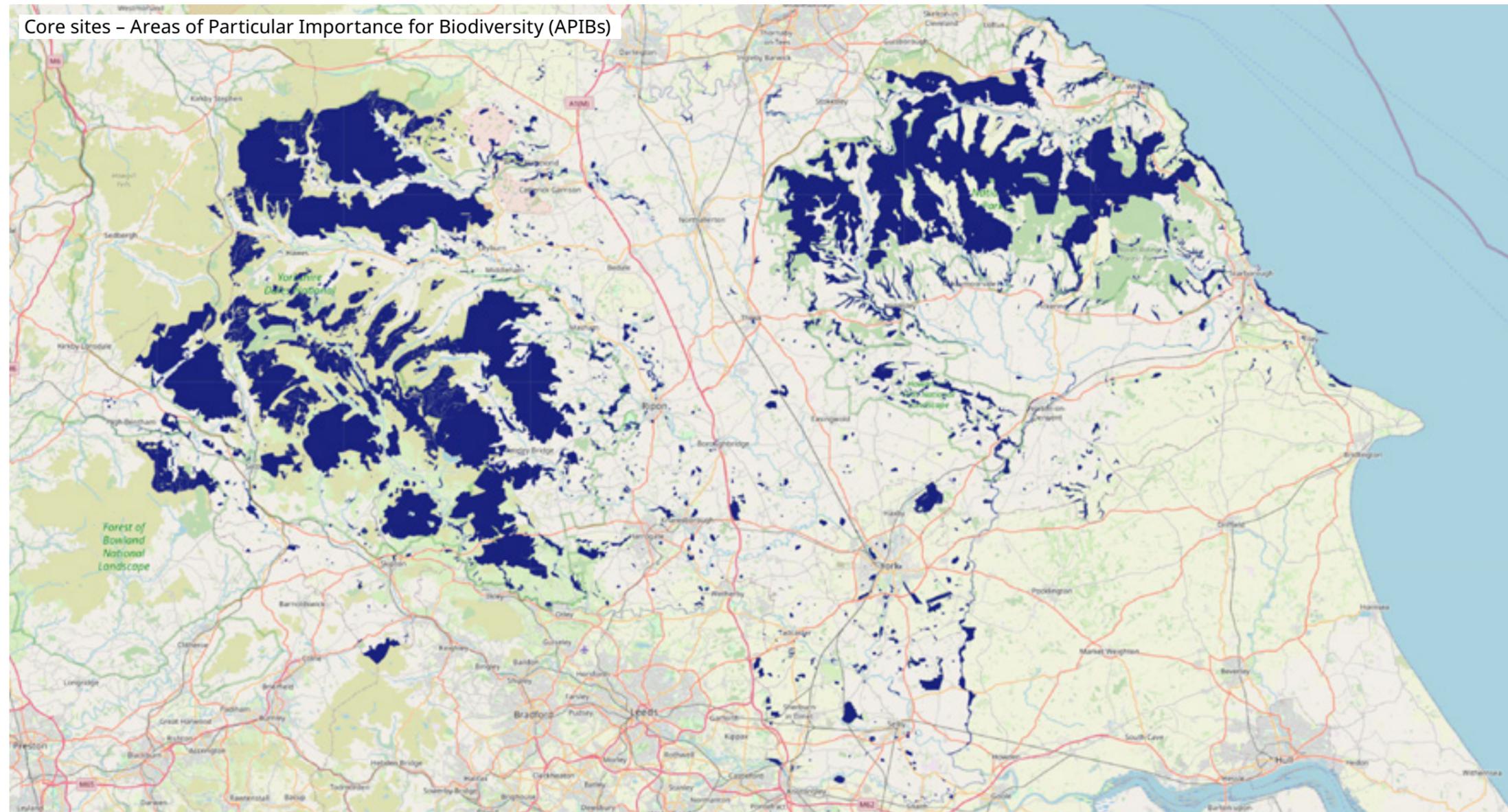
In developing our approach to mapping for the LNRS, stakeholders highlighted the importance of mapping areas of existing priority habitat within our National Parks to become part of the nature network, as there are no locally designated sites (e.g. Local Wildlife Sites) within their geography.

Nature recovery areas – Areas that Could Become of Particular Importance for Biodiversity (ACBs)

Additionally, we are required to map areas that could become of particular importance for biodiversity (ACBs). These are areas where the responsible authority and our local partners propose that nature recovery effort should be focused to achieve the greatest benefit for biodiversity and the wider environment.

¹⁸ The Nature Recovery Network - GOV.UK www.gov.uk/government/publications/nature-recovery-network

¹⁹ Making space for nature: a review of England’s wildlife sites published today - GOV.UK www.gov.uk/government/news/making-space-for-nature-a-review-of-englands-wildlife-sites-published-today



Bigger, better, more, and more joined up

This is the guiding principle of our nature recovery network, to identify areas where it may be possible to increase the size of existing areas of core habitat (including core sites), improve their condition, and provide additional protection through buffering (offsetting by a certain distance from the perimeter of the existing habitat), create areas of new habitat, and create new linkages across our landscape. Each of these principles has been incorporated into our mapping process and the development of our nature network, as set out below.

Bigger

Working out from our existing core sites in nested concentric rings to identify opportunities to expand or buffer areas of existing habitats and create sympathetic habitats in close proximity to existing ones.

Better

The mapping process involved first identifying all core areas of existing habitat, where condition can potentially be improved through enhanced habitat management.

More

Alongside the existing core areas, the process then identified opportunity areas where additional areas of key habitat could be created.

More joined up

The process then looked for opportunities to link these clusters of existing and new habitat across the landscape with stepping-stones and corridors to increase their ecological functionality and allow for enhanced movement of species throughout our region.

For each of these elements, we have followed an evidence-based modelling process to create a bigger, better and more joined-up strategic nature network.

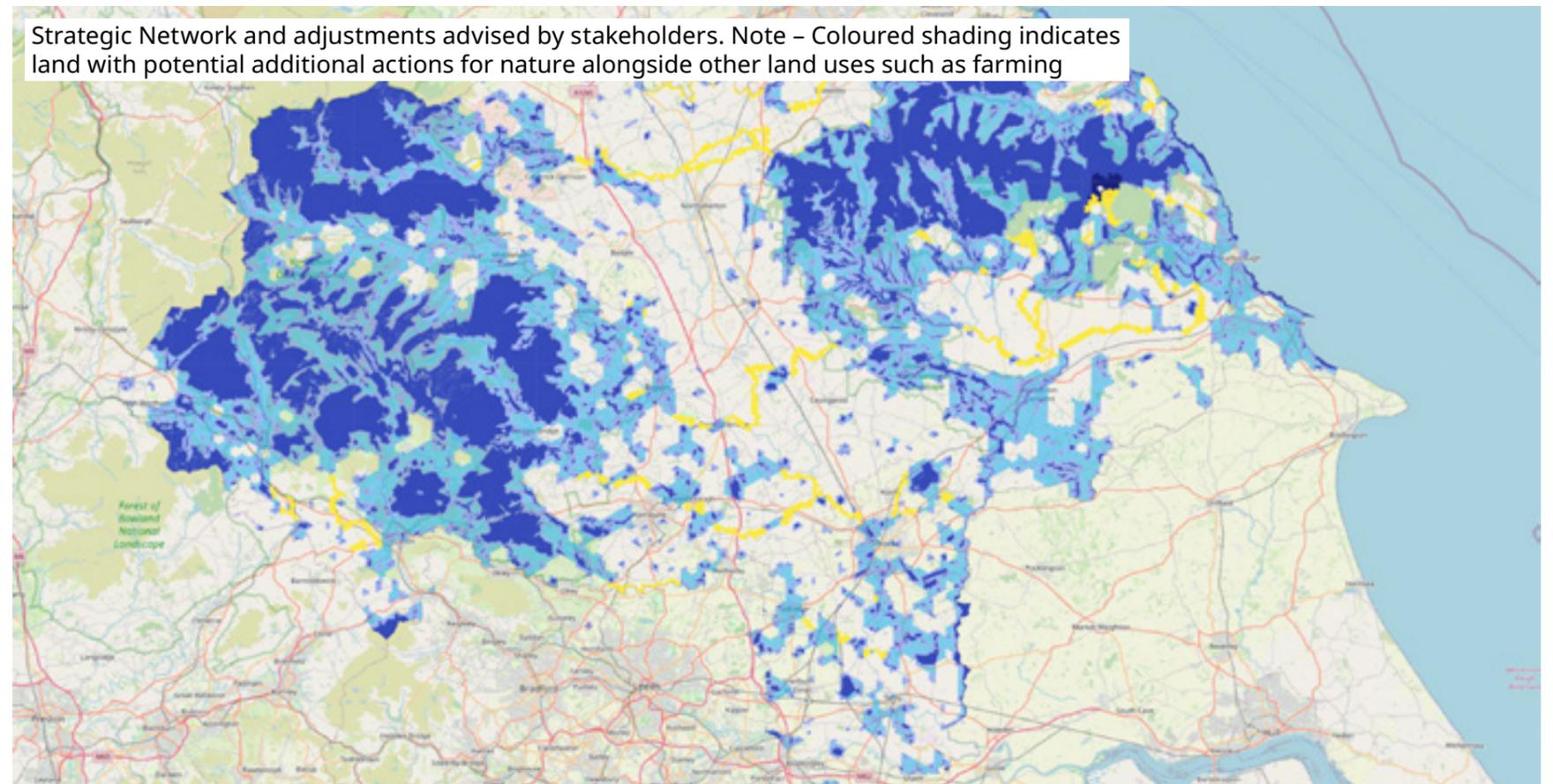
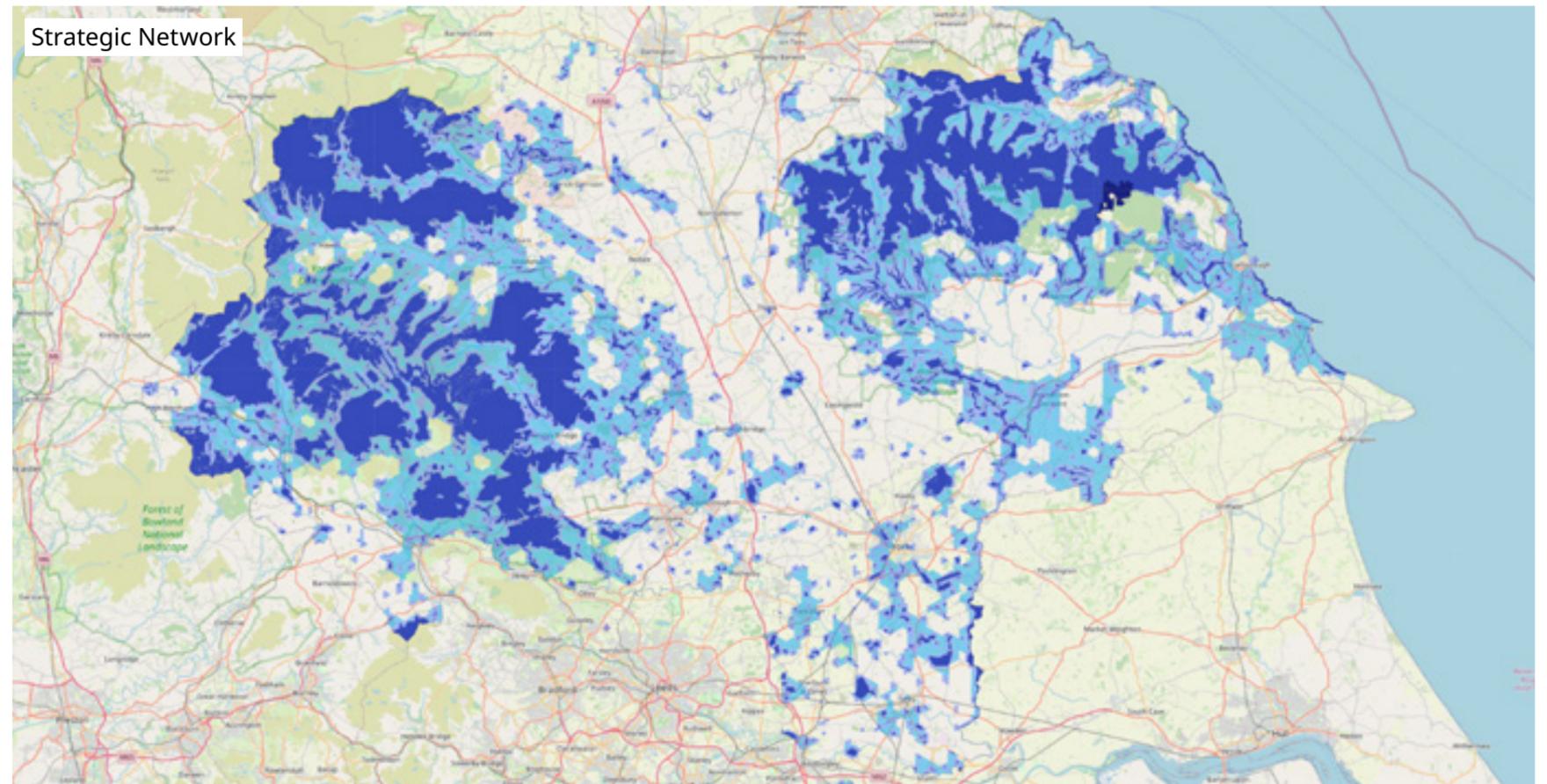
Creating a strategic network

Underpinning this first iteration of the LNRS, is the need to identify an optimum nature network that can contribute to an overarching target across our geography. To identify an optimum network we employed the modelling software tool Marxan, which is based on the well-established methodology of Systematic Conservation Planning²⁰. In summary, the procedural steps of the methodology were:

- Establish a regular grid of hexagonal ‘planning units’ across our geography, each with an area of 20 hectares (ha)²¹
- Programme the software to include all existing core sites as part of the network solution
- Set targets for each habitat and opportunity type such that the total area of the optimised network would cover approximately 55% of the total area of North Yorkshire and York
- Inform the software’s selection of an optimised network with additional data relating to wider benefits from nature (the software is more likely to select planning units that align with wider benefits from nature)
- The software generates many network solutions by selecting individual planning units, and the optimum solution is chosen that best meets the target criteria with the most efficient network footprint
- The optimum network solution generated by the software is scrutinised by expert stakeholders and any necessary adjustments to the network are made

²⁰ Systematic Conservation Planning - an overview | ScienceDirect Topics
www.sciencedirect.com/topics/earth-and-planetary-sciences/systematic-conservation-planning

²¹ 20ha equates to the approximate footprint of 28 football pitches



How do priorities and measures relate to the nature network (Local Habitat Map)?

Our priorities and measures are directly linked to the Local Habitat Map. The map layer titled 'Areas that could become of particular importance for biodiversity (ACB)' shows the strategic network that has been identified as the most beneficial places for habitat enhancements to be undertaken across North Yorkshire and York. Each hexagonal 'planning unit' has several measures associated with it, which are considered to be the most appropriate and beneficial measures that could be implemented in that location.

Clicking into a hexagonal 'planning unit' within the ACB layer will show the relevant measures that could be implemented along with the priorities that those measures are associated with.

Non-mapped measures

Measures can be undertaken anywhere in North Yorkshire and York (not just within the strategic nature network) and there are a large number of more generic, unmapped measures that are not location-specific (e.g. many of the farmland measures) which could be undertaken more widely across our geography.

9. Delivery – who can do what?

9. Delivery – who can do what?

Everyone in North Yorkshire and York can contribute to our vision ‘to work together to enhance, expand, restore and connect our region’s habitats for thriving nature across North Yorkshire and York’. In Section 3.0, we established five ‘How we can do it’ principles for the delivery of nature recovery:

1. Working across communities, businesses, public bodies and non-governmental organisations (NGOs) to help nature to thrive
2. Putting nature at the heart of policy and decision-making
3. Attracting funding and green finance into nature
4. Promoting jobs, education, apprenticeships, and skills in delivering nature recovery
5. Monitoring and evaluating change – recording uplifts to species, tree cover and habitats over time

Working across communities, businesses, public bodies and non-governmental organisations (NGOs) to help nature to thrive

Residents and community groups can help nature to thrive in their local area, while landowners, land managers, farmers and non-governmental organisations (NGOs) can work at a more strategic scale to aid nature recovery, particularly by working in partnership.

Subject to funding from Defra, the expectation is that an LNRS delivery team will be set up by the responsible authority to support communities, businesses and organisations and help support their plans for nature.



Volunteers working at Nosterfield Nature Reserve with the Lower Ure Conservation Trust

Landowners, land managers and farmers

Why?

Over 70% of our land area is farmed and we also have a number of large estates across our geography. Much of this land is managed for food, fuel or timber, but there is great potential to better integrate natural habitats alongside these productive uses, bringing down costs for farmers through reduced input costs, supporting nature and making our land more resilient to climate change.

How?

Landowners, land managers and farmers can use the LNRS to:

- understand how their land fits within the Local Habitat Map and the strategic nature recovery network
- inform the measures (actions) they could carry out on their land
- inform and support applications for funding and delivery of projects

NGOs and partnerships

Why?

NGOs and partnerships such as Yorkshire Wildlife Trust, the Lower Ure Conservation Trust (LUCT) and the Dales to Vales River Network have established management plans and are already leading on nature recovery projects and are working with volunteers, landowners and farmers to take action and demonstrate the importance of partnership working for nature recovery. These organisations have been closely involved in the preparation of the LNRS.

How?

NGOs and partnerships can use the LNRS to:

- galvanise collaborative working with their partners
- inform the measures (actions) they can carry out on their land
- inform and support applications for funding and delivery of projects



Workshop with land managers & farmers, Selby Auction Mart

Developers and planners

Why?

There are targets to build approximately 20,500 homes across North Yorkshire, and 4,100 homes in the City of York, over the next five years. Future growth and development in our area will depend upon, and benefit from, a healthy natural environment and there is great opportunity to fully embed nature into our plans for growth.

How?

Developers and planners can use the LNRS to:

- support the integration of nature into the planning and development process
- understand how development sites fit with the Local Habitat Map and the strategic nature recovery network
- inform the selection of on-site and off-site Biodiversity Net Gain (BNG) sites

Under the Environment Act 2021, local planning authorities and decision-makers must have regard to the LNRS in their policies, including those within their local plans. Taking account of the LNRS when considering proposed developments can help developers move more smoothly through the planning process.

Investors

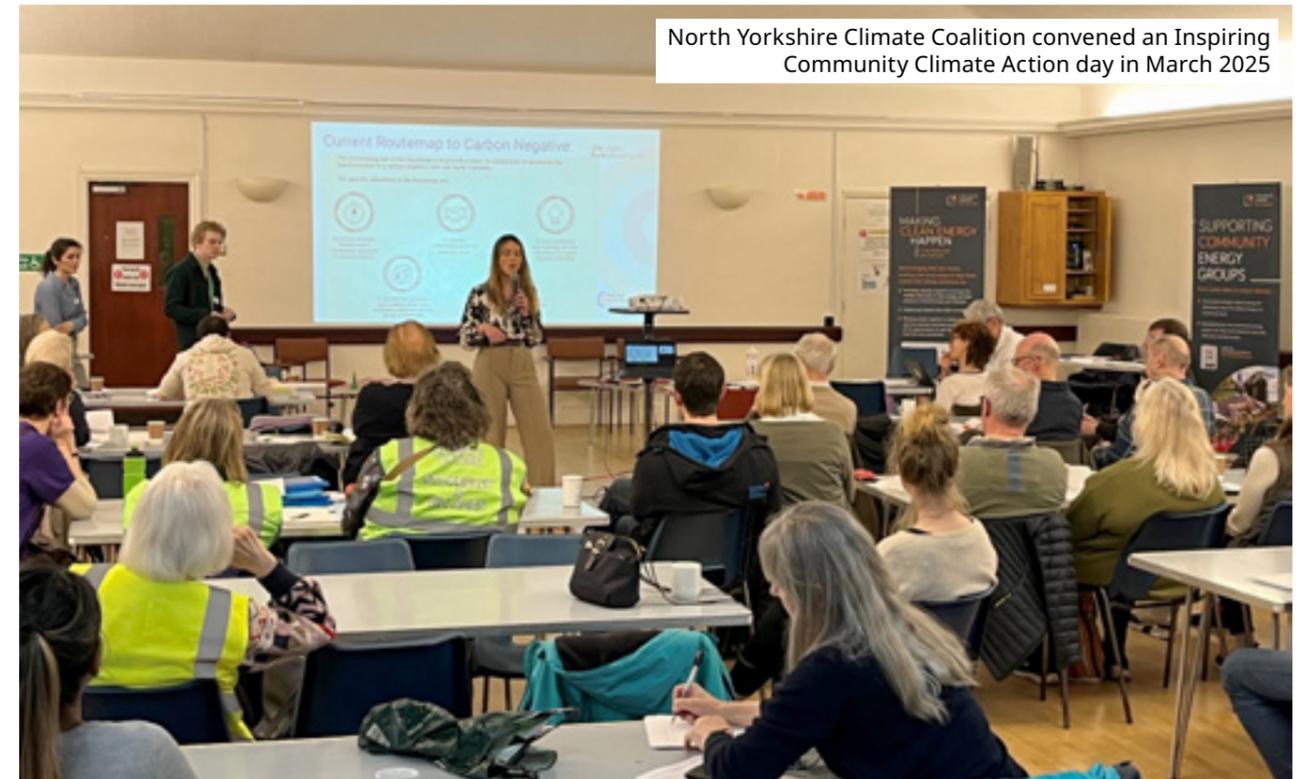
Why?

Private sector investors are increasingly factoring environmental concerns into their investment decisions, including their dependency on natural capital or need to mitigate offsets for water or greenhouse gas emissions. The Local Investment in Natural Capital (LINC) programme is designed to mobilise private investment and to support landowners and farmers in the delivery of nature recovery, climate adaptation and climate resilience actions across our geography.

How?

Investors can use the LINC programme and the LNRS to:

- connect with landowners and farmer clusters who are seeking the finance for nature-based solutions and nature-led infrastructure projects on the land they manage
- understand how these potential projects fit with the LNRS priorities, Local Habitat Map and the strategic nature recovery network



North Yorkshire Climate Coalition convened an Inspiring Community Climate Action day in March 2025

Town and Parish Councils and Community groups

Why?

Local organisations and coalitions, such as Holmedale Nature Network in Richmondshire, Kirkbymoorside Town Council and North Yorkshire Climate Coalition, are at the forefront of nature recovery and other causes such as action for climate change. They work to bring together groups of volunteers to survey their local area and draft management plans and schedule tasks and operations to benefit wildlife species and habitats. Those involved in these activities also benefit from their involvement through learning new skills and enhancing their health and wellbeing.

How?

Town and Parish Councils and Community groups can use the LNRS to:

- understand their local natural environment in the context of the Local Habitat Map and the strategic nature recovery network
- inform the measures (actions) they can carry out in their local community
- inform and support applications for funding and delivery of projects



Derwenthorpe, York

Picture credit: Tris Terry

Schools, nurseries and colleges

Why?

This is a significant opportunity to transform the way climate and natural environment education is taught in schools, nurseries, colleges and youth councils and to support young people to act and increase biodiversity across England. The National Education Nature Park programme²² has been developed for this purpose and led by the Natural History Museum with the Royal Horticultural Society and partner organisations. The programme aims to embed nature-based learning in the curriculum, and encourage children and young people all over the country to take action to improve their site for people and wildlife. The programme involves a five-step process:

1. Getting to know your space
2. Identifying opportunities
3. Making decisions
4. Making change happen
5. Recording change

Barrowcliff School in Scarborough has a volunteer-led garden club which is incorporating nature into the site including corners of the playing field with an orchard, an area for compost and hedgerow planting along the site boundary.

During 2024 the school and garden club was in receipt of a National Education Nature Park grant which has funded some large timber planters sited in the playground with space for planting and seating and plans for a small pond. The monies have also covered the cost for wildflower planting along the margins of the playing field.

How?

Schools, nurseries and colleges can use the LNRS to:

- understand their local natural environment in the context of the Local Habitat Map, the strategic nature recovery network and biodiversity priorities
- inform the measures (actions) they can carry out on their school site
- inform and support applications for funding and delivery of projects



LNRS workshop with Skipton Youth Council

²² Education Nature Park www.educationnaturepark.org.uk



Picture credit: Yorkshire Wildlife Trust, Andy Steele

TadCrafters meadow creation project, Tadcaster

Residents

Why?

North Yorkshire and York has a population of over 800,000 and there is significant scope to harness volunteer activity for our gardens, parks and open public spaces. Private gardens can make up a significant proportion of our total land area²³ and there are measures (actions) within the strategy that can be undertaken in gardens to benefit nature, such as planting native trees, shrubs and wildflowers, reducing the frequency of lawn mowing, and creating small areas of water such as ponds and rainwater gardens. Collective action across a neighbourhood can expand and connect natural habitats, supporting a wide variety of species.

How?

Residents can use the strategy to:

- inform the measures (actions) they can carry out in parks and gardens
- understand how private gardens, parks and open spaces fit with the Local Habitat Map and the strategic nature recovery network
- join volunteer programmes run by organisations such as Yorkshire Wildlife Trust (Team Wilder), St Nicks (Green Corridors), and the Lower Ure Conservation Trust (LUCT)



Picture credit: NEVEDC

Group of residents surveying plant and animal species

²³ Oldham Council; private gardens comprise 11.62% of total land area, Oldham's Green Infrastructure Strategy (2022)

Putting nature at the heart of policy and decision-making

Local politicians

Why?

Politicians have a great opportunity to offer leadership and they can do this by championing nature recovery with members of parliament (MPs), cabinet members, portfolio holders and fellow decision makers. They can also champion nature recovery in the wider policy context of climate change, planning and public health.

How?

Politicians can use the LNRS to:

- understand their local natural environment in the context of the LNRS priorities, Local Habitat Map and the strategic nature recovery network
- support Council funding of nature recovery projects (capital and revenue)
- Champion nature recovery within their local communities

Attracting funding and green finance into nature

Recently published natural capital investment plans²⁴ identify the relatively limited suite of financing strategies for nature recovery including: public sector grants, public sector service provision, private developer investment and community-level action. These are both narrow in scope and vulnerable to future changes to the financial and economic landscape. To address the shortcomings, natural capital investment plans consider a broader range of investment sources into nature and natural capital, including philanthropy, corporate and institutional investors.

Government has committed £5 billion to farming in the next two years (FY '25-'26 and '26-'27)²⁵ and there is opportunity to lever private sector funding alongside this. Locally, it is anticipated that the North Yorkshire and York Local Investment in Natural Capital (LINC) programme will help to mobilise private investment to deliver nature recovery, climate adaptation and climate resilience across the region. It will become one of the key delivery mechanisms of the LNRS.

Promoting jobs, education, apprenticeships, and skills in delivering nature recovery

Nature North has highlighted how investment in nature recovery can play a key role in the generation of green jobs. Targeting disadvantaged urban communities and rural and coastal regions can result in job and skills generation in economically vulnerable areas. The expectation is that jobs can be created at both entry and graduate level. Skilled staff are required in the restoration and creation of habitats as well as in their maintenance, monitoring and management. Nature North references a study by RSPB and Cambridge Econometrics²⁶ that estimates that a significant number of temporary and long-term jobs would be established through initiatives such as woodland creation and peatland restoration.

More locally, the York and North Yorkshire Combined Authority is funding a series of initiatives to support our working population with specific pathways into green jobs. These include the York & North Yorkshire Careers Hub for young people, Skills Bootcamps, Adult Skills Fund and the Skills Innovation Fund²⁷. Askham Bryan College is a land-based college with a campus on the western fringes of York. A significant proportion of the 1,500 students on the site are engaged in agriculture, horticulture, arboriculture, nature or conservation studies, meaning there is a pool of talent to take up green jobs in the region.

We have already highlighted the work of NGO's such as Yorkshire Wildlife Trust, St Nicks and the Lower Ure Conservation Trust, who facilitate apprenticeships and volunteering.

Through these initiatives, individuals enter into the nature recovery sector gaining knowledge, expertise and experience with the anticipation that they choose to stay in the nature sector for the duration of their career or remain supportive throughout it.



Young people at Nature North event



Askham Bryan College, York



Yorkshire Wildlife Trust apprenticeships

²⁴ [Greater-Manchester-Natural-Capital-Investment-Plan-January-2019.pdf](https://www.greatermanchester.gov.uk/media/1000000/greater-manchester-natural-capital-investment-plan-january-2019.pdf)

²⁵ Land Use Consultation - Defra - Citizen Space <https://consult.defra.gov.uk/land-use-framework/land-use-consultation/>

²⁶ The economic costs & benefits of nature-based solutions_final report_FINAL_V3.docx www.camecon.com/wp-content/uploads/2021/03/The-economic-costs-benefits-of-nature-based-solutions_final-report_FINAL_V3.pdf

²⁷ Skills in York and North Yorkshire <https://yorknorthyorks-ca.gov.uk/what-we-do/skills>

Monitoring and evaluating change – recording uplifts to species, tree cover and habitats over time

Government has mandated that LNRS responsible authorities monitor changes in nature recovery that occur as a result of the published strategies. At the outset of the preparation of the LNRS for North Yorkshire and York the Advisory Group (steering group) highlighted the importance of making use of monitoring and reporting tools to verify the impact of changes taking place over time.

During December 2024 over 30 locally-based stakeholders contributed to a workshop considering ‘What does LNRS delivery look like?’ for our region. This included a section on monitoring and reporting requirements, with some of the key findings including:

- Attendees would value dedicated LNRS resource to help facilitate a central reporting system for all stakeholders involving both numerical and spatial (GIS) records
- The importance of setting up baseline monitoring to determine any changes as a result of nature recovery activity
- To devise a GIS reporting system for ‘activity’ with a traffic light reporting system (with coloured polygons related to a step-by-step process, moving sequentially through (i)-(iv): (i) idea (ii) started (iii) finished (iv) achieved intended goal
- The value of measuring outcomes as opposed to outputs (e.g. assessing key indicator species may be a better way forward rather than detailed monitoring)



Picture credit: Simon Pickles

Recording nature on site



Picture credit: NEYDC

Devising a reporting system for mapping changes in natural species

Contact us

Online: northyorks.gov.uk/contact-us

By telephone: For further information call **0300 131 2131** and say 'nature recovery' when prompted

North Yorkshire Council, County Hall, Northallerton, North Yorkshire, DL7 8AD

You can request this information in another language or format at northyorks.gov.uk/accessibility



North Yorkshire and York Local Nature Recovery Strategy (LNRS)

Document 3: Statement of Biodiversity Priorities, Part I –
Description of our Strategy Area

CONSULTATION DRAFT

June 2025

LNRS Document Navigation

The North Yorkshire and York Local Nature Recovery Strategy (LNRS) is split into 5 separate parts to help users of the strategy easily find the information that is most relevant to them. The 5 parts are set out in the table below, with a brief description of each one. Please click on one of the other parts in the table to access it. *(N.B. document links will be created in the final version)*

This document is: **3: Statement of Biodiversity Priorities Part I – Description of Our Strategy Area**

1	Thriving Nature in North Yorkshire and York – Short Summary Provides a non-technical summary of the North Yorkshire and York Local Nature Recovery Strategy
2	Thriving Nature in North Yorkshire and York – Our Local Nature Recovery Strategy Provides a detailed overview of the North Yorkshire and York Local Nature Recovery Strategy
3	Statement of Biodiversity Priorities Part I – Description of Our Strategy Area Provides a detailed description of the strategy area of the North Yorkshire and York Local Nature Recovery Strategy
4	Statement of Biodiversity Priorities Part II – Priorities and Measures Sets out the priorities and measures for the North Yorkshire and York Local Nature Recovery Strategy
5	The Local Habitat Map Online mapping platform providing the Local Habitat Map for the North Yorkshire and York Local Nature Recovery Strategy, including existing Areas of Particular Importance for Biodiversity (APIBs) and Areas that Could Become of Particular Importance for Biodiversity (ACBs)
Appendix 1	LNRS Prioritisation methodology and scoring criteria
Appendix 2	LNRS Species prioritisation methodology
Appendix 3	LNRS Mapping methodology and datasets
Appendix 4	LNRS Nature recovery opportunities longlist
Appendix 5	LNRS Priority species list
Appendix 6	LNRS online survey responses summary, February 2024

Contents

Document Overview	1
Section A – The North Yorkshire and York LNRS strategy area	2
1. Overview	2
2. The State of Nature in North Yorkshire and York	5
3. Benefits from nature	8
4. Land Use Summary for North Yorkshire and York	9
5. Areas of Particular Importance for Biodiversity	11
Section B – Sub-area descriptions	13
North Yorkshire and York LNRS Area – Sub Area Map	13
Urban environments	14
1. Bowland Fells	16
2. Craven Lowlands	17
3. Limestone Landscape	18
4. Moorlands and Dales	20
5. Pennine Dales Fringe	22
6. Southern Magnesian Limestone	23
7. Tees Lowlands / Vale of Mowbray	24
8. Vale of York West / Humberhead Levels West	25
9. Vale of York East / Lower Derwent Valley	26
10. Howardian Hills	27
11. Vale of Pickering	28
12. Yorkshire Wolds	29
13. Esk catchment	30
14. Upland Plateau	31
15. Tabular Hills/Southern Fringe	32
16. North Yorkshire Coast	33

DRAFT

Document Overview

The purpose of the strategy area description is to inform setting priorities for recovering or enhancing biodiversity and environmental improvement within the strategy area. Our strategy area description includes the following narrative:

Section A

- Overview – we provide a spatial portrait of our area and outline habitats and species of importance in the national context
- State of nature – we outline some of the declines in nature across North Yorkshire and York
- Pressures leading to decline – we set out some of the causes and likely future pressures leading to further decline in nature
- Wider environmental issues – we describe how creating new and existing habitats can help address matters such as improvements to the water environment and climate mitigation and adaptation
- Land use summary – we outline key statistics for our urban and natural environments, designated sites and waterbodies

Section B

- Sub area map – we introduce the map of our sub areas that represent distinctions between geology, hydrology and concentration of habitats across our study area
- Sub area descriptions – we include a summary description for each sub area and list key habitats, species and statements of environmental opportunities.

Section A – The North Yorkshire and York LNRS strategy area

1. Overview

The North Yorkshire and York Local Nature Recovery Strategy (LNRS) land area is over 850,000 hectares covering a range of geologies including limestone, sandstone and ironstone. Long term interactions of land with climate and hydrology have resulted in distinctive topography, with uplands characterised by the Yorkshire Dales, North York Moors and Yorkshire Wolds, and neighbouring lowlands including the Vale of Mowbray, Vale of York and Vale of Pickering.

There is an extensive river network running through North Yorkshire and York, linking the uplands with the Humber Estuary and Yorkshire Coast. The rivers Swale, Ure, Nidd and Ouse flow in a south easterly direction towards York and then into the Humber estuary (see figure 1 on subsequent page). Other rivers joining the Ouse downstream of York include the Aire, Wharfe and Derwent. In the north, the Tees and Esk form separate river catchments, while in the west the Ribble finds its source in the Yorkshire Dales, before flowing into neighbouring Lancashire.

Approximately 15% of the national floodplain meadow resource occurs within the North Yorkshire and York strategy area. The Lower Derwent Valley supports one of the best examples of traditionally managed species-rich floodplain meadow habitat in the UK, and supports internationally important populations of wintering waterfowl.

North Yorkshire is noted for its upland landscapes, dominated by heather moorland and blanket bog that support rare species such as Hen Harrier, Merlin, and Bog Asphodel. The area has 27% of England's blanket bog resource¹, and around 25% of the upland heathland resource. The North York Moors has the largest block of continuous heather moorland in England. The Yorkshire Dales National Park contains approximately half of all Britain's limestone pavement and contains a significant proportion of the national upland hay meadow habitat, which the area is also famous for.

Lowland heathland is a rare habitat in England, and the York and Selby areas contain 2% of the country's total resource, supporting rare species such as Pillwort, Slender Pond Snail, Adder and Nightjar.

Limestone habitats are especially rich in wildlife, and North Yorkshire is unique in having four different limestone types, each supporting unique habitats and species. These vary from the largest area of Carboniferous limestone in the Yorkshire Dales, the Permian Magnesian limestone running north to south through the centre of North Yorkshire, the Jurassic limestone on the southern edge of the North York Moors, and Britain's most northerly chalk outcrop (Cretaceous) in the Yorkshire Wolds. These support unique flora such as Lady's Slipper Orchid, Purple Milk-vetch, and Perennial Flax. Almost half the plants of Conservation Concern in Yorkshire were linked with limestone and chalk²

¹ [Our peatlands | Yorkshire Peat Partnership](#)

² [State of Yorkshire's Nature | Yorkshire Wildlife Trust](#)

The Yorkshire Dales contains more than 40% of England's upland calcareous grassland resource³.

Woodland cover is slightly below the average for England, but we have important areas of ancient and long-established woodlands across our geography. The North York Moors National Park has the highest density of Plantation on Ancient Woodland Sites (PAWS) in the North of England. North Yorkshire and York is known for its large number of country estates and associated parkland, including Fountains Abbey & Studley Royal, Duncombe Park, and Castle Howard, which support large numbers of veteran and ancient trees, an irreplaceable habitat.

The LNRS area encompasses the North Yorkshire coastline from Staithes to Filey Bay, a highly distinctive heritage coast, with internationally recognised Jurassic and Cretaceous geology, and cliffs containing an array of fossils. Coastal grasslands support specialist invertebrates and plant species such as Bithynian Vetch, the hard cliffs are important nesting habitat for declining sea birds such as Kittiwake, and marine mammals such as Minke Whale and Bottlenose Dolphin can be seen out to sea.

North Yorkshire and York hosts a range of rare and iconic species from birds such as the Curlew and Barn Owl, to the Tansy Beetle, 'the Jewel of York', one of only two places it is found in the UK. The North York Moors National Park is now home to the only significant breeding population of Turtle Dove in the north of the UK. Our area is one of few places in the country left for endangered species such as Tassel Stonewort and Freshwater Pearl Mussel. The moth Dark Bordered Beauty has its only England site at Strensall Common, near York. Many of these rare and vulnerable species occur outside of our protected areas.

³ [M Hammond \(2019\), Flagship Habitats in North Yorkshire](#)

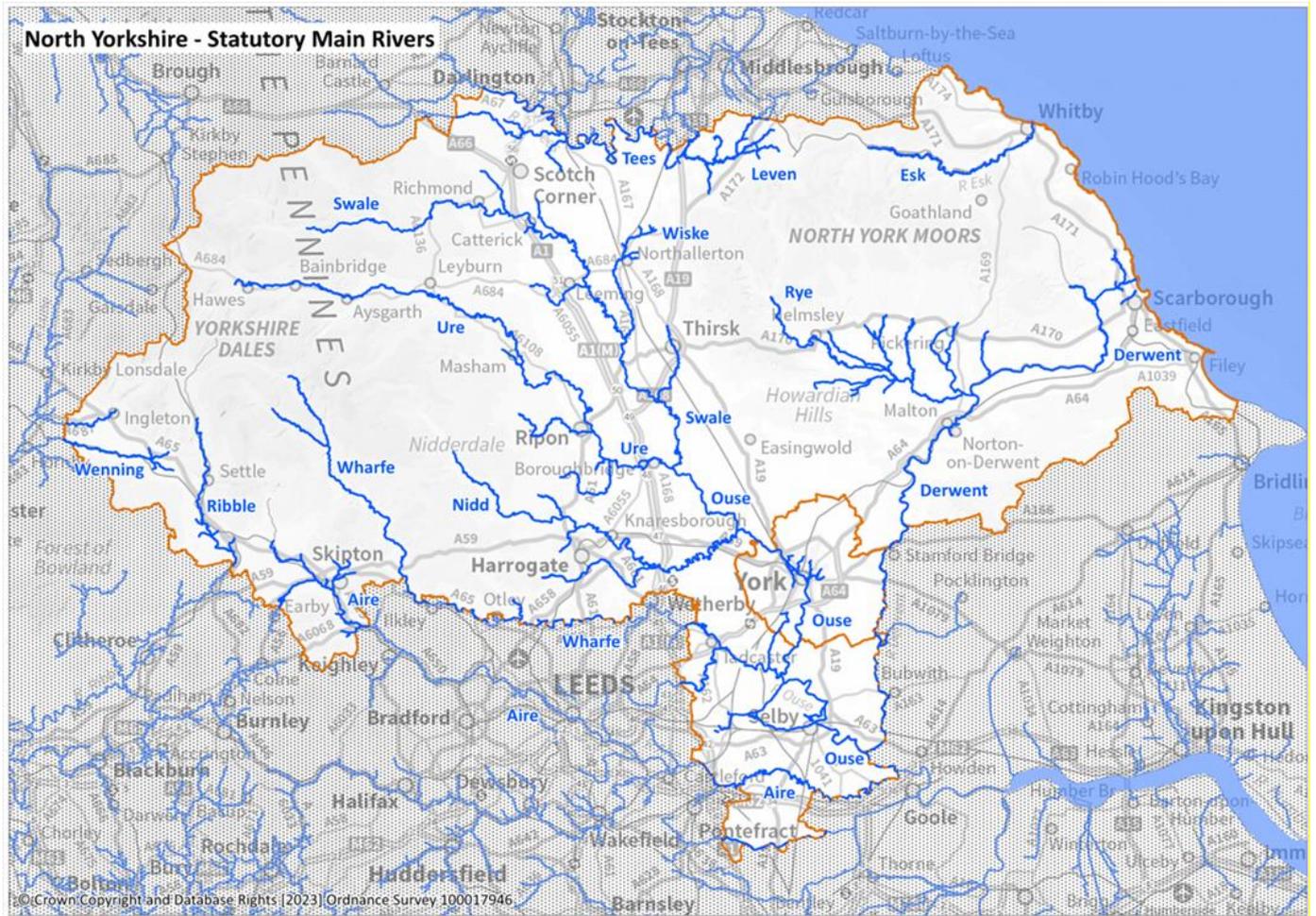


Figure 1 – Statutory Main Rivers

2. The State of Nature in North Yorkshire and York

Our landscapes have been shaped by humans for thousands of years, starting with neolithic farmers, carrying on through Roman settlers and beyond. Literary and archaeological research has highlighted that North Yorkshire and York was historically more wooded than today, but it was likely never heavily wooded (approximately 12% at the time of the Domesday Book in 1086 (Oliver Rackham, *Trees and Woodland in the British Landscape*, 1976)). Our current woodland cover is almost 9%.

Our historic lowlands were a great mosaic of wetlands, fenlands, and raised bogs. Work began in earnest by the Romans and continued from the 14th Century onwards to make the land more habitable and productive for food, dramatically changing our landscapes. Drainage activity over hundreds of years has led to the loss of 90% of our wetlands, and changes to our rivers natural processes. On the River Ouse corridor, there were around 1200 ha of floodplain meadow at the time of the Enclosures, but only 9% survives, with 91% having been lost⁴.

Large areas of common meadow and moor remained by the time of the Parliamentary Enclosures (between 1750 to 1850). For example, the Swale and Ure Washlands in our area's central lowlands had approximately 1300 ha of Ings (floodplain meadows enclosed by Parliament during this period⁵). This exceeds the entire surviving resource of Great Burnet meadow (the grassland plant community characteristic of traditionally-managed Ings) in England and Wales. Other changes in agricultural practices and increased demands on land for human activity has resulted in a 97% loss of our wildflower-rich grasslands.

The UK is one of the most nature-depleted countries on Earth (State of Nature 2023). Our dramatic land use changes over the last hundred years, combined with other factors, both human (such as pollution) and climate-related, has resulted in species abundance declining by around a third since 1970. In Yorkshire over 25% of species have declined in the last 30 years (State of Yorkshire Nature YWT). These can be seen in North Yorkshire and York by the dramatic decline of species such as Turtle Dove, White-Clawed Crayfish, Red Squirrel, and Lady's Slipper Orchid. Our area contains over 600 species considered to be endangered or vulnerable to extinction, including Tansy Beetle, Hen Harrier, Curlew, European Eel, Water Vole, and Burnt Orchid. Species that may be thought of as common such as the Common Toad, European Hedgehog or Swift are classed as priority species due to their dramatic declines in numbers.

Pressures that led to the decline in nature, and will continue to impact into the future if not addressed, include:

Habitat loss and fragmentation – urbanisation and agricultural intensification since the Second World War have historically led to the direct loss in habitat as well as a reduction in the quality of remaining habitat. Rivers and their riparian habitats have been heavily modified for flood risk and land drainage reasons and many structure and weirs present a barrier to fish migration. These

⁴ M Hammond (2017), *Deep meadows and transparent floods: the story of the Ouse Ings*, Carstairs Countryside Trust & Floodplain Meadows Partnership

⁵ [History — The Lower Ure Conservation Trust](#)

changes over time have created a fragmented network of sites for nature that have reduced the ability of species to migrate and made them more at risk of localised extinctions.

This fragmentation increases the potential for recreational disturbance, the negative impact of leisure activities on wildlife and their habitats. This can include changes in animal behaviour, habitat damage, and even physical harm or death of wildlife. Activities like walking, dogs walking off-leash, photography and drone flying can all contribute to recreational disturbance.

Water Pollution – Since the Industrial Revolution our waterways have been impacted by the chemical and biological waste products of commercial and residential activities. Agriculture and rural land management activities also continue to have an impact upon water quality. Pollution can occur from direct discharges into the river (such as via a pipe), from diffuse sources (such as through ground or via multiple sources) or from the release of sediment into the water. However, the return of iconic species like Atlantic Salmon to some of Yorkshire's rivers, in many cases for the first time in 200 years, demonstrates the positive efforts to clean these rivers. However, less than 20% of our waterbodies in North Yorkshire and York are classed as good ecological status, highlighting the impact issues such as pollution are still having on these ecosystems. More work is required to reduce the input of unwanted chemicals and nutrients from sewage treatment and run off from roads and agriculture into our watercourses, to support the recovery of our river wildlife.

Air Pollution – In England, the two main sources of atmospheric nitrogen pollutants are nitrogen oxides and ammonia. Nitrogen oxides result from the burning of fossil fuels, in both power stations and motor vehicles, while ammonia is mainly emitted from agriculture. Overall, 96% of the England's most sensitive wildlife habitats are affected by excessive nitrogen deposition.⁶

There is clear evidence for the negative impact on our ecosystems, including species loss, changes in soil chemistry and habitat degradation, due to eutrophication (excessive nutrient enrichment, leading to biodiversity loss), acidification or direct damage through toxicity. When excessive nutrients enter the soil, slower growing species adapted to low-nutrient conditions tend to decline, resulting in reduced species richness. These habitat changes may have an impact on other groups, such as insects and birds.

Nitrogen deposition is a complex problem and requires a coordinated response across several policy areas. Integrated approaches are needed across areas such as agriculture, transport, energy, climate change, water quality and public health, to drive emissions reductions.

Invasive species – There are estimated to be around 2000 Invasive Non-Native Species (INNS) in Britain. Many are well established, such as the Grey Squirrel, but 10 new ones are establishing each year⁷. INNS are estimated to cost the UK economy £1.84 billion a year and are a major threat to our nature. Some directly target our native wildlife (e.g. American Mink, Signal Crayfish), whilst others cause indirect harm whilst undermining our riverbanks (Himalayan Balsam), damaging our property (Japanese Knotweed), or impacting on human health (Giant Hogweed).

⁶ [We need to talk about Nitrogen - British Ecological Society](#)

⁷ [Non-native species » NNSS](#)

When planning work to restore habitats or encouraging more recreational and educational activities in the outdoors, we must ensure that we do not create new paths for INNS to spread further through our landscapes.

Pests and diseases – These are prevalent throughout our natural world, with more coming into our country through human activity and climate change. Warmer average temperatures and wetter environments could increase the presence of pests and disease even further. Ash dieback was accidentally introduced to England back in 2012 and is expected to kill up to 80% of ash trees across the UK⁸. It will change the landscape and threaten many species which rely on ash. Other species such as *Phytophthora ramorum* cause extensive damage and death to more than 150 plant species, including some forest species such as Larch that is extensive in North Yorkshire and York.

Climate change – The UK is predicted to experience warmer, wetter winters and hotter, drier summers. The impacts we are already experiencing with our changing climate are impacting the species around us as well. Flooding during breeding seasons can lead to nests and habitats being washed out, while droughts can prevent access to essential water and food sources. Changes in temperature can cause flowering periods to fall out of synch with emerging pollinating insects, leading to a lack of food at essential life stages. Changes in temperature will force animals to either survive in poor living conditions or migrate, which can be extremely challenging if the habitat they rely on is highly fragmented. Expansion of our urban spaces and corridors can mean that these precious stepping stones for their survival are lost. Upland and lowland peat habitat that have been drained to create productive farmland are at risk of drying out, releasing carbon instead of storing it.

Land use change - In England there are many demands being made on land including the needs of agricultural production (food and non-food), employment and residential development, strategic infrastructure including renewable energy, protected landscapes, nature recovery and leisure and recreation. To assist better management of these demands, it is understood that Government will publish the consultation on its Land Use Framework (LUF) during 2025. North Yorkshire and York faces all these competing demands across its geography and it will need tools like the LUF and the planning system to help manage competing demands on land effectively.

More specifically, in the City of York, the average annual net provision is 822 dwellings, with 13,152 new homes proposed across the Local Plan period 2017-2032/33. In North Yorkshire the new 'standard method' from the National Planning Policy Framework (December 2024) indicates the need for 4077 dwellings per year across the geography including the two national parks.

⁸ [Ash Dieback \(*Hymenoscyphus fraxineus*\) - Woodland Trust](#)

3. Benefits from nature

Healthy biodiversity and fully functioning ecosystems are essential for food production and fighting pests and diseases, supporting pollinators and the production of crops, fruit and fish.

Creating new habitats and enhancing existing habitats to create a larger network for nature will help humans mitigate and adapt to climate change, since all habitats can store carbon whilst also supporting biodiversity at a landscape scale. The measures included in the LNRS will help nature recover and create a network that could be more resilient to future climates for us as well as the species around us.

Creation, restoration, or enhancement of the range of habitats present in North Yorkshire and York, both in our rural and urban environments, will help store water and slow its flow, reducing the impacts of flood events and drought conditions. Clean rivers result in reduced costs of water with most of Yorkshire's drinking water coming from river and reservoirs. Creating more roughness in the landscape through hedgerows and field margins, woody areas, wetlands, and rough grasslands can help prevent soil to run off our fields, preventing the loss of valuable assets for food production. These activities will also help prevent sediment and run off from our roads entering our waterways, improving their quality at a lower cost than by mechanical means.

Increasing tree cover, particularly in urban spaces, can help cool down our streets and houses as temperatures increase, as well as help clean our air.

Our area's nature is integral to our local tourism offer. Investing in its condition and increasing its abundance will support this vital element of North Yorkshire and York's economy.

Many of our habitats have been lost or become degraded because we no longer value them as assets. The reduced demand for hay from our meadows, rushes and reeds from our wetlands, or timber products from our woodlands has been a key factor in the change in these habitats to become less wildlife rich. We must find new markets for the products associated with habitat management, such as feedstocks for anaerobic digestion and biomass to help grow our local green energy markets.

All the above work cannot take place unless we increase the workforce in our area to support these ambitions around nature recovery. This will unlock opportunities for businesses to be created and expand and unlock further education opportunities in our area.

4. Land Use Summary for North Yorkshire and York

In terms of land use today, over 70%⁹ of North Yorkshire and York is under agricultural use, including the rearing of livestock, arable and mixed farming. Other land uses include forestry, semi-natural habitat or greenspace associated with urban areas or development. There is very low urban coverage at 5.8% of the total area. More comprehensive figures on land use, nature conservation designation and water quality are included in the tables below.

Approximately 50% of North Yorkshire is protected landscape, designated either as National Park (the Yorkshire Dales and the North York Moors) or National Landscape (Forest of Bowland, Nidderdale and the Howardian Hills). The natural environment has strong links with North Yorkshire and York's economy, with agriculture and tourism being specialisms of the region.

The figures in the tables below were provided by the North and East Ecological Data Centre (NEYEDC), Forestry Commission, Environment Agency, and Natural England.

⁹ Please note that in the table the "Agriculture" section is given a total percentage of 57.2%. The additional 13% comes from habitats such as heathland and semi-natural grassland, which can also be classed as agricultural land because they are grazed for livestock or have hay crops taken from them.

Table 1 – Land use in North Yorkshire and York

Land Type	Area (Hectares)	Percentage of Total LNRS Area (%)
Urban	49,720	5.8
Allotments, community gardens, private gardens, golf courses, amenity grassland, road islands and verges	20,608	2.4
Building, roads, other built structures	29,111	3.4
Agriculture	488,079	57.2
Arable	286,210	33.5
Improved Grassland	196,066	23.0
Other Agricultural Land	5,803	0.6
Semi-natural Habitat	299,952	35.2
Woodland (including orchards)	74,131	8.7
Scrub, Scattered Trees	2,785	0.3
Parkland	3,978	0.5
Semi-natural Grassland	71,396	8.4
Bog	54,892	6.4
Heathland	82,040	9.6
Limestone Pavement	716	0.1
Wetlands	9,089	1.1
Intertidal sediment, mudflats, shingle	985	0.1
Other land types	15,393	1.8
Inland rocks, scree, boulders	1,332	0.16
Coastal Rocks	882	0.1
Miscellaneous habitats	13,118	1.54
TOTAL	853,144	100

5. Areas of Particular Importance for Biodiversity

The designations below make up the core of the nature recovery network, referred to as 'Areas of Particular Importance for Biodiversity (APIB)'. These encompass international, national, and locally designated sites, and areas of irreplaceable habitat see tables below.

N.B. sites can be covered by both national and international designations.

These can be seen on the LNRS Local Habitat Map. For more information about these sites, please visit [MAGIC](#)

Table 2 – Areas of Particular Importance for Biodiversity (APIB) in North Yorkshire and York

Type	Area (Hectares)	Percentage of total LNRS area (%)
European Designated Sites (SPA, SAC, Ramsar)	197,837	23
Sites of Special Scientific Interest	118,002	13.8
National Nature Reserves	1970	0.2
Marine Conservation Zones	6113	n/a
Local Wildlife Sites	10,617	1.2
Local Nature Reserves	303	0.04
Irreplaceable Habitats:		
Ancient woodland	14,553	1.7
Blanket bog	54,737	6.4
Limestone pavements	716	0.1
Lowland fens	1998	0.2

Condition of our designated sites, waterbodies and woodland

Table 3 – Condition of existing sites in North Yorkshire and York

Sites of Special Scientific Interest (SSSI)					
n.b. the total area of SSSI below is slightly higher than in the previous table because some SSSI units continue out of the North Yorkshire and York LNRS area.					
Condition		Area (Ha)		Percentage	
Favourable		18,076.97		15.07	
Unfavourable – Recovering		85,844		71.58	
Unfavourable – No change		10,521.09		8.77	
Unfavourable – Declining		5,444.72		4.54	
Partially Destroyed		33.85		0.03	
Destroyed		2.21		0.00	
Not Recorded		9.93		0.01	
TOTAL		119,932.77		100	
Woodland					
Category					Percentage
Woodland managed by Forestry England					25.8%
Woodland under other management					41.6%
Woodland not in management					32.6%
Waterbodies - Water Framework Directive Status Classification (2022)					
Condition	Rivers and Canals	Lakes	Transitional/ Coastal	Total	Percentage of total number of waterbodies
High	-	-	-	0	0
Good	65	2	-	67	19.6
Moderate	180	7	2	189	55.2
Poor	43	-	-	43	12.6
Bad	13	-	-	13	3.8
Not assessed	16	14	-	30	8.8
TOTAL	317	23	2	342	100

Section B – Sub-area descriptions

North Yorkshire and York LNRS Area – Sub Area Map

The map arranges the LNRS area into sub areas that represent distinctions between geology, hydrology, and the concentration of habitats. The boundaries are based on Natural England’s National Character Areas (NCAs) and the equivalent NCA map for the LNRS Strategy Area is provided in Appendix 1.

For more information about National Character Areas, visit [Natural England - National Character Area Profiles - National Character Area Profiles](#)

On subsequent pages of this document, each sub area is provided with an overarching physical description, followed by information on its key habitats and species, concluding with statements of environmental opportunity. The following section on urban environments covers the city of York and the larger settlements and market towns of North Yorkshire.

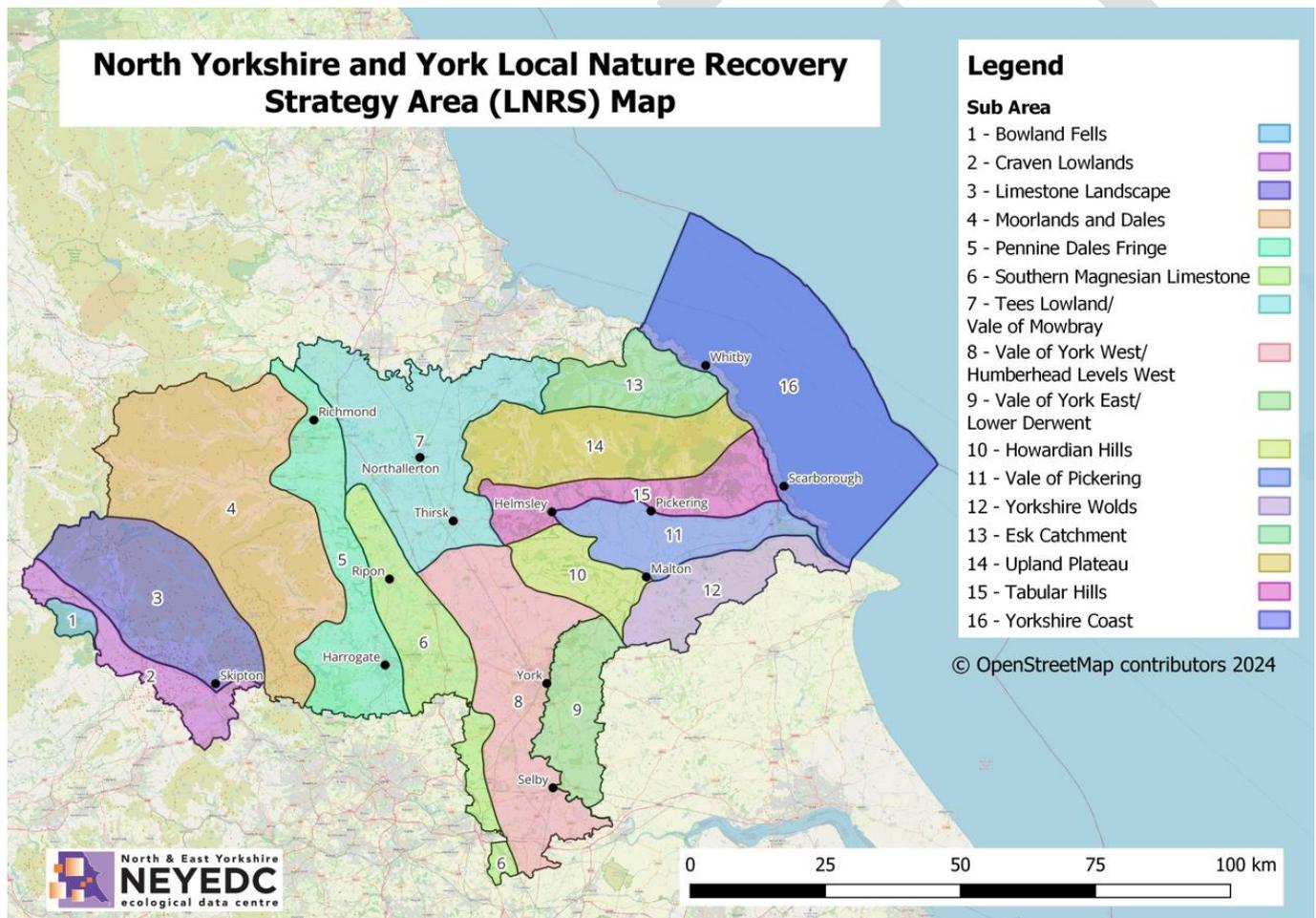


Figure 2 - North Yorkshire and York LNRS Sub Area Map

Urban environments

The city of York, our large towns such as Harrogate and Scarborough, and the smaller market towns spread across the county, have all been shaped by the landscapes they sit within and by many phases of development over time. As a result, the nature that uses these urban spaces can vary across North Yorkshire and York. Infrastructure such as buildings, roads and railways have created barriers for nature and contributed to the decline in many species over the decades.

However, our urban buildings and infrastructure can provide greater support for certain groups of species and habitats that are able to thrive in these environments. Urban greenspace and accessible wildlife habitats have an important role in increasing the quality of life of residents, and this is the area where local people can directly help nature's recovery. Wildlife in towns and villages is not necessarily isolated and many species can move through habitat corridors and into the wider countryside, using routes such as road verges, hedgerows, private gardens and waterways.

Urban features such as river and rail corridors, office and factory grounds, brownfield sites, churchyards and private gardens provide special opportunities for many species and can support flower and invertebrate-rich grasslands. Examples include St Nicks nature reserve in York, a former landfill site. In churchyards, walls and gravestones can support rich lichen and fern floras.

Although often referred to as 'green deserts' playing fields and other amenity grassland can provide foraging areas for some birds of conservation concern, including Song Thrush, Fieldfare, redwing and starling. Some bird species of conservation concern are found in urban settlements, including Bullfinch, House and Tree Sparrows, Spotted Flycatcher and Kittiwakes, where ecological conditions are suitable, although there has been much decline in recent years. Bumblebees and other pollinators are often attracted to gardens and green spaces, and garden ponds are known to support newts, frogs, toads and dragonflies.

Our buildings can support bats, Swallows, House Martins and Swifts. Hedgehogs are common visitors to gardens and other urban green spaces, and our rivers provide corridors for larger mammals such as otter. The presence of ponds, species-rich grasslands, trees, woodlands, hedgerows, shrubs and healthy waterways all increase opportunities for wildlife around us. Innovative design of our built environment, such as Sustainable Drainage Schemes (SuDS), green roofs and walls, swift bricks and other nest boxes, open up opportunities for nature at all heights and scales.

Key habitats – species-rich grasslands, woodland, hedgerow, ponds, rivers, brownfield sites which can include grassland, scrub and wetland.

Key Species – bats, Hedgehog, Otter, Swift, House Martin, Redwing, Fieldfare, Starling, Tree and House Sparrows, Kittiwake, Common Frog, Common Toad, Great Crested Newt, White-letter Hairstreak, Large Tortoiseshell, Cornflower, Ragged Robin.

Statements of Environmental Opportunities

- Ensure that there is a well-connected network of high-quality green/blue infrastructure through our urban settlements which will enable people to understand and enjoy the natural environment, as well as providing a range of other benefits including biodiversity enhancement, food provision and flood risk mitigation.
- Protect and enhance the waterways of our cities, towns and villages to reduce flood risk, improve water quality and conserve the valuable contribution they make towards sense of place, biodiversity, recreation and sense of history.
- Promote the inclusion and retrofitting of sustainable drainage schemes in developments to increase water storage and filtration and provide more space for nature.
- Explore opportunities to amend management of our existing urban greenspaces to incorporate more space for nature, including species-rich grassy areas, species-rich hedgerows, trees and pollinator-friendly shrubs.
- Encourage homeowners, housing authorities and local councils to adopt wildlife-friendly practises in gardens and community greenspaces, including reduced mowing, nestbox installation, prevention of chemical use, hedgehog gap installation, tree and shrub planting, to create more spaces for nature in urban settlements.

1. Bowland Fells

A distinctive upland block with steep escarpments, upland pasture and expansive open moorland. Area is dominated by blanket bog, upland heathland, and flushes, fen and swamp. Steep sided woodland valleys also an important feature.

Key habitats – blanket bog, upland heathland, upland flushes, fen and swamp, woodland, scrub.

Key species – Hen Harrier, Merlin, Lesser Black-backed Gull, Ring Ouzel, wading birds.

Statements of Environmental Opportunities

- Safeguard, manage and enhance the large areas of open, expansive blanket bog and wet-heath habitats and the important species they support, to ensure a strong network of habitats as well as for the benefits this brings to climate regulation, water quality and availability.
- Manage and enhance the landscape character and biodiversity of the moorland fringes, with their mosaic of pastures and meadows and their strong field patterns defined by drystone walls and hedgerow, to improve ecological networks and strengthen landscape character.
- Manage and enhance the watercourses and catchments for nature conservation, public enjoyment, recreation, water supply and flood management.
- Increase the significance of trees and woodland and manage existing tree cover to provide a range of benefits, including helping to assimilate new infrastructure, restore lost habitats and landscape features, store carbon, reduce soil erosion, enhance water quality and provide timber, fuel and recreational opportunities.
- Manage the development of and support sustainable tourism to minimise its impact on the cultural heritage, landscape character and tranquillity of the area, and increase opportunities for visitor engagement, enjoyment and understanding of the natural environment.
- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality, reduce soil erosion, improve water quality and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.
- Educate and take action against wildlife crime to ensure an end to persecution and a sustainable future for birds of prey such as hen harrier.

2. Craven Lowlands

These are transitional landscapes between the uplands areas of Bowland, Southern Pennines and Yorkshire Dales. The Ribble, Lune and Aire rivers and their floodplains are important component to the area and its farmed landscape, with associated woodland and species-rich grassland valleys. Some mire, blanket bog and heathland habitats are present, as well as upland grassland habitats. Parkland habitats are scattered across the area. The farmed landscape's irregular field patterns are defined by hedgerows and hedgerow trees.

Key habitats – upland heathland, blanket bog, mires, upland hay meadow, upland calcareous grassland, river, deciduous woodland, scrub, lowland meadow, lowland fen, parkland,

Key species – Curlew, Lapwing, Snipe, Redshank, Atlantic Salmon, Brown Trout, European Eel, farmland birds (e.g. Barn Owl, Skylark, Yellow Wagtail).

Statements of Environmental Opportunities

- Manage and enhance the landscape character and biodiversity of the farmed environment, with its mosaic of pastures and meadows, and strong field patterns defined by drystone walls and hedgerows, to improve ecological networks.
- Restore, buffer and expand the area's important habitats, including blanket bog, wet heath, waterbodies and woodland, to provide benefits for climate change, flood regulation, soil quality and erosion, and water quality.
- Work to ensure that riparian and wetland habitats are well managed and well connected to the high density of waterbodies. Enhance the network (including in-river habitat for migratory fish) to further increase biodiversity, improve its ability to buffer pollution, increase flood mitigation and improve water quality.
- Increase the resilience and significance of woodland, wood pasture and parkland, and manage and expand existing tree cover to provide a range of benefits, including helping to assimilate new infrastructure; reconnecting fragmented habitats and landscape features; storing carbon; and providing fuel, wood products, shelter and recreational opportunities.
- Increase the enjoyment and understanding of the landscape and to experience a sense of escapism and inspiration, while also conserving the qualities of the landscape and its valuable historic and wildlife features.
- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality, reduce soil erosion, improve water quality and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.

3. Limestone Landscape

This south-west area is considered outstanding for its 'karst' (limestone) landforms, cave systems and exposures of Carboniferous rocks, and supporting important habitats such as limestone pavements, tarns (including two extremely rare upland marl lakes), and calcareous grasslands. The extensive cave systems beneath the Dales provide important hibernation sites for moths and bats. The fells have significant amounts of blanket bog, upland heathland, upland flushes and lowland raised bog. Drystone walls are more common boundary features. Several major rivers start here, including the Ribble, Wharfe, Aire, and Lune. Woodland is in low levels across the area, with some important ancient woodlands and planted woodlands that support species such as red squirrel. Farming is mainly livestock, grazed at high intensity and with some adjacent areas of intensive grass production to support it.

Key habitats – limestone caves, limestone pavements, upland tarns, upland calcareous flushes and seepages, upland and lowland calcareous grasslands, upland hay meadows, blanket bog, upland heathland, upland flushes, lowland raised bog, rivers, woodland (including upland ash woodland), scrub.

Key species – Red squirrel, Curlew, Golden Plover, Merlin, Hen Harrier, Black Grouse, Ring Ouzel, White-clawed Crayfish, Northern Brown Argus, Bird's-eye Primrose, Teesdale Violet, Lady's Slipper Orchid, Yorkshire Feather-moss, Nowell's Limestone Moss, Tissue moth, bat species.

Statements of Environmental Opportunity

- Protect and expand the network of semi-natural habitats that create the distinctive pastoral character of the dales (including important upland hay meadows and wetlands along the numerous watercourses) to enhance water quality, strengthen connectivity, support rare species and allow for adaptation to climate change.
- Protect, enhance and restore the open moorland and blanket bogs to conserve their internationally important habitats and species, strong sense of place, history and remoteness, and peat soils, with their ability to sequester and store carbon and contribute to water quality.
- Protect, enhance and expand existing native woodland in this largely unwooded landscape to improve habitat connectivity, benefit wildlife, improve water quality, reduce flooding and soil erosion, sequester carbon and provide wood fuel.
- Protect, enhance and expand the area's many major rivers' in-river and riparian habitats, and wetlands to reduce flood risk, improve water quality and conserve the valuable contribution they make towards sense of place, biodiversity, recreation and sense of history.
- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality,

reduce soil erosion, improve water quality and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.

- Educate and take action against wildlife crime to ensure an end to persecution and a sustainable future for birds of prey such as hen harrier.
- Promote responsible recreation and use of the limestone features in this landscape, such as limestone pavements and caves, to maintain and enhance them for the wildlife they support.

DRAFT

4. Moorlands and Dales

Northern gritstone dales and moorland are found on predominately acidic soils, with deeper soils of the western fringe area, containing wide and deep, often u-shaped river valleys. Drystone walls are more common boundary features. Several major rivers start here, including the Swale, Ure and Nidd. Farming is mainly livestock, either on the grasslands of the Dales or on the moorland heather habitats. Grouse shooting is a major land use for this area. Calaminarian grassland linked to past industrial processes is present in the area, a rare habitat in England supporting specialist plants, bryophytes and lichens. Woodland is in low levels across the area, with some important ancient woodlands and conifer plantations that support species such as red squirrel. The landscape contains a series of reservoirs (e.g. Angram/Scar, Grimwith, Leighton/Roundhill and Gouthwaite) supplying water to Yorkshire residents, some of which are designated as SSSIs.

Key habitats – upland heathland, blanket bog, upland flushes, upland hay meadows, rivers, woodland, scrub, lowland dry acid grassland, purple moor grass and rush pasture, upland hay meadow, upland acid grassland and rough pasture, lowland hay meadow, lowland fens, calaminarian grassland, lowland raised bog, limestone caves, reservoirs and ponds.

Key species – Red Squirrel, Hazel Dormouse, Curlew, Golden Plover, Merlin, Hen Harrier, Black Grouse, Short-eared Owl, White-clawed Crayfish, Adder, Slow Worm, Common Lizard, Pearl-bordered Fritillary, Duke of Burgundy butterfly, Malham Sedge Caddisfly, Burnt Orchid

Statements of Environmental Opportunity

- Protect, enhance and restore the open moorland and blanket bogs to conserve their internationally important habitats and species, strong sense of place, history and remoteness, and peat soils, with their ability to sequester and store carbon and contribute to water quality.
- Protect and expand the network of semi-natural habitats (including important upland hay meadows and wetlands along the numerous watercourses) to enhance water quality, strengthen connectivity, support rare species and allow for adaptation to climate change.
- Protect, enhance and extend, as appropriate, existing native woodland in this largely unwooded landscape in order to improve habitat connectivity, benefit wildlife, improve water quality, reduce flooding and soil erosion, sequester carbon and provide wood fuel.
- Protect, enhance and expand the area's many major rivers' in-river and riparian habitats, and wetlands to reduce flood risk, improve water quality and conserve the valuable contribution they make towards sense of place, biodiversity, recreation and sense of history.
- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality,

reduce soil erosion, improve water quality and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.

- Educate and take action against wildlife crime to ensure an end to persecution and a sustainable future for birds of prey such as hen harrier.
- Expand the range of habitats present along the moorland fringe, including woodland, scrub and rough grassland, to reduce fire risk, improve habitat connectivity and benefit wildlife.

DRAFT

5. Pennine Dales Fringe

A transitional landscape between upland and lowland with a varied topography of exposed upland moorland fringes and plateaux dropping to lower foothills, separated by major river valleys and incised by numerous minor tributary valleys. The landscape holds several reservoirs (Thruscross, Swinsty/Fewston, Lindley Wood) that are an important source of water for Yorkshire residents. Drystone walls are common in the west while hedges, often thick and tall with frequent hedgerow trees, are more prevalent at lower elevations in the east. Broad valleys, widening to the east, with their more fertile soils support arable crops, while steeper, higher land in the west supports predominantly livestock farming. It is a well woodland landscape (many ancient in origin), as well as a high number of historic houses with associated parkland and veteran trees. Moorland edge mosaic habitats are important for species such as black grouse and ring ouzel.

Key habitats – rough grassland, upland heathland, lowland fen, lowland meadows, rivers, coastal and floodplain grazing marsh, wood pasture and parkland, woodland (including upland ash wood and wet woodland), scrub.

Key species – Curlew, lapwing, hen harrier, willow tit, Atlantic salmon, brown trout, European eel, river lamprey, otter, water vole, white-clawed crayfish, bat species, adder, slow worm and common lizard

Statements of Environmental Opportunity

- Protect and connect native broadleaved woodland, parkland and veteran trees to maximise their value for wildlife, flood risk alleviation, water quality, climate regulation, recreation, sense of place and sense of history.
- Protect and enhance the area's many major rivers' in-river and riparian habitats, and wetlands to reduce flood risk, improve water quality and conserve the valuable contribution they make towards sense of place, biodiversity, recreation, and sense of history.
- Expand the range of habitats present along the moorland fringe, including woodland, scrub, and rough grassland, to reduce fire risk, improve habitat connectivity and benefit wildlife.
- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality, reduce soil erosion, improve water quality and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.
- Educate and take action against wildlife crime to ensure an end to persecution and a sustainable future for birds of prey such as hen harrier.

6. Southern Magnesian Limestone

The landscape is a low rolling ridge running north-south, cut by river valleys running west to east, notably the Ure, Nidd, and Wharfe. The limestone geology has influenced many aspects of the landscape, from use of its limestone resource as a local building material to the specialised limestone grasslands associated with limestone areas. Fragments of woodland, species-rich grasslands (including on road verges), and fen are scattered throughout the landscape, as well as several historic parkland sites.

Key Habitats – lowland calcareous grassland, lowland meadow, deciduous woodland (including upland mixed ash wood), wood pasture & parkland, wetlands (e.g. lowland fen), rivers, hedgerows

Key Species – Thistle Broomrape, Cylindrical Whorl Snail, Small Amber Snail, Bittern, farmland birds, wading birds.

Statement of Environment Opportunities

- Protect the underlying geology and range of historic landscape features, including the extensive Palaeolithic, Neolithic and bronze-age monuments, as part of the wider landscape and the evidence and time-depth of the area's historic evolution. Increase opportunities to improve access to, understanding of and enjoyment of historic features within the landscape, as well as their links to biodiversity and underpinning geodiversity.
- Protect, enhance and expand the area's many major rivers' in-river and riparian habitats, and wetlands to reduce flood risk, improve water quality and conserve the valuable contribution they make towards sense of place, biodiversity, recreation and sense of history.
- Protect and manage existing semi-natural habitats, including grasslands, wetlands, woodlands, parklands and veteran trees; and increase the area of semi-natural habitats, restore and create new areas, and create networks and links between habitats, to make their ecology more resilient and to afford increased movement of species.
- Protect the overall rural landscape and maintain its highly tranquil quality, managing the arable landscape to ensure the continued production of quality crops while also enhancing landscape features such as field boundaries and improving biodiversity, soil quality, reduction of soil erosion, water quality and flood risk management.
- Promote the successful incorporation of any future major land use changes, directing them where they can enhance the existing landscape and seeking optimum design to obtain the greatest net benefits, such as to minimise visual impact on the wider landscape, incorporating green infrastructure and creating new access to enhance recreational opportunity for people to experience wildlife.

7. Tees Lowlands / Vale of Mowbray

The Tees Lowlands is a broad, open plain dominated by the meandering lower reaches of the River Tees and its tributary the Leven, with wide views to distant hills. It is largely agricultural in character, with fragmented woodland cover, and remnants of wet grasslands.

The Vale of Mowbray is a low-lying vale characterised by undulating floodplains associated with the rivers Swale, Wiske and Cod Beck. This is a farmed landscape, with a mix of arable and livestock, with limited woodland cover scattered across the area, along with hedgerows and hedge trees throughout and historic parks and gardens. Fragments of high quality wet grassland and wetlands are still present. There are major transport corridors with a series of market towns running down it. The area includes important historic features e.g. Roman settlements.

Key habitats – Rivers, Arable field margins, improved grassland, deciduous woodland, hedgerows, remnants of lowland meadow, wet grassland, fen, floodplain grazing marsh, ponds.

Key species – River Lamprey, European Eel, Atlantic Salmon, Sea/Brown Trout, Water Vole, farmland birds, Brown Hare.

Statements of Environmental Opportunity

- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality, reduce soil erosion, improve water quality, and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.
- Ensure that there is a well-connected network of high-quality green infrastructure throughout the Tees Lowlands and Vale of Mowbray which will enable people to understand and enjoy the natural environment, as well as providing a range of other benefits including biodiversity enhancement, food provision and flood risk mitigation.
- Protect and enhance the water resources of the area, in particular the aquifer and rivers, by supporting sustainable management of the farmed landscape, retaining important levels of food provision while protecting soils and water quality, and establishing networks of habitats including restoration of wetland habitats in the floodplain.
- Manage and extend the presently limited native woodland cover throughout the area to develop woodland habitat networks, and restore and expand the existing hedgerow network, to enhance sense of place, and assist in managing erosion, peak flow events and carbon storage.

8. Vale of York West / Humberhead Levels West

The western half of the Vale of York is low lying, farmland dominated landscape, heavily influenced by rivers, with pockets of wetlands, floodplain meadows and woodland. The City of York lies in the heart of this landscape, with the river corridor and fragments of good-quality floodplain meadow, and fen present at Askham Bog. The area contains the entire UK population of Tansy Beetle apart from 2 sites in East Anglia.

The western half of the Humberhead Levels is also flat low lying and largely agricultural landscape. The whole area characterised by long views and big open skies. There are strong links to the rivers Aire and Went crossing the landscape, with remnant wetlands and floodplain. Clay sand and gravel deposits have led to series of quarries in the area. There is the presence of industry at several power stations. Peat soils may be present, but likely to be further south. There is limited woodland and hedgerow cover, but Bishop Wood a key ancient woodland site.

Key habitats – arable and pasture, hedgerows, canals and ditches, rivers, floodplain grazing marsh (including Great Burnet floodplain meadows), wetlands (including fen and ponds), lowland meadows, deciduous woodland, wood pasture and parkland linked to estates along the area.

Key species – Tansy Beetle, Depressed River Mussel, Water Vole, River Lamprey, European Eel, Atlantic Salmon, Sea/Brown Trout, Pillwort. farmland birds, wading birds.

Statements of Environmental Opportunity

- Identify opportunities within the existing agricultural systems to enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality and reduce soil erosion and deliver benefits for biodiversity, carbon storage and climate regulation.
- Manage and enhance the network of rivers and important wetland habitats within the area, increasing the landscape's ability to manage flood and drought risk naturally and sustainably, and provide other ecosystem services while recognising the needs of individual species and habitats and increasing the resilience of wildlife to climate change.
- Increase the network of species-rich meadows, pastures, flower-rich field margins and hedgerows, ensuring that they and the wider farmed environment are managed to reduce rates of diffuse pollution and improve water quality.
- Protect the open and expansive character of the landscape, its cultural features and sense of remoteness, by ensuring that new development is sensitively located, accommodates green infrastructure, retains long views, and makes a positive contribution to biodiversity.

9. Vale of York East / Lower Derwent Valley

Low lying, farmland dominated landscape, heavily influenced by rivers, with pockets of wetlands and internationally important floodplain “ings” meadows. A string of “commons” containing remnant heathland habitats are dotted along the valleys. High concentration of internationally and nationally important National Nature Reserves. Woodland cover is low in this area.

Key habitats – lowland hay meadow, floodplain grazing marsh (including Great Burnet floodplain meadows), arable, hedgerows, rivers, lowland heathland, lowland dry acid grassland, ponds.

Key species – wildfowl and wading birds (Wigeon, Teal, Ruff, Whimbrel, Common and Green Sandpiper, Oystercatcher, Spotted Crake), farmland birds, Water Vole, Otter, Dark Bordered Beauty, Tormentil Mining Bee, Scarce Dusky Yellowstreak mayfly, *Dolichopus migrans* (a fly), Tansy Beetle, Greater Water Parsnip, Pillwort, River Lamprey, European eel, Atlantic salmon, brown trout.

Statements of Environmental Opportunity

- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality, reduce soil erosion, improve water quality and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.
- Manage and enhance the network of in-river and riparian habitats, and important wetland habitats within the Vale, increasing the landscape’s ability to manage flood and drought risk and provide other ecosystem services while recognising the needs of individual species and habitats and increasing the resilience of wildlife to climate change naturally and sustainably.
- Increase the network of species-rich meadows, pastures, flower-rich field margins and hedgerows, ensuring that they and the wider farmed environment are managed to reduce rates of diffuse pollution and improve water quality.
- Extend and enhance lowland heathland sites on areas of sandy soil for the benefit of biodiversity, as well as enhancing the sense of place. Create and keep open sandy areas and banks on lowland heath (through disturbance by cattle and large herbivores) to provide habitat for their associated unique flora and fauna, which have been lost.

10. Howardian Hills

A clearly defined belt of irregular, rounded ridges of Lower, Middle and Upper Jurassic rocks with intervening sheltered valleys, a diverse landscape of woodlands, historic buildings, designed parkland (notably Castle Howard), and rolling arable land on ridges and open plateaux. The area has a relatively high proportion of woodland, often within historic designed parkland associated with large country houses, as well as native woods and conifer plantations. It has a highly fragmented network of important grassland and wetland sites (including road verges), supporting rare species such as knapweed broomrape.

Key habitats – rivers, floodplain grazing marsh, fens, reedbed, deciduous woodland (including ash woodland, upland oak woodland and alder woodland), wood pasture and parkland, hedgerows, Species-rich grassland.

Key species –wading birds, farmland birds, bat species, Brown Hare, Water Vole, Otter, White-clawed Crayfish, Irish Major soldierfly, Scarce Dusky Yellowstreak mayfly, Baneberry, Knapweed Broomrape, rare arable flowers.

Statements of Environmental Opportunity

- Manage the wooded character of the sub area and its important historic parklands to optimise carbon storage, water quality and regulation of peak flow events, and to strengthen habitat networks, enhancing the sense of place and history.
- Support sustainable management of the agricultural landscape to retain important rates of food provision, while enhancing the network of semi-natural habitats within pastoral and arable landscapes, protecting the wildlife and water quality of the River Derwent, optimising carbon storage, soil quality and regulation of peak flow events, and strengthening the sense of place.
- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality, reduce soil erosion, improve water quality and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.
- Protect the geological and historic landscape features that are characteristic of the area, including its distinct landform, prehistoric earthworks, medieval monasteries, grand houses with designed parkland, and settlement pattern. Manage these features to provide diverse public benefits, enhancing the sense of place and history, and protecting natural resources.
- Promote enhanced access to and enjoyment of the Howardian Hills in ways that will maintain and enhance the area's special qualities and character, and its tranquillity, and that will support the essential underpinning ecosystem services, the quality of soils and water, and carbon storage.

11. Vale of Pickering

A low-lying basin of flat or gently undulating topography the landscape contains rivers and wetlands which have been artificially drained and heavily modified for productive farming. The east end is peat influenced, containing internationally important archaeology of Star Carr, as evidence of human habitation around former Lake Pickering. Sparse woodland and tree cover. Dominated by major rivers, the Rye in the west and the Derwent in the east and middle.

Key habitats – rivers, drains and ditches, floodplain grazing marsh, fens, reedbed, hedgerows and hedge trees, wet woodland

Key species – Wildfowl and wading birds (e.g. Lapwing, Curlew, Redshank, Oystercatcher), Willow Tit, Water Violet, River Lamprey, Otter, Water Vole, Scarce Dusky Yellowstreak mayfly.

Statements of Environmental Opportunity

- Enhance the network of in-river and riparian habitats, and wetlands in the Vale to provide public benefits in improved flood mitigation and improved water quality, and to reduce habitat fragmentation and increase the resilience of habitats and species to environmental change.
- Protect and enhance the historic landscape and geodiversity of the Vale, promoting greater understanding of this to inform current and future decisions on how the landscape is used.
- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality, reduce soil erosion, improve water quality and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.
- Ensure that developments are successfully integrated into the landscape, making a contribution to biodiversity and habitat networks, and that they do not compromise the sense of tranquillity and openness of the rural landscape, or delivery of other important ecosystem services, including mitigating and adapting to climate change.

12. Yorkshire Wolds

Chalk-influenced open downland landscape and network of dry valleys, dominated by arable and pastureland. Chalk reaches its northern limit in Britain here at Muston. Chalk grasslands are important homes for wildlife, and grade into neutral grasslands where leaching has reduced the lime in the soil. Woodlands and hedges, although present, tend to be relatively recent in origin and of limited wildlife interest. Wetlands are very limited but where they do occur, can be of great interest. Usually these are as flushes and springs at the foot of the scarp slope along the edge of the Vale of Pickering. Ponds, and particularly dewponds, are few in number but can be of interest, particularly for beetles and other invertebrates.

Key habitats – chalk rivers, lowland calcareous grasslands (including road verges), deciduous woodland, dew ponds, arable field margins, hedgerows, scrub.

Key species – farmland birds (Corn bunting, Skylark, Yellowhammer, Turtle Dove), Barn Owl, Lapwing, Brown Hare, Tassel Stonewort, Dropwort, Carlina Thistle, Northern Brown Argus, Marbled White.

Statements of Environmental Opportunity

- Enhance, extend and manage the unique assemblage of chalk-based habitats (lowland chalk grasslands, streams) and broadleaved woodland, while protecting the provision and quality of water.
- Improve opportunities to enhance people's enjoyment of the area while protecting high levels of tranquillity by conserving extensive views and intimate, steep-sided valleys which contribute to sense of place, and by protecting and promoting the extensive historic evidence of past human settlement, landscape change and designed landscapes.
- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality, reduce soil erosion, improve water quality and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.

13. Esk catchment

This landscape incorporates the river Esk and associated habitat flowing down into Whitby. This is a wider valley, with an upland landscape of walled and hedged pastures alongside moorland, with patches of conifer and broadleaf woodland along its lower reaches. An important catchment for euryhaline migratory fish species, such as Sea/Brown Trout and Atlantic Salmon, and the associated critically endangered Freshwater Pearl Mussel.

Key habitats – upland heathland, blanket bog, lowland dry acid grassland, river, deciduous woodland, scrub, species-rich grassland.

Key species – Merlin, Ring Ouzel, Golden Plover, Curlew, Freshwater Pearl Mussel, Atlantic Salmon, Sea/Brown Trout, Petty Whin.

Statements of Environmental Opportunity

- Protect and positively manage the large areas of open, expansive moorland for the internationally important habitats and species that they support, for the sense of wildness and strong character of the areas, for their ability to sequester carbon, and for the benefits that well managed moorland brings for water quality and flood control.
- Seek opportunities to restore lowland fens, reedbeds, flood plain grazing marsh, flushes, in-river and riparian habitat to enhance biodiversity and contribute to regulating flood flows, enhancing water quality, aquifer recharge, carbon sequestration and storage, leading to benefits being experienced within the sub-area.
- Positively manage woodlands, trees, wood pasture and historic parklands for their contribution to the characteristic landscapes of the area, their priority habitats and the species that they support, as well as their potential for carbon storage, regulation of peak flood flows and provision of renewable materials.
- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality, reduce soil erosion, improve water quality and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.
- Remove barriers to fish migration and reduce sources of water pollution into the River Esk, to support the return of species into the river.

14. Upland Plateau

Extensive areas of open moorland, dissected by a series of dales, some broad and sweeping, others narrow, steep sided and wooded. The beck valleys that feed into the Esk, Rye and Derwent contain corridors of species-rich grassland, wetland, mature and veteran landscape trees and woodland habitats amongst the farmed landscapes.

Key habitats – upland heathland, blanket bog, purple moor grass rush pasture, lowland dry acid grassland, species-rich grasslands, deciduous woodland, scrub, acid and calcareous flushes, river.

Key species – Merlin, Ring Ouzel, Golden Plover, Curlew, Wild Daffodil, Large Heath butterfly, Bilberry Bumblebee, Tormentil Mining Bee, Geyer's Whorl Snail, *Anabolia brevipennis* (a caddisfly), Water Vole.

Statements of Environmental Opportunity

- Protect and positively manage the large areas of open, expansive moorland for the internationally important habitats and species that they support, for the sense of wildness and strong character of the areas, for their ability to sequester carbon, and for the benefits that well managed moorland brings for water quality and flood control.
- Seek opportunities to restore lowland fens, reedbeds, floodplain grazing marsh, flushes and riparian habitat to enhance biodiversity and contribute to regulating flood flows, enhancing water quality, aquifer recharge, carbon sequestration and storage, leading to benefits being experienced within the sub area and beyond to downstream sub areas.
- Positively manage woodlands, trees, wood pasture and historic parklands for their contribution to the characteristic landscapes of the area, their priority habitats and the species that they support, as well as their potential for carbon storage, regulation of peak flood flows and provision of renewable materials.
- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality, reduce soil erosion, improve water quality and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.

15. Tabular Hills/Southern Fringe

Arable and pasture fields are more present, with remnants of species-rich calcareous grasslands, and wetlands. Strong woodland presence the tabular hills, including substantial conifer and mixed plantations. Important parkland sites such as Duncombe Park with notable veteran tree assemblages. Arable Farmland and historic quarries contain rare arable flower species. The Ryedale Windypits are archaeologically significant natural underground features, used as an amenity for cavers and potholers, and are also nationally important swarming and roosting sites for seven species of bats.

Key habitats – deciduous woodland, conifer plantations, wood pasture, parkland and veteran trees, lowland meadow, lowland calcareous grassland, rivers, hedgerows, scrub.

Key species – Duke of Burgundy butterfly, Pearl-bordered Fritillary, Green Barred Colonel soldierfly, Irish Major soldierfly, Geyer's Whorl Snail, 6-spotted Longhorn Beetle, Norfolk Hawker, Turtle Dove, Goshawk, Nightjar, Beaver, Pine Marten, rare arable flowers, Dropwort, Whiskered Bat, Daubenton's Bat, Natterer's Bat, Brown Long-eared Bat.

Statements of Environmental Opportunity

- Seek opportunities to restore lowland fens, reedbeds, flood plain grazing marsh, flushes and riparian habitat to enhance biodiversity and contribute to regulating flood flows, enhancing water quality, aquifer recharge, carbon sequestration and storage, leading to benefits being experienced within the NCA and beyond to NCAs downstream.
- Positively manage woodlands, trees, wood pasture and historic parklands for their contribution to the characteristic landscapes of the area, their priority habitats and the species that they support, as well as their potential for carbon storage, regulation of peak flood flows and provision of renewable materials.
- Protect and promote sustainable management of species-rich grasslands, former quarries and other rich floral habitats, enhancing their biodiversity and pollination values.
- Promote sustainable farming practices that enhance landscape character and create a functioning ecological network to safeguard future food provision, retain soil quality, reduce soil erosion, improve water quality and deliver benefits for biodiversity, carbon storage, natural flood management and climate regulation.

16. North Yorkshire Coast

The coast is a mix of hard cliffs that support breeding seabirds and soft coastal slopes made of calcareous clays, with the variety of exposures and slip features enabling a complex mosaic of habitat types with a strong maritime influence. The lack of interference on the slope itself has enabled species associated with old, unimproved habitats to survive. Grasslands range from acid, almost heath conditions to neutral or calcareous. These grasslands grade into dense scrub and woodland. In places there are ponds, flushes and wetlands established on slip back slopes and these too are diverse. Of particular interest are the numerous slip planes that provide bare clay for a number of rare and unusual invertebrates. There are extensive stretches of sand and rocky shores. In the Esk estuary saltmarsh and brackish wet meadows are present in small amounts.

The marine area is equally diverse with large swathes of kelp forest in the inshore area providing habitat and food for a wide variety of wildlife. Further offshore, cobble and boulder fields are interspersed with sandy sediments, creating important habitat for commercial fish species. Migratory fish, including salmon and sea trout, travel northwards along the coast and to inland breeding locations via the Esk Estuary, Staithes Beck and other coastal streams. Dolphins and minke whales follow the shoals of North Sea mackerel and herring swimming south from the Arctic, joining the resident populations of porpoise and seals. Internationally important populations of Kittiwakes, Puffins and Razorbills arrive to breed each summer, whilst wading and diving birds spend winter along the shoreline.

N.b. The accompanying map shows the Yorkshire Coast sub-area (16) extending 12 nautical miles from the shoreline which reflects the coastal and marine environment being considered by the Yorkshire Marine Nature Partnership to inform the Local Nature Recovery Strategy. The LNRS will focus its priorities and measures on species and habitats out to mean low water. Nature recovery work further out to sea will be led by the Yorkshire Marine Nature Partnership.

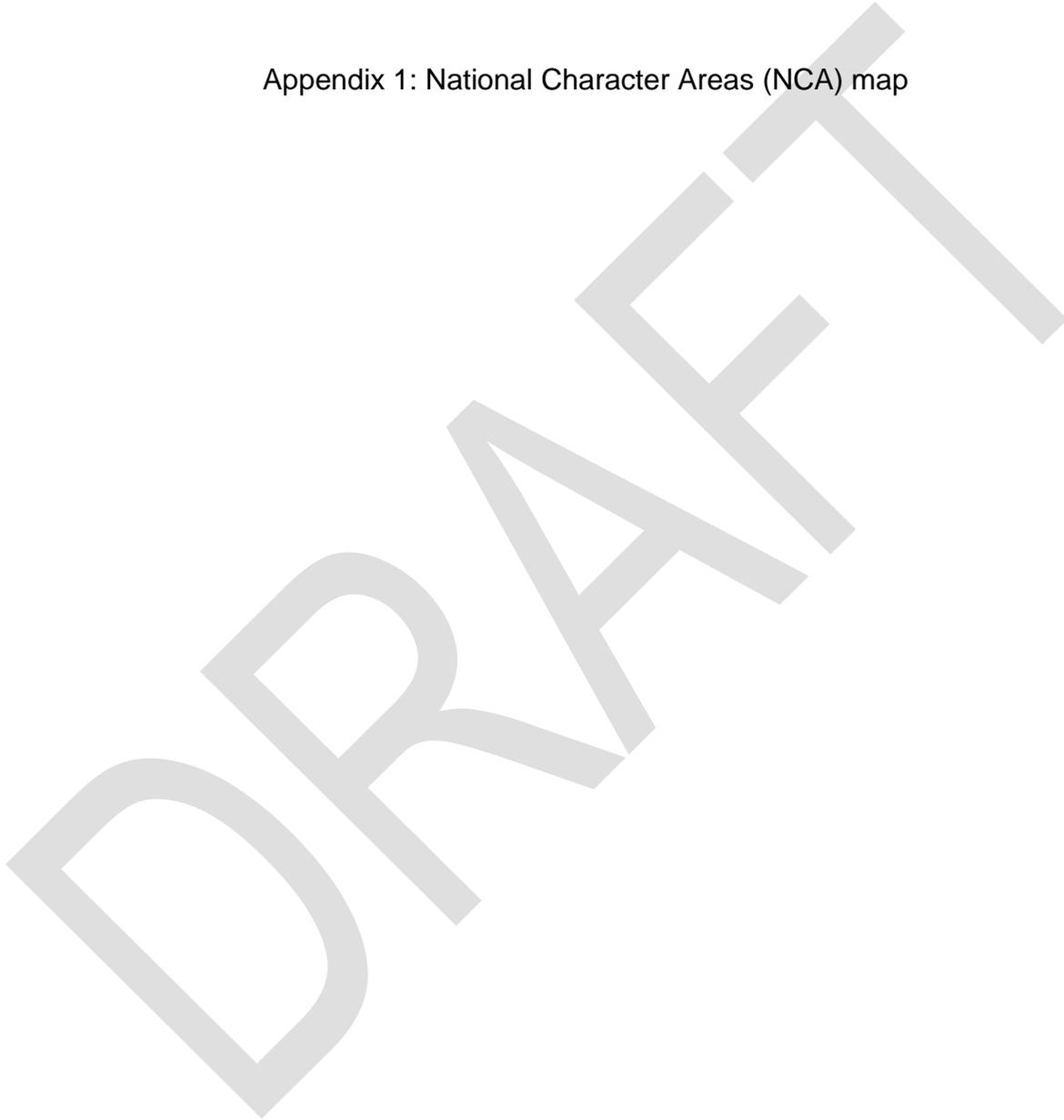
Key habitats – species-rich grasslands (calcareous, acid and neutral), scrub, kelp forest, coastal cliff slope mosaics, rocky shore mosaic of subtidal sediment habitats from sand and gravel to mud.

Key species - whales (Minke, with occasional other species like Humpback), Harbour Porpoise, Bottlenose Dolphin, White-beaked Dolphin, Grey seal, Kittiwake, Fulmar, auks (Razorbill, Guillemot, Puffin), Atlantic Salmon, Sea/Brown trout, Kidney Vetch, Thrift, Sea Lavender, red and brown seaweeds, Blue Mussel.

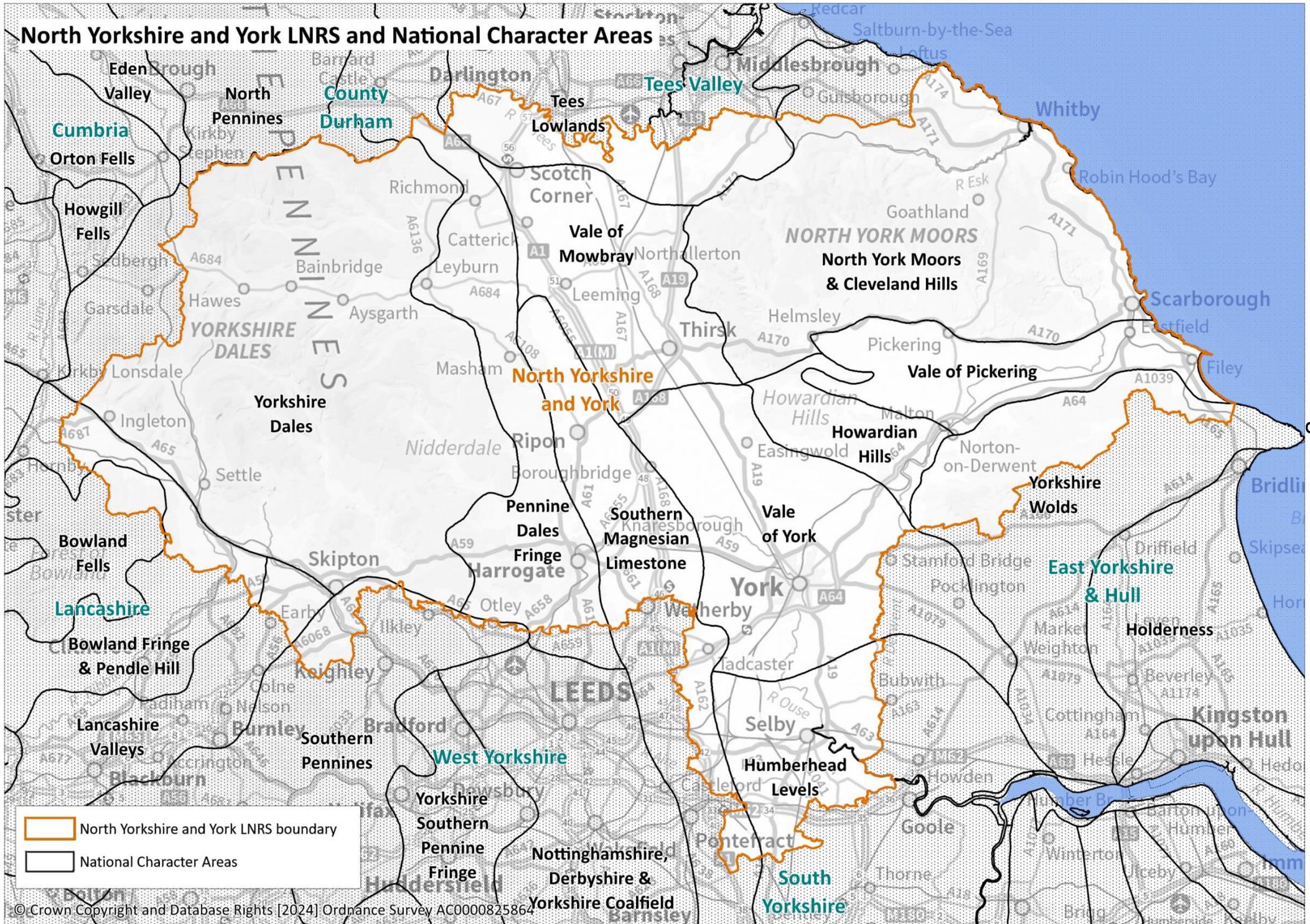
Statement of Environmental Opportunities

- Manage the coastal marine protected areas for the benefit of wildlife.
- Allow essential coastal processes to occur, including erosion of the soft clay cliffs, while respecting policies that reduce erosion and flood risk in relation to key coastal settlements.
- Improve intertidal biodiversity, such as adding ecological enhancements to 'hard' infrastructure.
- Increase our understanding of the coastal and marine ecosystem to better determine nature recovery, long term trends and ecosystem service opportunities (e.g. kelp mapping, sediment surveys, cetacean surveys, rocky shore ecology surveys).
- Explore opportunities to work with recreational sea users to capture data and promote sustainable behaviours (e.g. recreational angling sector, watercraft users through development of codes of conduct for example).
- Explore the connectivity between the sea and in-land habitats via coastal streams.
- Enhance people's understanding and enjoyment of the geodiversity, historic sites, seaside character and remoteness that contribute to the varied sense of place and valuable recreational assets that the area provides.

Appendix 1: National Character Areas (NCA) map



North Yorkshire and York LNRS and National Character Areas



	North Yorkshire and York LNRS boundary
	National Character Areas



North Yorkshire and York Local Nature Recovery Strategy (LNRS)

Document 4: Statement of Biodiversity Priorities, Part II –
Priorities and Measures

CONSULTATION DRAFT

June 2025

LNRS Document Navigation

The North Yorkshire and York Local Nature Recovery Strategy (LNRS) is split into 5 separate parts to help users of the strategy easily find the information that is most relevant to them. The 5 parts are set out in the table below, with a brief description of each one. Please click on one of the other parts in the table to access it. *(N.B. document links will be created in the final version)*

This document is: **4: Statement of Biodiversity Priorities Part II – Priorities and Measures**

1	Thriving Nature in North Yorkshire and York – Short Summary Provides a non-technical summary of the North Yorkshire and York Local Nature Recovery Strategy
2	Thriving Nature in North Yorkshire and York – Our Local Nature Recovery Strategy Provides a detailed overview of the North Yorkshire and York Local Nature Recovery Strategy
3	Statement of Biodiversity Priorities Part I – Description of Our Strategy Area Provides a detailed description of the strategy area of the North Yorkshire and York Local Nature Recovery Strategy
4	Statement of Biodiversity Priorities Part II – Priorities and Measures Sets out the priorities and measures for the North Yorkshire and York Local Nature Recovery Strategy
5	The Local Habitat Map Online mapping platform providing the Local Habitat Map for the North Yorkshire and York Local Nature Recovery Strategy, including existing Areas of Particular Importance for Biodiversity (APIBs) and Areas that Could Become of Particular Importance for Biodiversity (ACBs)
Appendix 1	LNRS Prioritisation methodology and scoring criteria
Appendix 2	LNRS Species prioritisation methodology
Appendix 3	LNRS Mapping methodology and datasets
Appendix 4	LNRS Nature recovery opportunities longlist
Appendix 5	LNRS Priority species list
Appendix 6	LNRS online survey responses summary, February 2024

Contents

Document overview	1
Section A – Overview of Priorities and Measures	2
1. Introduction	2
2. What are priorities and measures?	2
3. How do priorities and measures relate to other LNRS documents and maps?	3
How do priorities and measures relate to the Description of the Strategy Area?	3
How do priorities and measures relate to the Local Habitat Map?	3
Are all measures mapped onto the Local Habitat Map?	4
The Local Habitat Map and Biodiversity Net Gain (BNG)	4
4. How do priorities and measures relate to the LNRS public survey?	5
5. Do priorities and measures contribute to wider benefits from nature?	7
6. Contribution to National Environmental Objectives (NEOs)	9
7. Who is the document for?	10
8. How was the list made?	12
9. How do I navigate the document?	13
Section B – Priorities and Measures for the North Yorkshire and York LNRS	15
Overarching Priorities (OVR)	15
Habitat Priorities	18
Farmland (FRM)	18
Upland (UPL)	24
Grassland (GRA)	31
Woodland (WLD)	38
Water and wetlands (WET)	45
Urban (URB)	55
Coastal Priorities (CST)	60
Section C – Species	63
1. Introduction	63
2. What are priority species?	63
3. How do species relate to measures?	64

North Yorkshire and York LNRS

4. Focus Species	64
5. Future migrants and species recovery projects	65
6. Bespoke Species Measures	65
7. Species Recovery Projects list	71
8. Migrants list	72

DRAFT

Document overview

This document provides the priorities and measures (actions), along with the focus species, for the North Yorkshire and York Local Nature Recovery Strategy (LNRS). The document is separated into three sections, as set out below:

Section A provides an overview of the strategy's priorities and measures (actions), including how they relate to the other LNRS documents and the Local Habitat Map, how they contribute to wider benefits from nature and National Environmental Objectives (NEOs), how the list of priorities and measures was made, and how the document can be used by different audiences.

Section B provides the tables of priorities and measures (actions) for the LNRS, beginning with the overarching priorities, which are relevant across all habitat types, followed by the individual habitat priorities. The habitat priorities are separated into seven habitat themes of farmland, upland, grassland, woodland, water and wetlands, urban, and coastal. Each priority has a number of associated measures (actions), which are detailed in the tables, along with the wider benefits from nature and focus species that are relevant to the priority.

Section C provides an overview of the way in which species have been considered and factored into the strategy, including LNRS priority species and LNRS focus species and how these relate to the strategy's priorities and measures.

Section A – Overview of Priorities and Measures

1. Introduction

This section of the Statement of Biodiversity Priorities sets out the priorities and measures (actions) for the Local Nature Recovery Strategy (LNRS) for North Yorkshire and York. The priorities and measures form the core of the strategy and have been developed in collaboration with a wide range of regional experts, organisations, community groups, landowners and other stakeholders.

2. What are priorities and measures?

This strategy identifies a range of objectives that, if implemented, would result in positive benefits for nature and biodiversity, as well as making a positive contribution to other wider benefits from nature. The strategy's objectives are divided into 'priorities' and 'measures' and these are presented in the tables in section B of this document.

The priorities are the end results that the strategy is seeking to achieve. They can be considered as the 'what' and the 'why' of nature recovery; what we are seeking to do, and why we are seeking to do it. Working with regional stakeholders, we have identified a total of 44 nature recovery priorities. These are separated into 5 overarching priorities, which are considered relevant to all nature recovery activity, followed by 39 habitat priorities, which are separated into the following habitat categories:

- Farmland
- Upland
- Grassland
- Woodland
- Water and wetlands
- Urban
- Coast

Each priority has a number of associated measures. These are the practical 'on the ground' actions that, if taken, would help to deliver the aims of the priority. They can be considered as the 'how' and the 'where' of nature recovery; how we could do it, and where we could do it.

3. How do priorities and measures relate to other LNRS documents and maps?

How do priorities and measures relate to the Description of the Strategy Area?

Enhancing, restoring and creating the habitats listed in the priorities and measures will strengthen the networks of key habitats listed in the sub areas of the description of the Strategy Area. Delivery of the priorities and measures will therefore help achieve the Statements of Environmental Opportunity within each sub area.

The statistics within the introduction of the Description of the Strategy Area show that currently many of the habitats that are important for nature recovery in North Yorkshire and York are low in quantity. For example, only 1% of our area contains wetland habitats such as fen, and our species-rich grasslands cover less than 10% of our area. Much of our existing semi-natural habitats are also in poor condition, limiting the range of species able to live within them. Achieving the priorities and measures will lead to more habitat across North Yorkshire and York that is in better condition to support the hundreds of species that are in decline or at risk of extinction.

How do priorities and measures relate to the Local Habitat Map?

Our priorities and measures are directly linked to the Local Habitat Map. The map layer titled 'Mapped Measures' identifies the most beneficial places for habitat enhancements to be undertaken across North Yorkshire and York. The 'Mapped Measures' layer is configured as a series of hexagonal 'planning units' with several measures associated with each hexagon which are considered to be the most appropriate and beneficial measures that could be implemented in that location. Clicking into a hexagonal 'planning unit' will show the relevant measures that could be implemented, along with the priorities that those measures are associated with.

Potential to deliver a specific measure may only apply to a smaller area within the hexagon and would not necessarily be deliverable throughout the entire hexagon. This will depend upon the actual conditions on the ground.

Priorities and measures identified within the Local Habitat Map are the same as those listed in the tables in Section B of this document. All priorities and measures have a unique identification code, which can be used to easily identify them in both the Local Habitat Map and the tables in Section B.

Each measure has been assigned a priority level, with level 1 having the highest priority, level 2 having a moderate priority, and level 3 having a lower priority. It is not the intention to say that some measures are 'low priority', but to provide a relative level of priority across the mapped measures. The general principle is that where a measure has more 'niche' requirements (and therefore can only be done in a small number of places) it has been assigned a higher priority

Section A – Overview of Priorities and Measures

level (e.g. Level 1). For measures that have fewer constraints (and therefore can be done in a much wider number of places), these have been assigned a lower priority level (e.g. Level 3).

The priority levels should be used as a general guide as to which measures should be prioritised in a particular location. Generally, a Level 1 measure should be prioritised over a Level 2 or Level 3 measure, and a Level 2 measure should be prioritised over a Level 3 measure, subject to the site conditions being suitable to deliver the higher priority measure.

Are all measures mapped onto the Local Habitat Map?

No. Only those measures identified as 'Mapped' in the tables are mapped to specific locations in the Local Habitat Map. These measures have the potential to be particularly beneficial for nature recovery if they are undertaken in particular locations. In addition to the mapped measures, there are a large number of unmapped measures (identified in the tables as 'Unmapped') which do not appear on the Local Habitat Map. These measures may be equally beneficial for nature recovery, but they are not location-specific and could be undertaken more widely across the whole of North Yorkshire and York. All 'enabling activity' measures are unmapped, as they do not result in direct action for habitat enhancement, but would help to enable this by supporting the 'direct action' measures. They may be undertaken in locations where 'direct action' measures are being implemented, but this would be driven by the direct action measure itself.

When identifying appropriate measures that could be undertaken in a particular location, where no mapped measures have been identified for a given location on the Local Habitat Map, carrying out one or more of the unmapped measures would still result in positive enhancements to nature and biodiversity.

The Local Habitat Map and Biodiversity Net Gain (BNG)

The LNRS Local Habitat Map has a direct linkage with Biodiversity Net Gain (BNG) in supporting a strategic approach to off-site BNG delivery. BNG is designed to ensure that development has a measurably positive impact (or 'net gain') on biodiversity, when compared to what was on a site before the development took place. It has been mandatory since February 2024 under the Town and Country Planning Act 1990, with developments being required to deliver a minimum 10% net gain in biodiversity when compared with the pre-development level.

The LNRS Local Habitat Map plays a role in BNG by determining the 'strategic significance' multiplier within the biodiversity metric. Sites identified as falling within the 'Mapped Measures' layer in the Local Habitat Map carry a 15% strategic significance uplift in post-development BNG calculations. For the 15% uplift to apply, the habitat intervention being proposed under BNG must be consistent with the measure that is proposed for that location in the Local Habitat Map.

4. How do priorities and measures relate to the LNRS public survey?

As part of the development of the LNRS, an online public survey was undertaken between November 2023 and February 2024. The objective of the survey was to raise awareness about nature recovery, understand the views of individuals throughout North Yorkshire and York regarding nature and its enhancement, and signpost respondents towards local volunteering opportunities in nature. Responses to the online survey have helped to inform the development of the strategy and its outputs. The online survey covered the following topics:

- Why people care about nature;
- Which habitats and landscapes people feel are most important for nature recovery;
- Which groups of wildlife species people feel are most important when it comes to nature recovery;
- What examples people have seen of people working together to restore and protect nature or the natural environment in North Yorkshire and York;
- How concerned people are about nature in North Yorkshire and York;
- Which factors (e.g. climate change, water quality) are giving people the greatest concerns about nature decline.

From the survey responses, the three habitat types considered by respondents to be of greatest importance for nature recovery across North Yorkshire and York were rivers, lakes and streams; woodlands and forests; and wetlands. These relate closely to the habitat categories used in the LNRS, as detailed below, and the strategy has several priorities and measures directly linked to the enhancement of each of these habitat types.

Additionally, other specific habitats were mentioned by respondents in ‘free text’ responses. These were ranked in terms of the number of times each was mentioned, with the most mentioned being (in descending order):

- Hedgerows
- Farmland and agricultural land
- Roadside verges
- Parks and gardens
- Brownfield sites
- Peatlands

The strategy contains priorities and associated measures that relate to each of the above habitats, for example priority **FRM_P05** ‘Expand the hedgerow network’ relating to hedgerows and priority **GRA_P07** ‘Enhance road verges’ relating to roadside verges. There are a number of priorities and associated measures linked to the enhancement of farmland and agricultural land, which are listed under habitat category ‘Farmland (FRM)’.

Section A – Overview of Priorities and Measures

The responses to the public survey around species were evenly spread between which groups of species were felt to be important in relation to nature recovery, with no group standing out strongly. Written responses had a strong skew (28%) towards messages that all species were important and local nature recovery should be holistic and value the interconnectedness of habitats and the species reliant upon them. Plants and fungi were strongly felt to be important as underpinning a wide range of other species (mentioned by 34% of respondents). The LNRS has worked to incorporate these aspirations into the priorities and measures, so that rare habitats and interconnecting farmland and urban spaces are included to maximise the potential spaces available for as many species as possible across our landscapes.

Many respondents highlighted the importance of soil organisms, such as earthworms, and soil health. A number of measures within our farmland, grassland and water and wetland priorities directly work to support this; where not specified within a measure, soil health is also highlighted as an additional benefit that delivery of the priority will achieve.

Very few species were mentioned by name, and in almost all cases these are recognised as LNRS focus species, (e.g. Curlew, Hen Harrier, Tansy Beetle, Hedgehog, bat species) while others such as Pine Marten and Beaver are recognised as priority species.

For further information about the LNRS online public survey and responses received, please see Appendix 6.

5. Do priorities and measures contribute to wider benefits from nature?

Although the focus of the strategy's priorities and measures is on enhancing nature and biodiversity through habitat improvement, they would also make positive contributions to wider benefits from nature such as pollination, flood protection and climate regulation. Each of the 39 habitat priorities (and its associated measures) can positively contribute to particular benefits from nature. These are identified under 'benefits' for each priority in the tables of priorities and measures below.

When referring to wider benefits from nature, the strategy aims where possible to use the terminology from the State of Natural Capital (SONC) Report for England 2024, produced by Natural England. It is hoped that this will provide the clearest linkages between the strategy's priorities and the wider benefits they can help to deliver, as well as connections into other areas of policy. As the strategy is biodiversity-led, the benefit of 'thriving plants and wildlife' is considered to be an inherent benefit of all of the priorities, so this has not been identified separately.

The full range of benefits from nature that the strategy's priorities and measures can contribute to are listed below. Some of the listed benefits are in addition to those identified in the State of Natural Capital report. These additional benefits are considered by regional stakeholders to be important to include in the strategy, alongside the benefits from nature identified in the State of Natural Capital Report.

Benefits from nature that LNRS priorities, and associated measures, can contribute towards:

- | | |
|---|--|
| 1. Access to nature* ¹ | 15. Animal welfare* ¹ |
| 2. Health and wellbeing* ¹ | 16. Timber and other wood products |
| 3. Educational resource* ¹ | 17. Produce from the sea* ² |
| 4. Sense of place* ¹ | 18. Plant based energy |
| 5. Carbon storage* ¹ | 19. Aquaculture* ² |
| 6. Climate regulation | 20. Cultivated crops |
| 7. Reduced chemical use* ¹ | 21. Reared animals and outputs |
| 8. Pollination | 22. Clean air |
| 9. Soil health* ¹ | 23. Noise regulation |
| 10. Reduced fire risk* ¹ | 24. Urban cooling |
| 11. Plentiful water | 25. Erosion control |
| 12. Water quality* ¹ | 26. Pest and disease control |
| 13. Water cooling/shading* ¹ | 27. Cultural benefits* ³ |
| 14. Flood protection | |

Section A – Overview of Priorities and Measures

**1 additional LNRS benefit from nature, not from the Natural England State of Natural Capital report*

**2 the benefits from nature of ‘produce from the sea’ and ‘aquaculture’ are not identified as benefits for any of the shortlisted LNRS priorities. It is not considered that any LNRS priorities would make a significant contribution to these particular benefits*

**3 ‘cultural benefits’ incorporates aspects of access to nature, health and wellbeing, educational resource, and sense of place. As these benefits have been identified separately for the LNRS priorities, the term ‘cultural benefits’ is not used*

DRAFT

6. Contribution to National Environmental Objectives (NEOs)

In 2018, the government's 25 Year Environment Plan (25YEP) established a series of goals and targets for improving the environment within a generation (by the end of 2042) and leaving it in a better state than we found it. These goals and targets are separated into the categories below:

- Clean air
- Clean and plentiful water
- Thriving plants and wildlife
- Reducing the risks of harm from environmental hazards
- Using resources from nature more sustainably and efficiently
- Enhancing beauty, heritage and engagement with the natural environment
- Mitigating and adapting to climate change
- Minimising waste
- Managing exposure to chemicals
- Enhancing biosecurity

Under the Environment Act 2021, Government is committed to reviewing the 25YEP every five years. The Environmental Improvement Plan (EIP) 2023 is the first revision of the 25YEP, which sets out the specific targets and commitments made under each of the above categories. The apex goal of the EIP is improving nature, resulting in thriving plants and wildlife, with all its other goals helping to achieve this. Whilst improving nature is the primary objective of the LNRS, and so is the focus of the priorities and measures, many of them will also contribute to the other, wider targets of the EIP.

Some of the long-term targets of the EIP that are most relevant to the LNRS include:

- Halt the decline in species abundance by 2030, and then increase abundance by at least 10% to exceed 2022 levels by 2042.
- By the end of 2042, restore or create in excess of 500,000 hectares of a range of wildlife-rich habitats outside protected sites, compared to 2022 levels.
- Increase tree canopy and woodland cover to 16.5% of total land area by 2050.
- Reduce nitrogen, phosphorus and sediment pollution from agriculture into the water environment by 40% by 31 December 2038, compared to a 2018 baseline.

The EIP targets are referred to collectively as the National Environmental Objectives (NEOs). Implementation of the priorities and measures of the LNRS will help achieve these targets.

The potential contribution that an individual priority could make to one or more of the NEOs was considered as one of the scoring criteria in the LNRS prioritisation process, with priorities that stakeholders felt would make a positive contribution to NEOs being given higher scores against this criterion. See Appendix 1 for further detail on the prioritisation process and selection of the shortlisted priorities.

7. Who is the document for?

This document is for everyone across North Yorkshire and York. Everyone can take action for nature and play a part in local nature recovery, working collaboratively towards our vision:

To work together to enhance, expand, restore and connect our region's habitats for thriving nature across North Yorkshire and York.

From policymakers and decision-takers to conservation and nature organisations, farmers, landowners, community groups and the general public, the strategy is intended to provide a collaborative focus that we can collectively work towards to enhance our region's nature, and the wider benefits from nature, that we all enjoy.

Whilst the strategy is nature-focused and biodiversity-led, this document can also be used by wider stakeholders working in other related sectors, such as flood protection, climate regulation, and public health and wellbeing. As outlined in Section 5 above, each priority lists the wider benefits from nature that it would positively contribute to. This information can be used by wider stakeholders to identify relevant priorities, and their associated measures, relevant to their areas of work.

When considering the strategy's priorities and associated measures (actions), users should refer to this document alongside the Local Habitat Map. Measures are noted in the tables in Section B as being either 'mapped' or 'unmapped'. Mapped measures also appear on the Local Habitat Map, as undertaking these measures in particular locations would be especially beneficial. Unmapped measures are those that would have a similar benefit if undertaken in a wider range of locations and are therefore not location specific. When considering which measures could be undertaken in a particular area or location, users of the strategy should refer to both the mapped and unmapped measures.

Landowners, land managers and farmers

Landowners, land manager and farmers can use this document to:

- inform the measures (actions) they could carry out on their land
- inform and support applications for funding and delivery of projects

The sections relating to Farmland (FRM) and Grassland (GRA) priorities in Section B will be of particular relevance, but there will also be priorities and measures from other habitat sections that could be delivered within some areas of our farmed landscape.

NGOs and partnerships

Non-governmental organisations (NGOs) and partnerships can use this document to:

- inform the measures (actions) they could carry out on their land, or land owned by project partners

Section A – Overview of Priorities and Measures

- inform and support applications for funding and delivery of projects

Developers and planners

Developers and planners can use this document to:

- support the integration of nature into the planning and development process
- inform the measures (actions) being undertaken as part of on-site and off-site habitat creation through Biodiversity Net Gain (BNG)

Business

Businesses can use this document to:

- help identify opportunities for investment into natural capital in North Yorkshire and York
- inform the measures (actions) they could carry out on their land and buildings

Town and Parish Councils and Community groups

Town and parish councils and community groups can use this document to:

- inform the measures (actions) they could carry out in their local community
- inform and support applications for funding and delivery of projects

Schools

Schools can use this document to:

- help identify opportunities for learning and education related to nature recovery and enhancement of biodiversity
- inform the measures (actions) they could carry out on their land and buildings

‘Educational resource’ is identified as one of the wider benefits from nature that the strategy’s priorities can contribute to (see Section 5 above). Priorities that have ‘educational resource’ identified as a benefit may be particularly relevant to nature-related learning.

Residents

Residents of North Yorkshire and York can use this document to:

- inform the measures (actions) they could carry out in and around their homes and private gardens

The section relating to Urban (URB) priorities in Section B will be of particular relevance, but there may also be measures from other habitat sections that could be delivered within some privately-owned properties and gardens.

8. How was the list made?

The final list of priorities and associated measures is the outcome of collaboration with a wide range of stakeholders from across our region, including organisations involved in nature recovery, organisations representing farmers and landowners, regional experts, local community and ‘friends of’ groups, representatives from our National Parks and National Landscapes, utility companies, rivers trusts, and many others.

Stakeholders were asked to put forward their suggestions for potential opportunities for nature recovery (which would later become priorities) at a series of habitat-themed workshops during early summer 2024. Attendees were asked to suggest both opportunities and the potential measures that could help to deliver those opportunities, so that the measures would be closely linked to a given opportunity. Wider stakeholders and other interested parties not in attendance at the workshops could submit opportunities and associated measures via email. This process produced a longlist of over 100 nature recovery opportunities for our region. See Appendix 4 for the longlisted opportunities that were not included on the final shortlist.

A prioritisation panel was convened during May 2024, made up of representatives from 12 key stakeholder organisations, including the four LNRS Supporting Authorities (Natural England, City of York Council, North York Moors National Park Authority, and Yorkshire Dales National Park Authority). Panel members scored each of the 107 longlisted nature recovery opportunities against 12 scoring criteria (7 ecological criteria and 5 criteria relating to wider benefits from nature). The longlist of opportunities was then ranked according to the scores given by the panel members, and the top 25 highest-scoring opportunities were selected as the foundation of the shortlisted priorities. The project team, in consultation with key stakeholders, then selected a further 15 opportunities from the longlist to provide broader representation of the themes and habitats that had been identified during the longlisting process, and these were added to the shortlisted priorities, giving a total of 40 habitat priorities.

The resulting shortlist of nature recovery priorities was presented to regional stakeholders at a further workshop in June 2024, with stakeholder representatives being asked to provide their comments and feedback on the initial shortlist. One of the outcomes of this workshop was the suggested addition of the 5 overarching priorities, which were seen by stakeholders to be key, cross-cutting themes with a range of objectives that should be considered in all nature recovery activity.

Following this workshop, the shortlist of priorities and measures went through several further rounds of refinement with regional stakeholders, resulting in the 44 priorities presented in the tables below (5 overarching priorities and 39 habitat priorities). See Appendix 1 for further detail on the prioritisation process and selection of the shortlisted priorities.

9. How do I navigate the document?

The priorities and measures are divided into 8 sections, with a table of the relevant priorities and measures in each section. The sections are set out in the following order. Each section has a three-letter code, which also prefixes the priorities and measures in that section (noted in brackets below):

1. Overarching priorities (OVR)
2. Farmland priorities (FRM)
3. Upland priorities (UPL)
4. Grassland priorities (GRA)
5. Woodland priorities (WLD)
6. Water and wetlands priorities (WET)
7. Urban priorities (URB)
8. Coastal priorities (CST)

Each priority has a unique priority code (e.g. FRM_P01), a summary name (e.g. Enhance and expand arable field margins), and a priority statement. Each measure has a unique measure code (e.g. FRM_M01.1) and a measure statement. It is intended that the priority and measure codes will make it easier for strategy users to refer to a particular priority or measure.

Each measure is also identified in the tables in Section B as either being a 'direct action' measure, or an 'enabling activity' measure, as well as being either a 'mapped' or 'unmapped' measure.

Direct action and enabling activity measures:

Most of the identified measures are direct actions to benefit nature through enhancing existing habitats or creating new habitats. These are identified in the tables as 'direct action' measures. There are a smaller number of measures that would help more broadly to enable and support these direct actions to take place, for example through providing case studies or identifying and mapping areas of existing habitat, but would not in themselves result in habitat enhancements. These are identified in the tables as 'enabling activity' measures.

Mapped and unmapped measures:

Some of the identified measures could be carried out widely across the geography of North Yorkshire and York and are not location-specific, or we do not have sufficient data to be able to link them to a specific location. These are identified as 'unmapped' measures. Other measures are considered to have the potential greatest benefits for nature if they were to be carried out in more specific locations across our region. These are identified as 'mapped' measures and appear on the Local Habitat Map mapping platform, which can be accessed [via this link](#).

Section A – Overview of Priorities and Measures

Links between priorities and measures:

All measures are directly linked to a priority and the codes are designed to reflect this. For example, measure UPL_M06.2 relates to priority UPL_P06 ('UPL' denotes this is an upland priority and measure, 'P' denotes a priority, and 'M' denotes a measure). Measure URB_M04.4 relates to priority URB_P04 ('URB' denotes that this is an urban priority and measure).

There are several measures that are closely linked to another priority or measure. Where a measure is also relevant to be considered alongside another priority or measure, these linkages have been identified in the tables with the wording 'Also see related priority/measure XX'.

Section B – Priorities and Measures for the North Yorkshire and York LNRS

Overarching Priorities (OVR)

Through discussion with stakeholders, it was decided that the strategy needed to include several high level ‘overarching’ priorities, which are relevant for consideration across all habitat types. The overarching priorities were developed from key themes that emerged during stakeholder workshops, such as enhancing habitat connectivity and controlling invasive non-native species (INNS) across our geography.

The overarching priorities differ from the habitat priorities in that they do not include associated measures, as they do not relate to specific habitat interventions. Instead, each overarching priority contains wider objectives that would help to support nature recovery across our region and would therefore contribute to achieving the priority.

Priorities:

- Enhance the connectivity between areas of good-quality existing habitat across North Yorkshire and York through the creation of appropriate new habitat between existing sites, to improve connectivity for key species.
- Undertake actions to benefit key species within North Yorkshire and York, particularly those requiring specific interventions.
- Control and seek to eradicate invasive non-native species (INNS) throughout North Yorkshire and York.
- Work collaboratively with all sectors across North Yorkshire and York to enhance coordinated regional action to benefit nature and seek to increase public knowledge, awareness and understanding of nature and its wider benefits.
- Enhance the ecological data and evidence base across North Yorkshire and York and share knowledge between all organisations and individuals undertaking actions to benefit nature.

Overarching Priorities (OVR)

Priority:

OVR_P01 Enhance habitat connectivity

Enhance the connectivity for key species between areas of good-quality existing habitat across North Yorkshire and York through the creation of appropriate new habitat.

Objectives:

1	Identify areas of good-quality existing habitat that would benefit from being connected.
2	Enhance the connecting sites between areas of existing good-quality habitat to provide greater connectivity between them.
3	Create new areas of habitat to act as stepping stones between areas of existing good-quality habitat to provide greater connectivity between them.
4	Use existing road, rail, river and footpath corridors (including national trails) as opportunities to increase habitat connectivity and better connect urban and rural areas.

Priority:

OVR_P02 Undertake actions to benefit key species

Undertake actions to benefit key species within North Yorkshire and York, particularly those requiring specific interventions.

Objectives:

1	Introduce species into areas of suitable habitat, where appropriate, and implement bespoke management for them to establish.
2	Support the propagation of relevant plant species, particularly those that are rare or have poor dispersal capabilities, through growing seeds and plug plants.
3	Undertake actions to support migratory species such as fish.

Priority:

OVR_P03 Control invasive non-native species

Control and seek to eradicate invasive non-native species (INNS) throughout North Yorkshire and York.

Objectives:

1	Implement a coordinated approach to the control of INNS across North Yorkshire and York, including the development of a regional biosecurity plan.
2	Work with regional partners, organisations, and projects to improve INNS monitoring and reporting across North Yorkshire and York.
3	Implement measures to mitigate the spread of INNS when undertaking any works (e.g. the removal of barriers from watercourses).

Overarching Priorities (OVR)

Priority:

OVR_P04 Enhance nature-related engagement, outreach and collaboration

Work collaboratively with all sectors across North Yorkshire and York to enhance coordinated regional action to benefit nature and seek to increase public knowledge, awareness and understanding of nature and its wider benefits.

Objectives:

1	Promote collaborative partnership working between regional partners, organisations and other stakeholders to enhance coordinated, strategic action for nature.
2	Work with statutory bodies (e.g. Internal Drainage Boards), local authorities, including the Mayoral Combined Authority, and other agencies to increase collaborative action that will benefit nature, and seek to incorporate nature into other regional plans and policies.
3	Work with the land management and farming sector through engagement and outreach to increase collaborative action that will benefit nature.
4	Engage and collaborate with communities and local groups, including through Parish Councils, to encourage local initiatives and other local actions that will benefit nature.
5	Increase public knowledge, awareness and understanding of nature and its wider benefits and suggest actions that individuals can take to benefit nature, including volunteering or becoming a member of (or donating to) a nature conservation organisation.

Priority:

OVR_P05 Enhance the data and evidence base and share knowledge

Enhance the ecological data and evidence base across North Yorkshire and York and share knowledge between all organisations and individuals undertaking actions to benefit nature.

Objectives:

1	Identify and map important areas of existing habitat to understand its current distribution and help target efforts to enhance, expand, restore and connect it.
2	Use historic mapping, records and traditional knowledge to inform evidence gaps and identify former areas of habitat that could be recreated or restored.
3	Share knowledge and case studies of existing good practice and projects that have achieved successful nature enhancement outcomes.
4	Ensure that actions intended to benefit nature are evidence-based and scientifically proven (e.g. based on the Oxford Conservation Evidence database).
5	Undertake monitoring, maintain records and provide reporting where actions to benefit nature have been implemented, to understand their outcomes and effectiveness and help build a regional evidence base.

Habitat Priorities

Farmland (FRM)

Farmland makes up over 70% of North Yorkshire and Yorks's land area. To achieve our ambition to better connect our important habitats and allow species to migrate, we must maximise opportunities to create spaces for nature across our farmed landscapes. Habitats such as hedgerows and trees, flower-rich field margins and ditches already make farmland important places for nature. However, there are many opportunities to make small and big changes to the way our farms are managed, that can make the farm businesses more resilient to pests, diseases, drought and flood events, whilst also creating more space for nature to thrive in these working landscapes.

Priorities:

- Enhance and expand the floristic value of arable field margins to increase total biodiversity, reduce the need for inputs and support pollinator and farmland bird populations.
- Expand the use of trees outside woodlands (e.g. agroforestry), to increase connectivity in the farmed environment and support farm productivity.
- Promote farming practices that create greater business resilience and improvements for biodiversity.
- Promote changes in land use practices, including increasing the diversity of grass sward and improving soil health, to increase the resilience of farmland for livestock and wildlife.
- Enhance existing hedgerow structure and diversity through encouragement of traditional management practices and hedgerow tree establishment. Expand the network of hedgerows as wildlife corridors and connecting other habitats.

Farmland Priorities (FRM)

Priority:

FRM_P01 Enhance and expand arable field margins

Enhance and expand the floristic value of arable field margins to increase total biodiversity, reduce the need for inputs and support pollinator and farmland bird populations.

Benefits:

- Carbon storage
- Climate regulation
- Reduced chemical use
- Pollination
- Soil health
- Water quality
- Cultivated crops
- Pest and disease control

Focus species:

- Arable Flowers
- Harvest Mouse
- Turtle Dove
- Tree Sparrow
- Necklace Ground Beetle
- Latticed Heath

Measures (Actions):

FRM_M01.1	Expand field margins, including promoting the rationalising of field margins ('squaring-up') of existing arable fields.	Direct action	Unmapped	
FRM_M01.2	Increase the floristic value of field margins through promotion of relevant options under current Environmental Land Management schemes (ELMs) e.g. Sustainable Farming Incentive (SFI).	Direct action	Unmapped	
FRM_M01.3	Identify the species associated with specific land-management types (e.g. Bryophytes associated with winter stubble).	Enabling activity	Unmapped	

Priority:

FRM_P02 Expand trees outside woodlands

Expand the use of trees outside woodlands (e.g. agroforestry), to increase connectivity in the farmed environment and support farm productivity.

Benefits:

- Sense of place
- Carbon storage
- Climate regulation
- Pollination
- Soil health
- Animal welfare
- Cultivated crops
- Erosion control

Focus species:

- Tree Sparrow
- Bats
- Grey Partridge
- Turtle Dove

Measures (Actions):

FRM_M02.1	Increase tree and scrub cover by identifying existing less sensitive pasture that would be suitable for infield agroforestry. Farm conservation advisors to promote the associated Environmental Land Management schemes (ELMs) / Sustainable Farming Incentive (SFI) options that would benefit connectivity in the farmed environment, and create food sources for beneficial species (e.g. foraging bats, pollinators, farmland birds).	Direct action	Unmapped	
------------------	--	---------------	----------	--

FRM_M02.2	Promote the benefit of Trees Outside Woodlands, including futureproofing for loss of mature trees e.g. through Ash dieback. Raise awareness with land managers through workshops and site visits of the opportunities and benefits of agroforestry where closed canopy woodland tree-planting is not required or desired.	Enabling activity	Unmapped	Also see related priority WLD_P01
------------------	---	-------------------	----------	--

DRAFT

Farmland Priorities (FRM)

Priority:

FRM_P03 Promote high nature value farming practices

Promote farming practices that create greater business resilience and improvements for biodiversity.

Benefits:

- Educational resource
- Reduced chemical use
- Pollination
- Soil health
- Water quality
- Pest and disease control

Focus species:

- Swift
- Bats
- Grey Partridge
- Harvest Mouse
- Necklace Ground Beetle
- Latticed Heath

Measures (Actions):

FRM_M03.1	Promote established and innovative farming techniques, (e.g. precision farming, drones) to farmers, non-governmental organisations (NGOs) and non-governmental advisors, along with machinery-sharing schemes to enable smaller farmers to be able to adopt some innovative farming techniques.	Enabling activity	Unmapped	
FRM_M03.2	Reduce or remove the use of artificial fertilisers and chemical application through alternative farming techniques. Promote farming practices that create greater resilience and improvements for biodiversity, including natural pest predators, such as bats, owls, swallows.	Direct action	Unmapped	
FRM_M03.3	Support land management collaboration with appropriate guidance to facilitate the targeting of interventions to the most appropriate locations. Work with farm advisory services to support existing and encourage new farmer cluster groups. Respond to Environmental Land Management schemes (ELMs) options for species-rich grassland through training/advice/support.	Enabling activity	Unmapped	
FRM_M03.4	Provide case studies of existing good-practice and complementary options (e.g. Environmental Land Management schemes (ELMs)) such as ditch management for wildlife and water quality.	Enabling activity	Unmapped	
FRM_M03.5	Raise awareness of the Natural Capital benefits of these measures e.g. business resilience, including farm visits & access to nature; sustainable tourism.	Enabling activity	Unmapped	
FRM_M03.6	Improve soil health through sharing knowledge and best practice. Promote baseline soil health measurements (e.g. earthworm monitoring) and regular monitoring to measure change. Encourage take-up of relevant funding option(s).	Direct action	Unmapped	

Priority:

FRM_P04 Promote changes in grassland management

Promote changes in land use practices, including increasing the diversity of grass sward and improving soil health, to increase the resilience of farmland for livestock and wildlife.

Benefits:

- Carbon storage
- Climate regulation
- Reduced chemical use
- Pollination
- Soil health
- Plentiful water
- Water quality
- Flood protection
- Animal welfare
- Reared animals and outputs

Focus species:

- Short-eared Owl
- Yellow Wagtail
- Harvest Mouse
- Necklace Ground Beetle

Measures (Actions):

FRM_M04.1	Raise awareness of alternative land management approaches with land managers that will lead to improvements in biodiversity, livestock health and efficiencies (quicker throughputs), reduction in chemical reliance, improve water-retention properties of land to store carbon. Make use of case studies and good communication between stakeholders and advisors.	Enabling activity	Unmapped	
FRM_M04.2	Encourage uptake of more diverse and sympathetic grazing practices e.g. rotation of stock, new technologies, different livestock breeds (smaller, native, hardy).	Direct action	Unmapped	
FRM_M04.3	Improve soil health through sharing knowledge and best practice. Promote baseline soil health measurements (e.g. earthworm monitoring) and regular monitoring to measure change. Encourage take-up of relevant funding option(s).	Direct action	Unmapped	
FRM_M04.4	Increase sward diversity which will give a range of rooting depths and will then require different stock at different times of the year.	Direct action	Unmapped	
FRM_M04.5	Reduce soil compaction to improve soil structure and increase water infiltration by ensuring the right machinery types are chosen and used appropriately, and by ensuring appropriate stocking rates.	Direct action	Unmapped	

Priority:

FRM_P05 Expand the hedgerow network

Enhance existing hedgerow structure and diversity through encouragement of traditional management practices and hedgerow tree establishment. Expand the network of hedgerows as wildlife corridors and connecting other habitats.

Benefits:

- Access to nature
- Health and wellbeing
- Educational resource
- Sense of place
- Carbon storage
- Climate regulation
- Pollination
- Animal welfare
- Erosion control

Focus species:

- Hedgehog
- Harvest Mouse
- Short-eared Owl
- Tree Sparrow
- Necklace Ground Beetle
- Bats

Measures (Actions):

FRM_M05.1	Identify and map fragmented patches of woodland that would benefit from being connected with hedgerows to ensure diversity and ease movement of species, e.g. birds, mammals, pollinators.	Enabling activity	Unmapped	Also see related measure WLD_M02.1
FRM_M05.2	Enhance and restore existing hedgerows by planting up gaps with a diversity of native species, carrying out hedge laying and responsible coppicing where required, and tree establishment within hedgerows.	Direct action	Unmapped	
FRM_M05.3	Promote the variety of age and height structures of hedgerow networks by transitioning from annual to sequential hedgerow cutting (e.g. every 2-3 years).	Direct action	Unmapped	
FRM_M05.4	Manage tree-health issues in hedgerows (e.g. Ash), including managing at-risk trees to retain wildlife benefits e.g. monolith and ecopole creation.	Direct action	Unmapped	
FRM_M05.5	Create buffers alongside hedgerows that exceed 2m width, where possible. Maximise diversity of these by including woodland flora and ancient woodland indicator species (via seeding and/or plug plants of local provenance).	Direct action	Unmapped	
FRM_M05.6	Plant new hedgerows with a mix of native shrub and tree species. Increase awareness and uptake of existing hedgerow creation schemes.	Direct action	Unmapped	

Upland (UPL)

Our farmed upland landscapes are a stronghold for nationally and internationally important habitats, such as limestone pavement, upland heathland, blanket bog, upland hay meadows, calcareous grasslands, mires, flushes and other wetland features. These are home to a vast number of specialist species reliant upon these unique habitats. Our uplands provide the source of multiple rivers in our area, thereby linked to opportunities to reduce water pollution, and reduce the impacts of flood events by storing more water upstream. Many of the habitats excel at storing carbon, essential to our ambitions to reduce carbon emissions, and adapt to climate change.

Priorities:

- Identify ideal management for different types of Limestone Pavement and associated habitats, to promote a diversity of the habitat and management approaches. Expand species-rich connecting habitat (species-rich upland calcareous grassland or scrub) between isolated parcels of Limestone Pavement to connect this fragmented habitat.
- Enhance the species richness of existing upland calcareous grassland sites and adjacent land. Increase the quality of calcareous grassland sites between these species-rich sites, to provide connectivity for upland specialist species.
- Enhance the species richness of existing upland hay meadow sites and adjacent land. Restore and create species-rich grasslands between these fragmented sites to provide connectivity for specialist species.
- Enhance the wetness and diversity of sward structure of upland acid grassland sites to increase connectivity for wading birds.
- Enhance the diversity, height and structure of existing upland dry heathland sites. Restore and create new upland dry heathland using existing poor acid grassland and increased scrub to provide greater connectivity for specialist species.
- Enhance and expand wet heath adjacent to existing blanket bog to prevent drying out. Where appropriate rewet dry heath sites to reverse the decline of this increasingly rare habitat.
- Enhance the wetness and diversity of existing blanket bog sites and adjacent land to prevent drying out. Identify areas of deep peat and historic bog habitat and work with landowners to restore these to functioning peatland habitats.
- Expand the range of habitats present along the moorland fringe, including woodland, scrub and rough grassland, to reduce fire risk and increase numbers of key species.

Upland Priorities (UPL)

Priority:

UPL_P01 Management and connection of limestone pavement habitats

Identify ideal management for different types of Limestone Pavement and associated habitats, to promote a diversity of the habitat and management approaches. Expand species-rich connecting habitat (species-rich upland calcareous grassland or scrub) between isolated parcels of Limestone Pavement to connect this fragmented habitat.

Benefits:

- Access to nature
- Health and wellbeing
- Educational resource
- Sense of place
- Pollination
- Soil health

Focus

species:

- Geyer's Whorl Snail
- Burnet Companion
- Necklace Ground Beetle
- Frog Orchid
- Juniper
- Dropwort

Measures (Actions):

UPL_M01.1	Identify and map Limestone Pavement coverage (and associated scree and scar rocky habitats where relevant) to understand its current state and potential location for calcareous grassland to be restored as a buffer, building on Lancaster University's re-survey of the UK's limestone pavement resource.	Enabling activity	Unmapped	
UPL_M01.2	Reduce grazing to create a diversity of Limestone Pavement habitats, including limestone grassland, limestone outcrops, base-rich flushes, and scrub.	Direct action	Mapped	
UPL_M01.3	Modify the management of the connecting sites (e.g. limestone grassland, limestone outcrops, base-rich flushes, scrub), introduce locally collected seeds appropriate to Limestone Pavement habitats.	Direct action	Mapped	

Priority:

UPL_P02 Enhance and restore upland calcareous grassland

Enhance the species richness of existing upland calcareous grassland sites and adjacent land. Increase the quality of calcareous grassland sites between these species-rich sites, to provide connectivity for upland specialist species.

Benefits:

- Carbon storage
- Climate regulation
- Pollination
- Soil health
- Reared animals and outputs

Focus

species:

- Burnet Companion
- Dropwort
- Birds-eye Primrose
- Northern Brown Argus
- Field Gentian
- Waxcap fungi

Measures (Actions):

UPL_M02.1	Identify appropriate shallow soil grassland sites where an increase in plant species diversity can be achieved through changing grazing regimes. This will lead to an increase in pollinators. Undertake surveys to identify the extent of carbon stored by grassland fungi and the area they cover. Research if and how this soil ecosystem can be restored.	Enabling activity	Unmapped	
------------------	---	-------------------	----------	--

Upland Priorities (UPL)

UPL_M02.2	Develop and support the propagation of calcareous plant species, particularly those that are rare or with poor dispersal capabilities, to augment creation and restoration sites (growing of seeds and planting out plugs).	Enabling	Unmapped	
UPL_M02.3	Enhance upland calcareous grassland through optimal grazing management (reduce stock numbers, alter stock type to include more cattle), and manage scrub to an appropriate percentage.	Direct action	Mapped	
UPL_M02.4	Revert improved calcareous grassland sites back to semi-improved calcareous grassland to increase the connectivity between sites of unimproved calcareous grassland. Undertake soil surveys to establish the local requirements. Modify inputs to try and return the soil to the calcareous state.	Direct action	Mapped	

Priority:

UPL_P03 Enhance upland hay meadows

Enhance the species richness of existing upland hay meadow sites and adjacent land. Restore and create species-rich grasslands between these fragmented sites to provide connectivity for specialist species.

Benefits:

- Access to nature
- Health and wellbeing
- Sense of place
- Pollination
- Plentiful water

Focus species:

- Devil's-bit Scabious
- Petty Whin
- Necklace Ground Beetle

Measures (Actions):

UPL_M03.1	Enhance and maintain existing upland hay meadows through traditional management e.g. cut and collect with aftermath grazing. Increase the wetness of sites, where appropriate, by improving the management and blocking drains, to improve their condition and provide more appropriate conditions for specialist species.	Direct action	Mapped	
UPL_M03.2	Increase grassland diversity in neighbouring fields to buffer known upland hay meadow sites, including conversion of pasture and the use of green hay from local donor sites, leading to an increase in invertebrates and birds, specifically Twite.	Direct action	Mapped	Also see related measures UPL_M03.4 WET_M06.3
UPL_M03.3	Increase the diversity of nearby neutral grasslands (including former hay meadows) to expand this habitat and act as stepping stones between upland hay meadow sites, via green hay spreading and introducing plug plants. Use appropriate seed mix where green hay is limited. Implement appropriate management.	Direct action	Mapped	Also see related measures UPL_M03.4 WET_M06.3
UPL_M03.4	Undertake mapping of green hay donor and receptor sites and locations identified where material is to be grown on to produce plug plants and seed at scale.	Enabling activity	Unmapped	Also see related measure WET_M06.3

Upland Priorities (UPL)

Priority:

UPL_P04 Enhance acid grassland

Enhance the wetness and diversity of sward structure of upland acid grassland sites to increase connectivity for wading birds.

Benefits:

- Pollination
- Soil health
- Plentiful water
- Reared animals and outputs

Focus species:

- Tormentil Mining Bee
- Black Grouse
- Waxcap fungi

Measures (Actions):

UPL_M04.1	Carry out surveys to identify upland acid grassland locations and understand where this habitat is more appropriate than upland dry heath creation/restoration.	Enabling activity	Unmapped	Also see related priority UPL_P05
UPL_M04.2	Enhance existing upland acid grassland through appropriate grazing, no mechanical operations in breeding season, and re-wetting or adding scrapes where required.	Direct action	Mapped	

Priority:

UPL_P05 Enhance upland dry heath

Enhance the diversity, height and structure of existing upland dry heathland sites. Restore and create new upland dry heathland using existing poor acid grassland and increased scrub to provide greater connectivity for specialist species.

Benefits:

- Access to nature
- Health and wellbeing
- Climate regulation
- Pollination
- Soil health
- Reduced fire risk
- Erosion control

Focus species:

- Petty Whin
- Merlin
- Ring Ouzel
- Hen Harrier
- Adder
- Small Yellow Underwing
- Round-leaved Sundew

Measures (Actions):

UPL_M05.1	Engage with local landowners, farmers, Yorkshire Peat Partnership and Protected Landscape teams to identify best possible actions to improve the health of our heather/peat moorlands, increasing native moorland species, supporting climate change adaptation, and increasing opportunities for people to engage with moorlands.	Enabling activity	Unmapped	
UPL_M05.2	Enhance and restore existing upland dry heathland by amending grassland grazing regimes and grazing species to encourage the development of heath, where this will not impact negatively on the upland acid grassland network. Introduce species where necessary.	Direct action	Mapped	Also see related priority UPL_P04

Upland Priorities (UPL)

UPL_M05.3	Undertake appropriate burning or cutting regimes once heath develops, with predator control where appropriate to support the success of ground-nesting birds. Implement wildfire management plans once heath is suitably developed, including the creation of firebreaks.	Direct action	Mapped	
UPL_M05.4	Carry out scrub management as heath develops to maintain a level of scrub that provides connectivity between patches of heath to benefit key bird species e.g. Merlin, Ring Ouzel, Black Grouse.	Direct action	Mapped	
UPL_M05.5	Collect seeds/cuttings of Petty Whin from plants on the North York Moors and grow on to support the recovery of this species.	Direct action	Mapped	
UPL_M05.6	Create upland dry heathland on species-poor acid grassland where appropriate, by reducing grazing pressure and reseedling to increase heather component.	Direct action	Mapped	Also see related priority UPL_P04
<p>Priority:</p> <p>UPL_P06 Enhance wet heath</p> <p>Enhance and expand wet heath adjacent to existing blanket bog to prevent drying out. Where appropriate rewet dry heath sites to reverse the decline of this increasingly rare habitat.</p> <p>Benefits:</p> <ul style="list-style-type: none"> • Carbon storage • Climate regulation • Reduced fire risk • Plentiful water • Water quality • Flood protection <p>Focus species:</p> <ul style="list-style-type: none"> • Adder • Small Yellow Underwing • Black Grouse • Bilberry Bumblebee <p>Measures (Actions):</p>				
UPL_M06.1	Identify opportunities for buffering along recreation routes through blanket bog.	Enabling activity	Unmapped	
UPL_M06.2	Explore with historic environment teams opportunities to restore former and current peat cutting sites.	Enabling activity	Unmapped	Also see related measure UPL_M07.2
UPL_M06.3	Enhance existing wet heath by amending grazing regime and type where required (e.g. reduction in sheep, increase in cattle) and introduce species (e.g. sphagnum and cottongrass) where required.	Direct action	Mapped	
UPL_M06.4	Carry out grip and gully blocking to increase wetness where this will not impact negatively on the maintenance of important dry heath sites, this will also help to reduce fire risk. Amend the grazing regime and grazing species, and introduce species (e.g. sphagnum and cotton grass plug plants) better suited to wet habitat. Avoid burning as this increases the drying out of sites.	Direct action	Mapped	Also see related priority UPL_P05

Upland Priorities (UPL)

Priority:

UPL_P07 Enhance blanket bog

Enhance the wetness and diversity of existing blanket bog sites and adjacent land to prevent drying out. Identify areas of deep peat and historic bog habitat and work with landowners to restore these to functioning peatland habitats.

Benefits:

- Carbon storage
- Climate regulation
- Reduced fire risk
- Plentiful water
- Water quality
- Flood protection

Focus species:

- Bilberry Bumblebee
- Adder
- Round-leaved Sundew

Measures (Actions):

UPL_M07.1	Identify areas of shallow peat that can be expanded, or peat formation re-started.	Enabling activity	Unmapped	
UPL_M07.2	Use peat maps to identify former extent of peat resource and understand ability to restore active hydrological processes to identify areas where blanket bog has been lost, and where peat formation could be re-started. Explore with historic environment teams opportunities to restore former and current peat cutting sites through re-wetting and sphagnum inoculation.	Enabling activity	Unmapped	Also see related measure UPL_M06.2
UPL_M07.3	Buffer, improve, and better connect all blanket bog and prioritise restoration of peat on open habitats in North Yorkshire and York. Use hydrological mapping systems to better understand how blanket bogs are connected and interact, and implement measures to rewet and enhance degraded blanket bogs, e.g. grip and gully blocking. This will also help to reduce fire risk.	Direct action	Mapped	
UPL_M07.4	Amend the grazing regime and grazing species as required, and introduce species (e.g. sphagnum and cottongrass plug plants) better suited to wet habitat. Avoid burning as this increases the drying out of sites.	Direct action	Mapped	
UPL_M07.5	Explore creation of a North Yorkshire based plant nursery specialising in growing of sphagnum plug plants and other specialist upland plant species (current stock comes from Loughborough).	Enabling activity	Unmapped	
UPL_M07.6	Enlarge areas of blanket bog by removal of trees on peat in carefully targeted and highly restorable locations supported by the: "Decision Support Framework for Peatland Protection". Identify areas with landowners that are suitable and feasible for peatland restoration or wooded peatland mosaics. These areas will be functionally connected to existing peatland bodies that haven't been heavily modified by land use operations. The characteristics of these areas can be seen on the Forest to Bog tool.	Direct action	Unmapped	

Upland Priorities (UPL)

Priority:

UPL_P08 Expand moorland fringe habitats

Expand the range of habitats present along the moorland fringe, including woodland, scrub and rough grassland, to reduce fire risk and increase numbers of key species.

Benefits:

- Carbon storage
- Climate regulation
- Reduced fire risk

Focus species:

- Black Grouse
- Ring Ouzel
- Red Squirrel
- Hawfinch
- Latticed Heath
- Curlew
- Bilberry Bumblebee

Measures (Actions):

UPL_M08.1	Use aerial imagery to identify areas where existing sites could be connected.	Enabling activity	Unmapped	
UPL_M08.2	Create a suitable mix of habitats adjacent to existing sites via different mechanisms, e.g. natural regeneration, deer control, livestock exclusion, vegetation management to mitigate against wildfires.	Direct action	Mapped	
UPL_M08.3	Increase habitat for breeding waders, including rough pasture, by promoting suitable agri-environment options, working with local communities, continued monitoring, "right tree, right place" approach (replace coniferous plantation with native species rich), and predator control where appropriate.	Direct action	Unmapped	
UPL_M08.4	Increase tree and woodland cover in areas of moorland edge that will not compromise the presence of existing priority species (e.g. Black Grouse, Ring Ouzel, breeding waders, Hazel Dormouse, Red Squirrel, Butterflies).	Direct action	Unmapped	Also see related priority WLD_P04
UPL_M08.5	Create new, buffer and connect existing woodland with appropriate species specifications, encouraging natural regeneration where possible.	Direct action	Mapped	Also see related priority WLD_P04

Grassland (GRA)

Grasslands are important habitats for wildlife, in their own right and also as connecting and buffering land for other habitat types. Some of our grasslands are fantastically rich in wildflowers that make them vital homes and stepping stones for pollinators, whilst others are important feeding and nesting sites for species such as farmland birds and wading birds. Good populations of fungi such as waxcaps can highlight unimproved, low-nutrient grasslands, a rare and threatened habitat in England. Road verges can also often be remnant unimproved grasslands and act as important corridors for species to move across our landscapes.

Lowland calcareous grasslands are found spread across our area and can often be very species-rich. Our acid grasslands tend to support a lower number of specialist species, but can also help buffer and connect our remnant lowland heathland sites.

Species-poor grasslands have often been lost in place of creating other habitat types, such as woodland, or for other land uses such as housing, renewable energy or more productive farmland. It is important we recognise their inherent value to support and connect nature in decision making. We can protect, enhance and expand the semi-natural grassland resource by linking their management to human interests, such as providing feedstocks for local green energy, supporting pollinators, or supporting regenerative farming practices.

Priorities:

- Expand or buffer existing species-rich grassland sites through changes to management regimes.
- Enhance and connect strategically important grasslands, to provide benefits for a range of bird species and pollinators.
- Enhance the species richness of existing lowland calcareous grassland sites and adjacent land. Increase the quality of calcareous grassland sites between these species-rich sites, to provide connectivity for specialist species.
- Enhance the species richness of existing magnesian limestone grassland sites and adjacent land. Increase the quality of magnesian limestone grassland sites between these species-rich sites, to provide connectivity for specialist species.
- Expand acid grassland to buffer existing lowland heath sites.
- Restore degraded lowland heathland sites and re-create this habitat at suitable locations.
- Enhance species-richness of road verges through better management to increase their biodiversity.

Grassland Priorities (GRA)

Priority:

GRA_P01 Enhance species-rich grassland

Expand or buffer existing species-rich grassland sites through changes to management regimes.

Benefits:

- Carbon storage
- Soil health
- Pollination
- Flood protection

Focus species:

- Waxcap fungi
- Short-eared owl
- Devil's-bit Scabious
- Adder's-tongue Fern

Measures (Actions):

GRA_M01.1	Use historic mapping (e.g. tithe maps) and species records (e.g. waxcaps) to identify historic species-rich grasslands and focus specific versus general habitat management/development efforts. Identify sites where species-rich grassland could be created and ways to achieve this (e.g. purchase via local councils, Biodiversity Net Gain (BNG) offsetting process, York and North Yorkshire Local Investment in Natural Capital (LINC) programme).	Enabling activity	Unmapped	
GRA_M01.2	Implement alternative management practices to maximise biodiversity e.g. work with land managers and local authority teams to explore cutting regimes, pesticide and herbicide use, and mapping of 'no mow' areas.	Direct action	Unmapped	Also see related priorities GRA_P07 URB_P03

Priority:

GRA_P02 Enhance and connect strategically important grasslands

Enhance and connect strategically important grasslands, to provide benefits for a range of bird species and pollinators.

Benefits:

- Carbon storage
- Soil health
- Pollination
- Flood protection

Focus species:

- Water Shrew
- Curlew
- Tormentil Mining Bee
- Burnet Companion
- Lapwing
- Devil's-bit Scabious

Measures (Actions):

GRA_M02.1	Identify sites that provide opportunities to enhance and connect strategically important grasslands, particularly where species have connectivity challenges e.g. curlew & other waders & pollinators.	Enabling activity	Unmapped	
GRA_M02.2	Make use of the Strategically Significant Networks mapping produced by the North and East Yorkshire Ecological Data Centre (NEYEDC) to help inform the connection of existing habitats.	Enabling activity	Unmapped	
GRA_M02.3	Enhance strategically important grassland sites by utilising existing funding schemes, thus increasing the diversity of structure and species.	Direct action	Mapped	

Grassland Priorities (GRA)

GRA_M02.4	Create new and expand existing rush pasture on upland fringes and lowland floodplains to increase abundances of wading birds and specialist plant species. Re-wet adjacent areas by removal/blocking of drains and addition of scrapes.	Direct action	Unmapped	
------------------	---	---------------	----------	--

DRAFT

Grassland Priorities (GRA)

Priority:

GRA_P03 Enhance lowland calcareous grassland

Enhance the species richness of existing lowland calcareous grassland sites and adjacent land. Increase the quality of calcareous grassland sites between these species-rich sites, to provide connectivity for specialist species.

Benefits:

- Carbon storage
- Soil health
- Pollination

Focus species:

- Geyer's Whorl Snail
- Burnet Companion
- Thistle Broomrape
- Northern Brown Argus
- Burnt Orchid
- Frog Orchid

Measures (Actions):

GRA_M03.1	Identify the location of existing lowland calcareous grassland sites, and opportunities to expand and restore neighbouring sites, to support pollinator populations.	Enabling activity	Unmapped	
GRA_M03.2	Enhance existing lowland calcareous grassland sites through appropriate grazing / mowing regimes and scrub management as required e.g. where it can be shown this would benefit key species (such as Duke of Burgundy and Northern Brown Argus butterflies).	Direct action	Mapped	
GRA_M03.3	Create lowland calcareous grassland at suitable sites through green hay spreading / reseeded and suitable ongoing management.	Direct action	Mapped	Also see related measures UPL_M03.4 WET_M06.3
GRA_M03.4	Develop and support the propagation of calcareous plant species, particularly those that are rare or with poor dispersal capabilities, to augment creation and restoration sites (growing of seeds and planting out plugs).	Direct action	Unmapped	

Priority:

GRA_P04 Enhance and expand magnesian limestone grassland

Enhance the species richness of existing magnesian limestone grassland sites and adjacent land. Increase the quality of magnesian limestone grassland sites between these species-rich sites, to provide connectivity for specialist species.

Benefits:

- Carbon storage
- Soil health
- Pollination

Focus species:

- Harvest Mouse
- Waxcap fungi
- Thistle Broomrape
- Adder
- Burnt Orchid
- Frog Orchid

Measures (Actions):

GRA_M04.1	Identify key connecting road verges on Magnesian Limestone and modify the management to increase floristic diversity (e.g. remove arisings).	Direct action	Unmapped	Also see related priority GRA_P07
------------------	--	---------------	----------	--

Grassland Priorities (GRA)

GRA_M04.2	Manage the existing species-rich Magnesian Limestone grassland resource through sympathetic management. Increase grassland diversity on adjacent land with green hay from local donor sites, supporting pollinator populations.	Direct action	Mapped	Also see related measures UPL_M03.4 WET_M06.3
GRA_M04.3	Create species-rich grassland at suitable sites across the Magnesian Limestone. Use arable reversion methods, seeding/green hay spreading, plug planting of specific key species e.g. pasque flower.	Direct action	Mapped	Also see related measures UPL_M03.4 WET_M06.3
Priority:				
GRA_P05 Expand acid grassland				
Expand acid grassland to buffer existing lowland heath sites.				
Benefits:	<ul style="list-style-type: none"> Carbon storage Pollination 	<ul style="list-style-type: none"> Soil health 		
Focus species:	<ul style="list-style-type: none"> Waxcap fungi Field Gentian 	<ul style="list-style-type: none"> Heath Rivulet Heath Dog-violet 	<ul style="list-style-type: none"> Tormentil Mining Bee 	
Measures (Actions):				
GRA_M05.1	Buffer lowland heath by managing adjacent grassland sites, using appropriate grazing and other management measures.	Direct action	Mapped	
GRA_M05.2	Create acid grassland at suitable sites. Use arable reversion methods, seeding/green hay spreading, plug planting of specific key species.	Direct action	Mapped	Also see related measures UPL_M03.4 WET_M06.3
Priority:				
GRA_P06 Restore and re-create lowland heath				
Restore degraded lowland heathland sites and re-create this habitat at suitable locations.				
Benefits:	<ul style="list-style-type: none"> Pollination 	<ul style="list-style-type: none"> Soil health 		
Focus species:	<ul style="list-style-type: none"> Adder Heath Rivulet 	<ul style="list-style-type: none"> Latticed Heath 	<ul style="list-style-type: none"> Tormentil Mining Bee 	
Measures (Actions):				
GRA_M06.1	Identify historic and potential lowland heath sites to enable the targeting of restoration/creation. Identify existing fragments of lowland heath to identify opportunities to reconnect existing sites.	Enabling activity	Unmapped	
GRA_M06.2	Undertake creation/restoration of lowland heath utilising seed-rich brash, green hay and other material from appropriate local donor sites, and ongoing sensitive management.	Direct action	Mapped	Also see related measures UPL_M03.4 WET_M06.3

Grassland Priorities (GRA)

<p>GRA_M06.3</p>	<p>Create and keep open sandy areas and banks on lowland heath (through disturbance by cattle and large herbivores) to provide habitat for their associated unique flora and fauna, which have been lost. Remove topsoil on pre-existing banks or create ponds and use the spoil to create sandy banks. Regular removal of vegetation is needed to keep these areas open.</p>	<p>Direct action</p>	<p>Mapped</p>	<p>Also see related priority WET_P03</p>
-------------------------	---	----------------------	---------------	---

DRAFT

Grassland Priorities (GRA)

Priority:

GRA_P07 Enhance road verges

Enhance species-richness of road verges through better management to increase their biodiversity.

Benefits:

- Access to nature
- Health and wellbeing
- Educational resource
- Carbon storage
- Reduced chemical use
- Pollination
- Soil health
- Flood protection

Focus species:

- Harvest Mouse
- Waxcap fungi
- Field Gentian
- Devil's-bit Scabious

Measures (Actions):

GRA_M07.1	Review North Yorkshire Council and City of York Council policies around verge management (including within settlements) to improve management for biodiversity, including purchase of necessary equipment where required e.g. cut and collect machinery.	Enabling activity	Unmapped	
GRA_M07.2	Expand the cut and collect of verge arisings, learning from the 2024 North Yorkshire Highways pilot, including anaerobic digestion where appropriate.	Direct action	Unmapped	
GRA_M07.3	Encourage Parish Councils and local land managers to adopt nature-friendly cutting regimes.	Enabling activity	Unmapped	
GRA_M07.4	Encourage local groups to monitor local verges.	Enabling activity	Unmapped	
GRA_M07.5	Establish a strategic approach with co-operation between local authorities, drainage authorities and adjoining landowners to prevent drainage ditches being cleared onto common land or roadside verges (this creates problems of nettles and rank grasses, undoing the benefits of cut vegetation removal).	Enabling activity	Unmapped	

Woodland (WLD)

Our area contains a variety of wooded habitats of different ages and types. Our ancient woodlands have persisted since before the 1600s and long-established woodlands prior to 1893. These woodlands may have had their tree cover and woodland structure changed from the original tree species to a range of woodland types, including conifer, mixed, and broadleaf woodlands (often after the Second World War). However, these woodlands still retain important woodland flora, contribute significantly to biodiversity and ecological resilience, and support a wide range of woodland species. These historic woodlands may require sympathetic management practices to diversify their tree species, age structure, and create additional habitats within them such as flower-rich woodland rides, glades, ponds and scrub.

It is important that such diversity is brought to younger woodlands and designed into new woodlands being planted to maximise their biodiversity. New woodland sites should as much as possible buffer and connect existing woodlands, to allow for movement of woodland species. These connecting habitats can include wood pastures, wood meadows, scrub and hedgerows, allowing them to be part of the agricultural and urban landscapes they sit within. Old and new woodlands support other priorities such as carbon sequestration, flood alleviation and recreation. Productive woodland, including new conifer plantations, can be designed to maximise opportunities for nature recovery as well as sustainable domestic timber production.

Parkland is an important habitat for our area as it is not only important historically and culturally, but hosts important populations of veteran and ancient trees. Each of these trees act as ecosystems, with some species such as oak supporting as many as 2300 species (<https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/british-trees/oak-tree-wildlife/>), including bats, birds, fungi, and invertebrates that can only survive on dead or dying wood. These important trees are often hundreds of years old, so it is important we protect and conserve them, but also start planting our “future” veteran trees.

Priorities:

- Protect individual veteran trees and plant trees to become future veterans to provide habitat and facilitate the movement of specialist species.
- Enhance and expand species-rich wood pasture, wood meadows and open mosaic habitats as an appropriate buffer and connecting habitat between woodland and grassland sites.
- Buffer, enhance, restore and better connect fragmented patches of Ancient Woodland (including Plantations on Ancient Woodland Sites) by creating linkages with, and improving the management of, long-established woodland to increase the resilience of these sites and allow for species movement, including more specialist woodland species.

Woodland Priorities (WLD)

- Increase tree and woodland cover by enhancing all types of existing woodland and creating new species-diverse woodlands, which promotes good woodland structure, increases resilience, and produces sustainable woodland products and timber.

Priority:

WLD_P01 Protect and expand veteran tree resource

Protect individual veteran trees and plant trees to become future veterans to provide habitat and facilitate the movement of specialist species.

Benefits:

- Access to nature
- Health and wellbeing
- Educational resource
- Sense of place
- Carbon storage
- Climate regulation

Focus

- Waxcap fungi
- Six-spotted Longhorn Beetle
- Lesser Spotted Woodpecker
- Latticed Heath

species:

- Bats

Measures (Actions):

WLD_M01.1	Promote the Woodland Trust Ancient Tree Inventory to locate and record ancient, veteran and notable trees.	Enabling activity	Unmapped	
WLD_M01.2	Plant new resilient trees to be veterans of the future using mapping of high-value veteran trees (e.g. Veteran Tree Inventory) to identify planting areas for future veterans and areas to trial 'veteranisation' to increase their value to key species.	Direct action	Unmapped	
WLD_M01.3	Protect existing veteran trees and newly-planted future veterans with suitable fenced enclosures to protect from livestock and other herbivores. Create and promote a best practice standard for fencing /enclosures around veteran trees to address impacts of grazing & intensive arable practices. Implement best practice management of no cultivation and no inputs.	Direct action	Mapped	
WLD_M01.4	Expand veteran tree work into existing woodland, parkland and farmland to ensure veteran trees of the future are developed within existing landscapes, increasing biodiverse planting without losing historic significance.	Direct action	Mapped	Also see related priority FRM_P02
WLD_M01.5	Sustainably manage parkland pasture associated with veteran trees, including use of herbal ley mixes, planting of replacement parkland trees and retaining dead wood on site to benefit insects and other wildlife.	Direct action	Mapped	Also see related measure WLD_M02.4

Woodland Priorities (WLD)

Priority:

WLD_P02 Enhance and expand wood pasture, wood meadows and open mosaic habitats

Enhance and expand species-rich wood pasture, wood meadows and open mosaic habitats as an appropriate buffer and connecting habitat between woodland and grassland sites.

Benefits:

- Sense of place
- Carbon storage
- Climate regulation
- Pollination
- Clean air

Focus species:

- Turtle Dove
- Juniper
- Red Squirrel
- Six-spotted Longhorn Beetle
- Northern Hairy Wood Ant

Measures (Actions):

WLD_M02.1	Identify fragmented patches of woodland that would benefit from being connected.	Enabling activity	Unmapped	Also see related priorities FRM_P02 FRM_P05
WLD_M02.2	Promote the benefits of trees in landscapes to farmers and encourage those habitats where close-canopy woodland is not viable. Identify funding mechanisms (e.g. Sustainable Farming Incentive (SFI), private green finance) to facilitate the diversification of the grassland element of woodland/grassland mosaic habitats.	Enabling activity	Unmapped	
WLD_M02.3	Create and expand wood pasture habitat as an appropriate buffer and connecting habitat between woodland and grassland sites. Undertake appropriate tree planting or natural colonisation to create this habitat, use Sustainable Farming Incentive (SFI) / England Woodland Creation Offer (EWCO) options to support. Implement sustainable grazing management of this habitat, including stock rotation and reseed to improve grassland where required.	Direct action	Mapped	
WLD_M02.4	Retain standing dead wood and fallen trees to be left on site as habitat for specialist species.	Direct action	Unmapped	Also see related measures WLD_M01.5 WLD_M04.6
WLD_M02.5	Increase the size of transitional habitat between grassland, wood pasture and isolated veteran trees to include more scrub, and therefore removing hard lines. Recognise the value of scrub in advice to landowners, e.g. through One Team, including amending grazing regimes, specific planting, and natural regeneration.	Direct action	Unmapped	Also see related measures WLD_M01.3 WLD_M01.4

Woodland Priorities (WLD)

WLD_M02.6	Improve the management of wood pasture, potentially through reduced grazing intensity where required, to allow natural regeneration to take place. Explore 'veteranisation' techniques to promote future veteran trees and associated habitat.	Direct action	Mapped	Also see related priority WLD_P01
WLD_M02.7	Replant cleared wood pasture with appropriate resilient tree and scrub species.	Direct action	Unmapped	
WLD_M02.8	Introduce key grassland indicator species, where appropriate, and promote the creation of wood meadows to land managers.	Direct action	Unmapped	

DRAFT

Woodland Priorities (WLD)

Priority:

WLD_P03 Enhance and connect ancient woodland

Buffer, enhance, restore and better connect fragmented patches of Ancient Woodland (including Plantations on Ancient Woodland Sites) by creating linkages with, and improving the management of, long-established woodland to increase the resilience of these sites and allow for species movement, including more specialist woodland species.

Benefits:

- Access to nature
- Health and wellbeing
- Educational resource
- Sense of place
- Carbon storage
- Climate regulation
- Clean air

Focus species:

- Red Squirrel
- Marsh Tit
- Juniper
- Hawfinch
- Six-spotted Longhorn Beetle
- Northern Hairy Wood Ant

Measures (Actions):

WLD_M03.1	Use the mapping of ancient semi-natural woodland (ASNW), long-established woodland (LEW) sites, and the revised ancient woodland inventory to identify priority corridors and prioritise woodland creation and natural colonisation in these areas. Share information with appropriate partners e.g. One Team and Defra arms-length bodies (Forestry Commission and Natural England). Co-ordinate advisors with land managers to ensure the best advice is available to those managing ASNW sites.	Enabling activity	Unmapped	
WLD_M03.2	Map and identify sites dominated by bracken to explore opportunities for woodland or heathland creation, with consideration of other priorities (e.g. breeding waders).	Enabling activity	Unmapped	Also see related priorities WLD_P04 UPL_P05 UPL_P06
WLD_M03.3	Identify Ghost Woodlands through existing ground flora that could be an appropriate site for re-establishment of woodland (but not at the expense of species-rich grassland).	Enabling activity	Unmapped	Also see related priority WLD_P04
WLD_M03.4	Increase the variety of woodland structure and species diversity within existing ancient woodlands in accordance with the UK Forestry Standard, e.g. mix of tree and shrub species, coppice management, glade and woodland ride management, retention of deadwood.	Direct action	Mapped	
WLD_M03.5	Restructure existing conifer plantations to buffer and connect patches of ancient woodland to maximise biodiversity, in accordance with the UK Forestry Standard and landowner aspirations.	Direct action	Mapped	
WLD_M03.6	Restore Plantation on Ancient Woodland sites (PAWS) from conifer to ancient semi-natural woodland over appropriate timescales. Restock where appropriate in accordance with Government's Keepers of Time: ancient and native woodland and trees policy in England - GOV.UK (www.gov.uk).	Direct action	Mapped	

Woodland Priorities (WLD)

WLD_M03.7	Buffer ancient woodland sites using agroforestry options, e.g. silvopasture to increase the size of small woodland sites (in particular ancient semi-natural woodland (ASNW) sites).	Direct action	Unmapped	Also see related priority FRM_P02
WLD_M03.8	Re-visit previously agreed agri-environment schemes to see if additional cover (scrub, natural colonisation or tree planting) could be an option.	Enabling activity	Unmapped	Also see related priorities FRM_P02 WLD_P04
WLD_M03.9	Coordinate a deer and grey squirrel control strategy across North Yorkshire and York to allow natural colonisation of wooded corridors between existing woodland sites.	Direct action	Unmapped	Also see related measures WLD_M04.1 WLD_M04.7
WLD_M03.10	Remove and prevent the spread of invasive non-native species (INNS) (e.g. Rhododendron) from woodlands, where identified. Work with existing projects to improve INNS monitoring and reporting, coordinating action at a landscape scale, and leading to the development of a regional biosecurity plan to reduce and monitor spread in the long-term.	Direct action	Unmapped	

Priority:

WLD_P04 Enhance, expand and connect new and existing woodland

Increase tree and woodland cover by enhancing all types of existing woodland and creating new species-diverse woodlands, which promotes good woodland structure, increases resilience, and produces sustainable woodland products and timber.

Benefits:

- Access to nature
- Health and wellbeing
- Carbon storage
- Climate regulation
- Soil health
- Water quality
- Timber and other wood products
- Plant based energy
- Clean air
- Noise regulation
- Urban cooling

Focus

- Burnet Companion
- Hawfinch
- Northern Hairy Wood Ant
- Tormentil Mining Bee
- Red Squirrel
- Hedgehog

Measures (Actions):

WLD_M04.1	Create new species-diverse woodlands. Ensure all woodland creation through planting or natural colonisation is planted and managed according to the UK Forestry Standard to ensure ongoing sustainable browsing levels, in particular for deer.	Direct action	Mapped	Also see related measure WLD_M03.9
WLD_M04.2	Ensure a diverse range of species are included in planting mixes, including species that are likely to still be viable to enhance resilience and seek to mitigate the risks from climate change and also consider pests and diseases by selecting species appropriate to the site using Ecological Site Classification or a similar tool.	Direct action	Mapped	

Woodland Priorities (WLD)

WLD_M04.3	Include native ground flora in woodland creation funded by local and national funding schemes, including incorporating appropriate structures, such as creating woodland clearings and canopy gaps, as per UK Forestry Standard. Raise awareness and encourage the provision of advice on introducing ground flora and shrub layer into new tree-planting schemes in rural and urban environments.	Direct action	Mapped	
WLD_M04.4	Enhance, restore, and/or reintroduce soil fungi communities to improve woodland biodiversity, function, and resilience as per UK Forestry Standard. Promote suitable practices to landowners as part of woodland management and creation advice.	Direct action	Mapped	
WLD_M04.5	Restructure existing conifer plantations and broadleaf/mixed woodlands to maximise biodiversity, in accordance with the UK Forestry Standard and landowner aspirations. Targeted removal of dominant species (where appropriate). Reduce proportion of single species to allow other species to respond and develop within canopy so that no more than 65% of the forest management unit is allocated to a single species.	Direct action	Mapped	
WLD_M04.6	Retain standing and fallen deadwood in all types of woodland and forest to increase structural diversity and encourage specialist species, e.g. planting sacrificial trees, retaining deadwood and felling debris.	Direct action	Mapped	
WLD_M04.7	Buffer, improve and protect existing woodland and create new woodland with resilient tree species in areas where red squirrels are expanding. Monitor red squirrel population in partnership with groups such as the Red Squirrel North England and UK Squirrel Accord, working collaboratively with land managers and controlling grey squirrel population.	Direct action	Mapped	Also see related measure WLD_M03.9
WLD_M04.8	Create woodland in areas that would benefit flood alleviation, using Natural Flood Management (NFM) opportunities mapping to identify suitable sites.	Direct action	Mapped	

Also see related Water and Wetlands priorities:

WET_P07: Expand Riparian Woodland

WET_P08: Restore, enhance and expand wet woodland

Water and wetlands (WET)

A series of major rivers have shaped North Yorkshire and York's landscape, many starting in the uplands of the Yorkshire Dales and North York Moors and flowing to the Humber Estuary or to the coast. Much of our lowlands was historically covered by fens, marshes, bogs, ponds, and wet grasslands. Millennia of human activity has altered the shape and flow of all our rivers, and in many cases disconnected them from their floodplains, created wildlife barriers such as weirs, and drained huge areas of wetland. All of this has impacted negatively on our wildlife.

Reinstating natural processes in our river catchments to make more space for water will not only dramatically increase the diversity of species and size of their populations, but it will also reduce the impacts of flood events in our settlements. Many wetland habitats are also excellent carbon sinks, helping reduce our carbon emissions. Nature-based solutions in our rivers and adjacent land can also reduce water pollution, creating healthier rivers for both humans and wildlife.

Priorities:

- Enhance and expand river and in-channel habitats to improve their quality and connectivity.
- Restore natural river processes to reconnect rivers and floodplains, and create space for nature, water and people.
- Restore, enhance, and expand pond networks at different successional stages in rural and urban landscapes, to increase resilience and support the population dynamics of wetland species.
- Enhance, expand and connect areas of fragmentary fen by improving management of existing sites and using species-rich ditches to connect sites.
- Restore and enhance existing flushes to support the needs of specialist plant species and make sites more resilient. Expand flush habitat and wet grassland areas to better accommodate wintering and breeding wetland bird populations.
- Buffer and restore poor-quality existing floodplain meadow sites to help protect and expand specialist species. Expand floodplain meadow habitat to increase resilience whilst remaining as a productive agricultural land use.
- Expand the amount of riparian woodland along all watercourses and at all elevations, including filling in gaps and increasing age structure, to increase the resilience of the natural habitats (both terrestrial and water).
- Restore and enhance existing wet woodland, and where possible expand the resource to increase resilience and support specialist species.

Water and Wetlands Priorities (WET)

Priority:

WET_P01 Enhance and expand river habitats

Enhance and expand river and in-channel habitats to improve their quality and connectivity.

- Benefits:
- Access to nature
 - Health and wellbeing
 - Educational resource
 - Plentiful water
 - Water quality
 - Flood protection

- Focus species:
- White-clawed Crayfish
 - Water Vole
 - Tansy Beetle
 - Bats
 - Golden-ringed Dragonfly
 - Freshwater Fish

Measures (Actions):

WET_M01.1	Implement in-channel mitigation measures for heavily-modified water bodies and improve in-channel habitat diversity (e.g. de-culverting, removal of barriers to fish migration, flow deflectors, soft engineering). Include mitigation measures for potential migration of invasive non-native species (INNS) upstream following removal of barriers.	Direct action	Unmapped	
WET_M01.2	Implement softening of hard infrastructure along watercourses where it must be retained, including retrofitting habitat features such as ledges, rough surfaces or floating islands. Where appropriate, incorporate artificial wildlife nesting or breeding spaces, such as nest boxes, artificial holts and burrows, and sand martin banks.	Direct action	Unmapped	Also see related measure CST_M01.4
WET_M01.3	Expand and maintain species-rich buffer strips along watercourses to improve connectivity and alter management of streams to reduce pollution and improve riparian habitat diversity, e.g. introduce tansy to support tansy beetle expansion, exclude or limit livestock access into rivers.	Direct action	Unmapped	
WET_M01.4	Expand suitable riparian habitat for water vole, alongside mink control where required, and implement ongoing management practices.	Direct action	Mapped	
WET_M01.5	Develop an invasive non-native species (INNS) management plan, in particular for Himalayan Balsam, to prevent domination of watercourse banksides.	Enabling activity	Unmapped	
WET_M01.6	Collate and analyse all available data on coastal migratory fish species, including pressures, migration pathways and known / potential barriers, and identify gaps in knowledge.	Enabling activity	Unmapped	Also see related measure WET_M02.7

Water and Wetlands Priorities (WET)

Priority:

WET_P02 Restore natural river processes

Restore natural river processes to reconnect rivers and floodplains, and create space for nature, water and people.

Benefits:

- Access to nature
- Health and wellbeing
- Educational resource
- Plentiful water
- Water quality
- Flood protection

Focus species:

- Southern Iron Blue
- Greater Water-parsnip
- Water Shrew
- Redshank
- Freshwater Pearl Mussel
- Depressed River Mussel

Measures (Actions):

WET_M02.1	Remove or realign artificial and engineered barriers and modifications where feasible to allow re-establishment of natural river processes e.g. levees, flood banks (include mitigation measures for potential migration of invasive non-native species (INNS) following removal of barriers). Where Flood embankments can be breached or set back, deliver connectivity to restore natural hydrology and hydro-geomorphological processes, including sediment and nutrient deposition, to help slow the flow.	Direct action	Mapped	
WET_M02.2	Reinstate meanders, oxbows, and natural in-channel features where possible to support migratory fish, freshwater pearl mussels and migrating birds, and help slow the flow.	Direct action	Unmapped	
WET_M02.3	Undertake wetland habitat and floodplain restoration works (including buffer strips and water storage) to connect wildlife-rich habitat and support key species.	Direct action	Unmapped	
WET_M02.4	Implement natural flood management (NFM) methods that support river restoration e.g. installing woody material and leaky dams, by working with land owners, farmers and partner organisations.	Direct action	Mapped	Also see related measure WET_M08.3
WET_M02.5	Explore opportunities for beaver re-introduction to create natural barriers and create natural flood management (NFM) opportunities.	Enabling activity	Unmapped	
WET_M02.6	Enhance chalk streams and associated floodplain habitats to increase biodiversity and help slow the flow, e.g. re-meandering.	Direct action	Mapped	
WET_M02.7	Improve coastal habitats for migratory fish and connect with in-land habitat restoration activities. Work with partners to fill gaps in knowledge, focussing on the impacts of climate change and how existing migration routes of key species may be affected by the predicted changes.	Direct action	Unmapped	Also see related measure WET_M01.6

Water and Wetlands Priorities (WET)

WET_M02.8	Work with the Esk and Coastal Streams, Yorkshire Derwent, and the Hull and East Riding Catchment Partnerships to connect in-land and coastal communities, enabling people to share traditional knowledge and oral histories, and providing opportunities for active citizen science to record habitat condition.	Enabling activity	Unmapped	Also see related priority CST_P01
------------------	--	-------------------	----------	--

Priority:

WET_P03 Expand and restore pond networks

Restore, enhance, and expand pond networks at different successional stages in rural and urban landscapes, to increase resilience and support the population dynamics of wetland species.

Benefits:	<ul style="list-style-type: none"> • Access to nature • Health and wellbeing • Educational resource 	<ul style="list-style-type: none"> • Climate regulation • Plentiful water • Water quality 	<ul style="list-style-type: none"> • Flood protection
-----------	--	--	--

Focus species:	<ul style="list-style-type: none"> • Common Toad • Common Frog 	<ul style="list-style-type: none"> • Emerald Damselfly • White-clawed Crayfish • Greater Water-parsnip
----------------	--	---

Measures (Actions):

WET_M03.1	Identify and map important pond areas where the number of nearby ponds can be increased to create clusters of successional ponds. Map existing or defunct Dew Ponds, to lead to their restoration, or identification of suitable new pond sites.	Enabling activity	Unmapped	
WET_M03.2	Identify and map ponds that are at risk of being lost and re-introduce positive management, e.g. remove excessive tree shading, removal of invasive non-native species (INNS), introduction of native aquatic plants where appropriate.	Direct action	Unmapped	
WET_M03.3	Develop a Pond Creation Strategy for urban and rural landscapes that will create new or restore existing ponds to form clusters and/or networks at different successional stages. Target areas of good semi-natural habitat for pond creation or plan terrestrial habitat restoration and pond restoration together, considering 'right pond, right place' approach.	Enabling activity	Unmapped	
WET_M03.4	Buffer existing ponds by increasing and improving the quality of marginal habitat and encourage creation/restoration of surrounding terrestrial habitat to provide better feeding habitat for amphibians and improved pond water quality, e.g. Great Crested Newt meta populations, considering 'right pond, right place' approach.	Direct action	Mapped	

Water and Wetlands Priorities (WET)

WET_M03.5	Create a programme connecting amenable landowners and nature volunteer groups for the creation and ongoing management of buffered ponds, with template agreements for the set aside of marginal areas for pond creation, and guidelines for site selection, pond creation, and any maintenance considerations.	Enabling activity	Unmapped	
WET_M03.6	Create successional networks of ponds to improve species diversity, and re-introduce species (e.g. Freshwater Habitats Trust introducing Medicinal Leech in Bedale and their work in re-establishing Pillwort). Raise awareness of the importance of having multiple ponds at different successional stages to land managers and advisors.	Direct action	Mapped	
WET_M03.7	Create new ponds for native crayfish ark sites.	Direct action	Unmapped	
WET_M03.8	Influence local planning policy (e.g. Supplementary Planning Guidance in Local Plans, Flood Risk Management Plans) to promote creation of nature-rich sustainable drainage systems (SuDS) as part of development.	Enabling activity	Unmapped	Also see related measures URB_M01.5 URB_M01.6
WET_M03.9	Create sustainable drainage systems (SuDS) and other constructed wetlands to 'slow the flow', create new habitats (ponds, wetlands, reedbeds), increase greenspace and improve mental health. Promote nature-based solutions for urban households in water company business plans to capture and treat sewage discharges to reduce nutrient losses to water courses.	Direct action	Unmapped	Also see related measures URB_M01.5 URB_M01.6 URB_M04.1

Priority:

WET_P04 Enhance, expand and connect fen habitats

Enhance, expand and connect areas of fragmentary fen by improving management of existing sites and using species-rich ditches to connect sites.

Benefits:

- Carbon storage
- Climate regulation
- Pollination
- Plentiful water
- Water quality
- Flood protection

Focus species:

- Geyer's Whorl Snail
- Garden Tiger
- Marsh Pug
- Strawberry Clover
- Necklace Ground Beetle
- Greater Water-parsnip

Measures (Actions):

WET_M04.1	Use maps to create a Lowland Fen Inventory, identify former extent of resource (e.g. relic fen sites), and understand ability to restore active hydrological processes to identify areas to recreate fen where it has been lost. Map lowland fen and carr woodland habitat, identifying suitable water courses and ditches as connecting habitat. Improve understanding of the hydrology and water chemistry of existing fens to enable their restoration and expansion.	Enabling activity	Unmapped	
WET_M04.2	Manage lowland fen sustainably, including advising land managers on grazing stock levels to maximise biodiversity.	Direct action	Mapped	
WET_M04.3	Re-introduce suitable plant species into fen habitat where necessary to increase diversity. Propagate plant species from local sources for re-introduction.	Direct action	Mapped	Also see related measure WET_M05.2
WET_M04.4	Create fen habitat where feasible, e.g. by expanding fen species into neighbouring ditches, working with the Internal Drainage Boards (IDBs) and other land managers.	Direct action	Mapped	

Water and Wetlands Priorities (WET)

Priority:

WET_P05 Restore, enhance and expand existing flushes

Restore and enhance existing flushes to support the needs of specialist plant species and make sites more resilient. Expand flush habitat and wet grassland areas to better accommodate wintering and breeding wetland bird populations.

Benefits:

- Pollination
- Water quality
- Plentiful water
- Flood protection

Focus species:

- Lapwing
- Curlew
- Round-leaved Sundew
- Water Vole

Measures (Actions):

WET_M05.1	Manage flushes sustainably, including advising land managers on stock levels to maximise biodiversity.	Direct action	Mapped	
WET_M05.2	Propagate plant species from local sources for re-introduction into flushes and wet grassland where appropriate. Raise awareness of the importance of local provenance seed to support the recovery of rare and declining wetland plant species.	Direct action	Unmapped	Also see related measure WET_M04.3
WET_M05.3	Revert degraded flush by removing drainage and artificial constraints (may include water abstraction).	Direct action	Unmapped	
WET_M05.4	Enlarge wetlands at known key areas for breeding and wintering bird populations (e.g. curlew, snipe), including floodplain meadows, wet grassland, moorland edge, and mineral extraction sites.	Direct action	Mapped	

Priority:

WET_P06 Restore floodplain meadows

Buffer and restore poor-quality existing floodplain meadow sites to help protect and expand specialist species. Expand floodplain meadow habitat to increase resilience whilst remaining as a productive agricultural land use.

Benefits:

- Access to nature
- Climate regulation
- Plentiful water
- Health and wellbeing
- Pollination
- Water quality
- Carbon storage
- Soil health
- Flood protection

Focus species:

- Yellow Wagtail
- Redshank
- Lapwing
- Tansy Beetle
- Garden Tiger
- Marsh Pug

Measures (Actions):

WET_M06.1	Identify the location of existing floodplain meadows and opportunities to expand into neighbouring sites. This will also lead to an increase in pollinators. Work with key agencies such as Internal Drainage Boards (IDBs) to understand where and how this is feasible.	Enabling activity	Unmapped	
WET_M06.2	Identify historic floodplain meadow sites to enable the targeting of restoration/creation, using historic floodplain maps and existing species records. Identify sites for creation that have the right underlying conditions (hydrological, soil fertility, soil type) for being a floodplain meadow.	Enabling activity	Unmapped	

Water and Wetlands Priorities (WET)

WET_M06.3	Identify a network of sites as sources of green hay and plug plants and help to facilitate the cutting and grazing of meadows e.g. shared grazing flocks.	Enabling activity	Unmapped	Also see related measure UPL_M03.4
WET_M06.4	Restore floodplain meadows by implementing restoration management (no inputs and annual cut with arisings removed) and re-seed where required to maximise the species diversity.	Direct action	Unmapped	
WET_M06.5	Promote the consistent annual management of existing, restoration and recreated floodplain meadows including annual hay cut in June / very early July with either an aftermath grazing or another hay cut in the autumn. No inputs required.	Enabling activity	Unmapped	
WET_M06.6	Increase floodplain meadow habitat, where appropriate, by allowing flooding to take place on appropriate grassland sites through reengineering flood protection embankments and water control structures. This will allow the river to reconnect with its floodplain and flood the land seasonally.	Direct action	Unmapped	
WET_M06.7	Create new floodplain meadows from poor quality grassland sites to improve the connectivity of this very rare and fragmented habitat. Use techniques such as green hay spreading and plug planting.	Direct action	Unmapped	Also see related measures UPL_M03.4 WET_M06.3

Priority:

WET_P07 Expand riparian woodland

Expand the amount of riparian woodland along all watercourses and at all elevations, including filling in gaps and increasing age structure, to increase the resilience of the natural habitats (both terrestrial and water).

Benefits:

- Access to nature
- Health and wellbeing
- Carbon storage
- Climate regulation
- Water quality
- Water cooling/shading
- Flood protection

Focus species:

- Water Vole
- Bats
- Water Shrew
- Garden Tiger
- Northern Hairy Wood Ant
- Southern Iron Blue

Measures (Actions):

WET_M07.1	Increase the age structure of riparian woodland through tree planting (subject to consideration of tree planting in areas used by ground nesting birds) and coppicing, so that trees are not all lost at once, and provide future in-channel habitat.	Direct action	Mapped	
WET_M07.2	Implement sensitive bank management (e.g. wooded buffer strips) and alternatives to tree removal, working with risk management authorities, land managers and river users to provide advice and sources of available funding, to create diverse vegetation in riparian zones, help improve water quality, natural flood management (NFM) (roughening water pathways) and water cooling/shading.	Direct action	Mapped	
WET_M07.3	Increase the amount of riparian tree and hedgerow species along watercourses, implemented through schemes such as catchment sensitive farming, as informed by river catchment management plans, to help improve water quality, natural flood management (NFM) and water cooling/shading.	Direct action	Unmapped	
WET_M07.4	Create new riparian woodland (within a minimum of 15-20m of planting both sides of watercourse), including wet woodland and join up wooded habitats where they would benefit flood alleviation, using natural flood management (NFM) opportunity maps to identify suitable locations (subject to consideration of tree planting in areas used by ground nesting birds).	Direct action	Mapped	Also see related priority WET_P08
WET_M07.5	Increase riparian woodland, scrub and mosaic habitats in suitable gills of upper catchments (steep enough, not on peatland, no breeding waders) in accordance with current Natural England / Forestry Commission guidance for peat and wading birds, to increase biodiversity, natural flood management (NFM) and water cooling/shading and quality. Agencies to work together to form a method of working with large-scale land managers to facilitate the planting of woody species in designated upland edge habitats.	Direct action	Mapped	

Priority:

WET_P08 Restore, enhance and expand wet woodland

Restore and enhance existing wet woodland, and where possible expand the resource to increase resilience and support specialist species.

Benefits:

- Carbon storage
- Climate regulation
- Plentiful water
- Water quality
- Flood protection

Focus species:

- Common Toad
- Common Frog
- Willow Tit
- Water Vole
- Emerald Damselfly
- Water Shrew

Measures (Actions):

WET_M08.1	Identify wet areas of land around existing wet woodland that has scope to become new habitat, and create wet woodland using appropriate resilient species in relation to climate change (not at the expense of existing fen habitat).	Direct action	Mapped	Also see related priority WET_P04
WET_M08.2	Enhance the diversity of wet woodland and create new wet woodland where it will support the presence of key species e.g. succession of standing deadwood for willow tit.	Direct action	Mapped	
WET_M08.3	Create wet woodland as a flood alleviation option through blocking up of ditches to retain water on site.	Direct action	Unmapped	Also see related measure WET_M02.4

Urban (URB)

Wildlife can be found in a variety of places in our settlements, within the remnants of semi-natural habitats such as woodlands, meadows and ponds, as well as human created spaces such as parks, gardens, schools and business parks. Much of this space can be low in biodiversity due to intensive management and a limited number of tree, shrub and flower species, many non-native and less suitable for pollinators. There is great opportunity to revisit how we use and manage our public and private spaces, and how we can introduce more native plant species and areas for wildlife, whilst keeping them places for people to use.

Our built environment is also very important for species as nesting habitat, and there is scope to introduce more capacity for birds, bats and invertebrates to make homes alongside humans. Introducing these changes, and creating more green spaces will support people's needs, as it can help improve air and water quality, cool down environments and help store water to reduce the impacts of flood events.

Priorities:

- Incorporate green infrastructure into the built environment, to provide more habitat for nature.
- Buffer and enhance existing urban nature-rich spaces (e.g. Local Nature Reserves and churchyards) to maximise opportunities for nature, whilst reducing the impact of recreational pressure.
- Modify the management of semi-natural urban grassland to improve biodiversity and connectivity.
- Encourage and promote action from the public to create habitats for wildlife in public and private gardens, schools and other urban areas, to make more spaces for nature and enhance connectivity.

Priority:

URB_P01 Incorporate nature into the built environment

Incorporate green infrastructure into the built environment, to provide more habitat for nature.

Benefits:

- Access to nature
- Health and wellbeing
- Educational resource
- Sense of place
- Carbon storage
- Climate regulation
- Pollination
- Plentiful water
- Water quality
- Flood protection
- Clean air
- Noise regulation
- Urban cooling

Focus species:

- Hedgehog
- Devil's-bit Scabious
- Swift
- Arable Flowers
- Bats

Measures (Actions):

URB_M01.1	Develop demonstrative projects on public and private sites that are scientifically proven to support nature e.g. green roofs/green walls and bat/bird boxes that are successfully used (see Natural England Green Infrastructure Framework).	Direct action	Unmapped	
URB_M01.2	Work with local planning authorities developing Green and Blue Infrastructure Strategies to maximise natural features within new developments, using Natural England Green Infrastructure Framework and learning from best practice in other urban authorities. These should promote scientifically proven options (e.g. bird boxes, bat boxes, insect hotels that are successfully used). Define best design for better nature and health.	Enabling activity	Unmapped	
URB_M01.3	Deliver nature enhancement initiatives within the building stock and land holdings of public and private sector partners (e.g. infrastructure providers, businesses, town and parish councils) e.g. green roofs on bus stops, rain gardens, green bridges.	Direct action	Unmapped	
URB_M01.4	Work with local planning authorities developing Green and Blue Infrastructure Strategies to map urban heat island effect and air quality, to identify areas where natural interventions could help urban cooling and air pollution e.g. appropriate tree and shrub planting.	Enabling activity	Unmapped	
URB_M01.5	Work with the sustainable drainage systems (SuDS) approval boards to improve the promotion and uptake of wildlife sensitive SuDS. Refer to a 'gold standard', that can be developed as part of local Green and Blue Infrastructure Strategies.	Enabling activity	Unmapped	Also see related measure WET_M03.8
URB_M01.6	Create a sustainable drainage systems (SuDS) manual for councils that covers the benefits and how to install on properties (within local council regulations), e.g. as a nature-based solution to urban waste-water management.	Enabling activity	Unmapped	Also see related measure WET_M03.9

Urban Priorities (URB)

URB_M01.7	Incorporate suitable 'crevices' into new build developments e.g. swift bricks, bat bricks (North Yorkshire Council and City of York Council to lead through adoption of appropriate planning control measures).	Direct action	Unmapped	Also see related measure URB_M04.4
URB_M01.8	Provide and protect substitute nesting and roosting sites when property developments threaten existing sites (North Yorkshire Council and City of York Council to lead through adoption of appropriate planning control measures)	Direct action	Unmapped	Also see related measure URB_M04.4

Priority:

URB_P02 Enhance urban nature-rich spaces

Buffer and enhance existing urban nature-rich spaces (e.g. Local Nature Reserves and churchyards) to maximise opportunities for nature, whilst reducing the impact of recreational pressure.

Benefits:

- Access to nature
- Health and wellbeing
- Educational resource
- Sense of place
- Reduced chemical use
- Pollination
- Flood protection
- Clean air
- Noise regulation
- Urban cooling

Focus species:

- Common Toad
- Common Frog
- Waxcap fungi
- Hedgehog
- Emerald Damselfly
- Garden Tiger

Measures (Actions):

URB_M02.1	Buffer and connect urban nature-rich spaces by identifying neighbouring land with partners to restore or create suitable habitat, e.g. hedgerow connectivity from urban areas into surrounding rural landscapes.	Direct action	Unmapped	Also see related priority FRM_P05
URB_M02.2	Work with planning authorities developing Green and Blue Infrastructure Strategies to introduce recreational zoning within existing sites and adjacent to existing sites (e.g. designated dog zones).	Enabling activity	Unmapped	
URB_M02.3	Enhance habitat in churchyards and cemeteries by working with local authorities, churches and associated community groups to establish and maintain management plans.	Direct action	Mapped	

Urban Priorities (URB)

Priority:

URB_P03 Modify the management of urban grassland

Modify the management of semi-natural urban grassland to improve biodiversity and connectivity.

Benefits:

- Access to nature
- Health and wellbeing
- Educational resource
- Sense of place
- Carbon storage
- Reduced chemical use
- Pollination
- Flood protection
- Clean air

Focus species:

- Waxcap fungi
- Arable Flowers
- Devil's-bit Scabious

Measures (Actions):

URB_M03.1	Engage with communities (e.g. parish councils, local community groups) to identify locations for enhancement for nature, co-design, interpretation, publicity and future management.	Enabling activity	Unmapped	
URB_M03.2	Enhance existing urban grasslands (e.g. parks, urban verges, landscaping around offices) where appropriate with introduction of native species, e.g. bulbs, meadow plug plants, seed sowing.	Direct action	Unmapped	Also see related priority GRA_P07
URB_M03.3	Use green hay spreading to increase species diversity.	Direct action	Unmapped	Also see related measures UPL_M03.4 WET_M06.3
URB_M03.4	Plant site suited native tree or shrub species likely to tolerate future predicted climate on urban grassland sites, where appropriate, to create a mosaic of habitats suitable for the location and connecting to other wooded habitats, where beneficial.	Direct action	Unmapped	
URB_M03.5	Reduce the size of amenity grassland through changes to mowing regimes (set aside a percentage for modified management). Where grassy areas are allowed to grow long over the spring and summer, implement appropriate management prescription of annual "hay" cut (from late July to early September) and removal of arisings, with aftermath grazing/cutting as required.	Direct action	Unmapped	Also see related measure GRA_M01.2

Priority:

URB_P04 Promote public action for better nature connectivity

Encourage and promote action from the public to create habitats for wildlife in public and private gardens, schools and other urban areas, to make more spaces for nature and enhance connectivity.

Benefits:

- Access to nature
- Health and wellbeing
- Educational resource
- Sense of place
- Carbon storage
- Climate regulation
- Pollination
- Plentiful water
- Flood protection
- Urban cooling

Focus species:

- Common Toad
- Garden Tiger
- Hedgehog
- Arable Flowers
- Emerald Damselfly
- Devil's-bit Scabious

Measures (Actions):

URB_M04.1	Promote nature and climate change adaptive options for residential properties e.g. variety of native plants/flowers grown, water harvesting for sustainable garden irrigation, permeable boundaries (including species-rich native hedgerows) to create hedgehog gaps in garden fencing, appropriate surface water management solutions (permeable surfaces) within private front gardens and driveways.	Enabling activity	Unmapped	
URB_M04.2	Promote initiatives such as 'Place for Nature' at Parish meetings and encourage the development of Parish Green Initiatives.	Enabling activity	Unmapped	
URB_M04.3	Deliver nature projects with children and staff in schools to encourage their use in home gardens.	Direct action	Unmapped	
URB_M04.4	Create suitable crevices (e.g. swift boxes, bat boxes) within existing buildings close to existing colonies to provide additional nest sites as sites are lost to roof renovations.	Direct action	Unmapped	Also see related measure URB_M01.8

Coastal Priorities (CST)

The North Yorkshire coast is an important place for wildlife. Sea birds whose populations are rapidly declining nest on the cliffs and in our coastal towns. Our rocky shores are home to a huge variety of wildlife, and an important way for most people to learn about marine life. Extensive numbers of residents and visitors enjoy the wonders of these coastal habitats, but such disturbance can put pressure on the wildlife reliant on these places. The presence of gulls and other sea birds in our towns has also led to conflict between humans and the bird life of the coast.

It is important we find ways to coexist in these coastal places and work to create more space for nature to reduce their impacts on our settlements. We also need to better understand the benefits that our intertidal habitats have on our lives so we can work to preserve and enhance it for the benefit of people as well as the wildlife that is found there.

North Yorkshire has a very small area of saltmarsh near Whitby, the only location for this habitat on the coast between Middlesbrough and Spurn Point. The uniqueness of this habitat within North Yorkshire must be enhanced to ensure the species reliant upon are not lost.

Priorities:

- Enhance rocky shore habitat to support specialist species, improve its connectivity with other ecosystems and the services it provides to society.
- Enhance habitats for seabirds on the North Yorkshire coast, both on our cliffs and in our urban spaces, to help resolve pressures from human activities and the impacts of climate change.
- Enhance, expand and connect existing saltmarsh to increase resilience of this fragile and fragmented habitat.

Priority:

CST_P01 Enhance rocky shore habitat

Enhance rocky shore habitat to support specialist species, improve its connectivity with other ecosystems and the services it provides to society.

Benefits:

- Access to nature
- Health and wellbeing
- Educational resource
- Sense of place
- Carbon storage
- Climate regulation
- Flood protection

Focus species:

- Blue Mussel

Measures (Actions):

CST_M01.1	Actively seek traditional knowledge and oral histories about the rocky shore environment to inform evidence gaps and record how the coastline has changed.	Enabling activity	Unmapped	Also see related measure WET_M02.8
CST_M01.2	Complete a natural capital assessment of the rocky shore to inform decision-makers of the integral 'value' of the habitat and communicate this effectively with the general public.	Enabling activity	Unmapped	
CST_M01.3	Restore habitat to allow recolonisation of blue mussels. Collate and analyse all available rocky shore habitat and species data, to identify evidence gaps around blue mussels. Target resources to fill these gaps and identify new recovery opportunities for this species.	Direct action	Unmapped	
CST_M01.4	Work with the Concrete Coast programme to install ecological enhancements on 'hard' infrastructure, where ecologically and structurally appropriate, to create new habitat.	Direct action	Unmapped	Also see related measure WET_M01.2
CST_M01.5	Prevent the spread and eradicate invasive non-native species (INNS), where identified. Work with existing projects to improve INNS monitoring and reporting, leading to the development of a regional biosecurity plan to reduce and monitor spread in the long-term.	Direct action	Unmapped	

Coastal Priorities (CST)

Priority:

CST_P02 Enhance habitats for seabirds

Enhance habitats for seabirds on the North Yorkshire coast, both on our cliffs and in our urban spaces, to help resolve pressures from human activities and the impacts of climate change.

Benefits:

- Access to nature
- Health and wellbeing
- Educational resource
- Sense of place
- Climate regulation
- Animal welfare

Focus species:

- Sea birds
- Adder

Measures (Actions):

CST_M02.1	Conduct regular population and productivity monitoring of seabirds nesting in urban spaces and on non-designated cliffs.	Enabling activity	Unmapped	
CST_M02.2	Broaden recreational disturbance monitoring and management to incorporate key locations and activities outside of designated areas.	Enabling activity	Unmapped	
CST_M02.3	Provide advice and support to communities in coastal urban spaces to encourage connectivity with nesting seabirds, utilise legal deterrents safely, and reduce access to litter and human food products.	Enabling activity	Unmapped	
CST_M02.4	Work with local authorities and businesses to identify suitable nesting locations (or creation of artificial habitat such as towers) and raise awareness of their plight with the local community.	Enabling activity	Unmapped	
CST_M02.5	Create and enhance suitable habitat for seabirds on the North Yorkshire coast, both on our cliffs and in our urban settlements.	Direct action	Unmapped	

Priority:

CST_P03 Enhance and expand existing saltmarsh

Enhance, expand and connect existing saltmarsh to increase resilience of this fragile and fragmented habitat.

Benefits:

- Educational resource
- Carbon storage
- Pollination
- Water quality
- Erosion control

Focus species:

- Strawberry Clover

Measures (Actions):

CST_M03.1	Enhance existing saltmarsh through sympathetic management and identify opportunities to expand this resource.	Direct action	Mapped	
------------------	---	---------------	--------	--

Section C – Species

1. Introduction

North Yorkshire and York contains a significant number of rare and threatened species that will, to some degree, benefit from habitat improvement measures, however they may also need very specific actions. For example, research and survey work that will help to better understand their distribution, abundance and ecology, as well as more specific measures to provide their unique habitat requirements.

2. What are priority species?

An initial list of over 8,000 species was provided by Defra for consideration as a starting point to help determine which species should be selected as priority species in our LNRS area. Following additional input from local and national experts, the species list was filtered by quality and quantity of local records to determine their presence in the strategy area (species with too few, too old or too geographically coarse records were removed). Species which experts determined to be widespread or vagrants in the LNRS area (as opposed to other areas of the country) were also removed. This led to a final longlist of 634 species, which were matched with LNRS Species guidance categories (see Appendix 2) to determine their relevance to the LNRS.

These 634 species are classed as priority species for our LNRS, because they are in decline, or suffer persecution, and require some form of intervention. These species are included in the LNRS so they can be prioritised for funding and further projects to enable their recovery, both as part of and outside of the LNRS.

An additional 1,682 species were classed as Category E, with insufficient data to determine their status or needs. The large number of species in this category highlights the urgent need to improve our knowledge of these species, to determine their current distribution in our area, and their nature recovery needs for future iterations of the LNRS. This will be an important focus for the LNRS. The full list of priority species and Category E Species can be found in Appendix 5.

From these, a shortlist of focus species has been produced to be prioritised in this first iteration of the LNRS (see below).

3. How do species relate to measures?

All 634 priority species were linked where possible to LNRS measures, to determine whether they would benefit from proposed actions. Where no measures would obviously benefit a species, this has been noted. This is mainly because the habitat they are reliant upon was not prioritised by stakeholders during LNRS development (e.g. calaminarian grassland).

It should be noted that for many of the priority species, being linked to a measure does not guarantee they will recover if that measure is delivered. Many species have specialist needs that habitat interventions alone will not achieve. However, making the link between measures and priority species allows nuanced discussions on how and where best to deliver the LNRS measures to maximise their benefits to the priority species.

Additionally, many of the species on the longlist are found in a single or small number of sites, and their management and protection does not easily fit into the LNRS priorities and measures.

4. Focus Species

The priority species longlist was filtered based on a series of categories, such as where species have been flagged as important in other plans and strategies (e.g. in Protected Landscape's nature recovery plans), local LNRS workshops, and their presence in LNRS measures, and were scored against these categories. In addition, whilst reviewing the longlist, any species that stood out as a potential indicator species to demonstrate the success of LNRS measures were included for consideration.

This information was reviewed and considered in the light of the LNRS priorities and with the goal of providing a list of species that would:

- benefit from the proposed measures within the first iteration of the LNRS;
- enable changes to be tracked via general recording efforts or targeted monitoring effort;
- encourage more people to get involved with monitoring activities and develop their skills;
- help raise awareness and encourage greater involvement with, and support for, the LNRS.

The methodology above resulted in 83 'focus species' that the LNRS will use to gain insight into species recovery as part of the LNRS, and to engage with land managers and the public around how to consider species needs in our area. The full methodology can be found in Appendix 2 and the outputs of this process can be found in tables 1 and 2 at the end of this section of the document.

5. Future migrants and species recovery projects

During the shortlisting process, species were highlighted that may colonise our LNRS area due to natural migration or be possible species for translocation projects in the future. Species were also identified that already had active species recovery projects underway and may not need the support of the LNRS to progress. These have been included for information (see tables 3 and 4 below). Some of these appear as focus species, where they qualified under other shortlisting criteria, e.g. they are listed within an LNRS measure.

6. Bespoke Species Measures

The focus species do not currently have bespoke species measures attached to them. Further analysis is needed to understand where these species are present, how they relate to the mapped measures on the LNRS Local Habitat Map, and what additional measures are needed to allow them to be conserved or to expand their ranges beyond the LNRS priorities and measures. This work will take place during the delivery phase of the LNRS.

Section C – Species

Table 1 – Individual focus species

Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<i>Bufo bufo</i>	Common Toad	Amphibians and reptiles	NT	Grasslands, woodland, hedgerows, farmland, brownfield sites, parks and gardens, ponds, lakes, ditches and canals.
<i>Rana temporaria</i>	Common Frog	Amphibians and reptiles	LC	Grasslands, woodland, hedgerows, farmland, parks and gardens.
<i>Vipera berus</i>	Adder	Amphibians and reptiles	NT	Wetlands, grassland, heathlands, blanket bog, woodland, maritime cliff and slope, moorlands, hedgerows.
<i>Andrena tarsata</i>	Tormentil Mining Bee	Bees, wasps, ants & sawflies	NA	Heathlands, acid grasslands, rush pastures, glades/rides in conifer plantations.
<i>Bombus monticola</i>	Bilberry Bumblebee	Bees, wasps, ants & sawflies	NA	Upland acid grassland and heathland.
<i>Formica lugubris</i>	Northern Hairy Wood Ant	Bees, wasps, ants & sawflies	NA	Coniferous and mixed woodland
<i>Apus apus [br]</i>	Swift	Birds	LC	Urban areas, grassland, farmland, hedgerows, wetland, rivers, lakes, open woodland
<i>Asio flammeus [br]</i>	Short-eared Owl	Birds	EN	Upland heathland, upland grassland
<i>Circus cyaneus [br]</i>	Hen Harrier	Birds	EN	Lowland heathland, upland heathland, upland grasslands
<i>Coccothraustes coccothraustes [br]</i>	Hawfinch	Birds	EN	Broadleaved woodland; wood pasture and parkland
<i>Dryobates minor [br]</i>	Lesser Spotted Woodpecker	Birds	EN	Broadleaved woodland; parkland; hedgerows with trees
<i>Falco columbarius [br]</i>	Merlin	Birds	EN	Upland heathland
<i>Lyrurus tetrix [br]</i>	Black Grouse	Birds	VU	Moorland fringe with scrub and rough pasture
<i>Motacilla flava [br]</i>	Yellow Wagtail	Birds	NT	Wet grassland, wetlands, hay meadows, arable field margins, arable land
<i>Numenius arquata [br]</i>	Curlew	Birds	EN	Upland grassland, upland heathland, blanket bog, rush pasture, lowland grassland
<i>Passer montanus [br]</i>	Tree Sparrow	Birds	VU	Broadleaved woodland, wood pasture and parkland, hedgerows, grasslands, arable field margins
<i>Perdix perdix [br]</i>	Grey Partridge	Birds	VU	Grassland, arable land
<i>Poecile montanus [br]</i>	Willow Tit	Birds	EN	Wet woodland, riparian woodland and scrubby areas
<i>Poecile palustris [br]</i>	Marsh Tit	Birds	NT	Broadleaved woodland, wet woodland and scrub, farmland with woody areas.

Section C – Species

Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<i>Streptopelia turtur [br]</i>	Turtle dove	Birds	CR	Open woodland; tall, thick hedgerows in farmland, parkland, arable land
<i>Tringa totanus [br]</i>	Redshank	Birds	VU	Upland heathland, upland grassland, wet grassland, freshwater marsh
<i>Turdus torquatus [br]</i>	Ring Ouzel	Birds	NT	Upland heathland with scrub, upland calcareous grassland
<i>Vanellus vanellus</i>	Lapwing	Birds	VU	Grassland, upland hay meadows, arable land, wetlands, floodplain grazing marsh
<i>Aricia artaxerxes</i>	Northern Brown Argus	Butterflies	VU	Upland and lowland calcareous grassland with scrub
<i>Austropotamobius pallipes</i>	White-clawed Crayfish	Crayfish	NA	Rivers, ponds
<i>Cordulegaster boltonii</i>	Golden-ringed Dragonfly	Dragonflies and damselflies	LC	Rivers and streams
<i>Lestes sponsa</i>	Emerald Damselfly	Dragonflies and damselflies	LC	Wetlands
<i>Carabus monilis</i>	Necklace Ground Beetle	Ground beetles	EN	Open habitat including arable margins, sandy heathland, woodland, thick scrub, hay meadows.
<i>Chrysolina graminis</i>	Tansy Beetle	Leaf beetles and allies	EN	Tall sward on riverbanks
<i>Anoplodera sexguttata</i>	Six-spotted Longhorn	Longhorn beetles	NT	decaying wood in open broadleaved woodland
<i>Arvicola amphibius</i>	European Water Vole	Mammals	EN	Rivers, wetlands, ditches, mixed woodland
<i>Erinaceus europaeus</i>	West European Hedgehog	Mammals	VU	Urban spaces and gardens, grassland, mixed woodland, heathland, arable land
<i>Micromys minutus</i>	Harvest Mouse	Mammals	NT	Tussocky grasslands, hedgerows, field margins, road verges, reedbeds, ditches
<i>Neomys fodiens</i>	Water Shrew	Mammals	LC	Banks of streams, rivers, ponds, ditches, mixed woodland,
<i>Sciurus vulgaris</i>	Red Squirrel	Mammals	EN	Upland & moorland, coniferous woodland; broadleaved woodland
<i>Baetis niger</i>	Southern Iron Blue	Mayflies	LC	Rivers and streams
<i>Mytilus edulis</i>	Blue Mussel	Molluscs	NA	Rocky shores
<i>Margaritifera margaritifera</i>	Freshwater Pearl Mussel	Molluscs (non-marine)	CR	Rivers and streams
<i>Pseudanodonta complanata</i>	Depressed River Mussel	Molluscs (non-marine)	NA	Rivers and streams, large ditches and canals
<i>Vertigo geyeri</i>	Geyer's Whorl Snail	Molluscs (non-marine)	NT	Open flushes in calcareous fens and mires
<i>Arctia caja</i>	Garden Tiger	Moths	NA	Gardens, damp meadows, fens, riverbanks, open woodland

Section C – Species

Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<i>Chiasmia clathrata</i>	Latticed Heath	Moths	NA	Gardens, calcareous grassland, fens, open woodland, heathland and moorland
<i>Euclidia glyphica</i>	Burnet Companion	Moths	NA	Dry or damp grasslands (usually calcareous), flower-rich hay meadows, woodland rides, verges
<i>Eupithecia pygmaeata</i>	Marsh Pug	Moths	NA	Wet meadows, marshes, fens
<i>Panemeria tenebrata</i>	Small Yellow Underwing	Moths	NA	Flower-rich grasslands, sea-cliffs, roadside verges
<i>Perizoma minorata</i>	Heath Rivulet	Moths	NA	Moorland, upland pasture and limestone grassland
<i>Coeloglossum viride</i>	Frog Orchid	Vascular plants	VU	lowland calcareous grassland, limestone pavement
<i>Drosera rotundifolia</i>	Round-leaved Sundew	Vascular plants	LC	blanket bog, lowland raised bog, upland heathland, upland flushes, fens and swamps
<i>Filipendula vulgaris</i>	Dropwort	Vascular plants	LC	Calcareous grassland, limestone pavement, upland heathland
<i>Genista anglica</i>	Petty Whin	Vascular plants	NT	Upland heathland, upland hay meadows, bog, fen, marsh and swamp
<i>Gentianella campestris</i>	Field Gentian	Vascular plants	VU	Upland calcareous grassland, lowland dry acid grassland, lowland meadow
<i>Juniperus communis</i>	Juniper	Vascular plants	LC	Upland heathland, upland broadleaved woodland, calcareous grassland, limestone pavement
<i>Neotinea ustulata</i>	Burnt Orchid	Vascular plants	EN	Lowland calcareous grassland
<i>Ophioglossum vulgatum</i>	Adder's-tongue fern	Vascular plants	LC	Broadleaved woodland, lowland meadows, unimproved grassland, heathland
<i>Orobanche reticulata</i>	Thistle Broomrape	Vascular plants	NT	Lowland calcareous grassland
<i>Primula farinosa</i>	Bird's-eye Primrose	Vascular plants	VU	Upland calcareous grassland
<i>Succisa pratensis</i>	Devil's-bit Scabious	Vascular plants	LC	acid grassland, calcareous grassland, calcareous grassland, lowland meadows, heathland, rush pastures, broadleaved and mixed woodland
<i>Trifolium fragiferum</i>	Strawberry Clover	Vascular plants	LC	Coastal saltmarsh, lowland fen, calcareous grassland, gardens
<i>Sium latifolium</i>	Greater Water-parsnip	Vascular plants	EN	Rivers, lowland fens, upland flushes, fens and swamps, standing open water and canals, reedbeds
<i>Viola canina</i>	Heath Dog-violet	Vascular plants	NT	Lowland dry acid grassland, heathland, rivers and streams

Section C – Species

Table 2 – Focus species assemblages

Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
Bats Species Assemblage				woodland, woodland edge, hedgerows, grassland, wetlands, lakes, rivers, gardens, parkland, buildings and bridges (roosting), tree holes (roosting)
<i>Myotis brandtii</i>	Brandt's Bat	Mammals	NA	
<i>Myotis daubentonii</i>	Daubenton's Bat	Mammals	LC	
<i>Myotis mystacinus</i>	Whiskered Bat	Mammals	NA	
<i>Myotis nattereri</i>	Natterer's Bat	Mammals	LC	
<i>Nyctalus leisleri</i>	Leisler's Bat	Mammals	NT	
<i>Nyctalus noctula</i>	Noctule Bat	Mammals	LC	
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle	Mammals	LC	
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	Mammals	LC	
<i>Plecotus auritus</i>	Brown Long-eared Bat	Mammals	LC	
<i>Myotis alcaethoe</i>	Alcaethoe Bat	Mammals		
Sea Bird Assemblage				Coastal cliffs and rocks, urban areas
<i>Rissa tridactyla [br]</i>	Kittiwake	Birds	CR	
<i>Fulmarus glacialis [br]</i>	Fulmar	Birds	LC	
<i>Larus argentatus [br]</i>	Herring Gull	Birds	EN	
Arable Flowers Assemblage				Arable Field Margins, parks and gardens
<i>Centaurea cyanus</i>	Cornflower	Vascular plants	NA	
<i>Cerastium arvense</i>	Field Mouse-ear	Vascular plants	LC	
<i>Cichorium intybus</i>	Chicory	Vascular plants	NA	
<i>Clinopodium acinos</i>	Basil Thyme	Vascular plants	VU	
<i>Euphorbia exigua</i>	Dwarf Spurge	Vascular plants	NA	
<i>Filago lutescens</i>	Red-tipped Cudweed	Vascular plants	EN	
<i>Filago vulgaris</i>	Common Cudweed	Vascular plants	NT	
<i>Fumaria purpurea</i>	Purple Ramping-fumitory	Vascular plants	LC	
<i>Galeopsis speciosa</i>	Large-flowered Hemp-nettle	Vascular plants	NA	

Section C – Species

Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<i>Glebionis segetum</i>	Corn Marigold	Vascular plants	NA	
<i>Geranium columbinum</i>	Long-stalked Crane's-bill	Vascular plants	LC	
<i>Hypochaeris glabra</i>	Smooth Cat's-ear	Vascular plants	VU	
<i>Mentha arvensis</i>	Corn Mint	Vascular plants	LC	
<i>Minuartia hybrida</i>	Fine-leaved Sandwort	Vascular plants	EN	
<i>Onobrychis viciifolia</i>	Sainfoin	Vascular plants	NT	
<i>Scandix pecten-veneris</i>	Shepherd's-needle	Vascular plants	NA	
<i>Spergula arvensis</i>	Corn Spurrey	Vascular plants	VU	
<i>Stachys arvensis</i>	Field Woundwort	Vascular plants	NA	
<i>Viola tricolor</i>	Wild Pansy	Vascular plants	NT	
Waxcap fungi Assemblage				Grasslands, verges, churchyards, woodland
<i>Gliophorus psittacinus</i>	Parrot Waxcap	Fungi	NA	
<i>Hygrocybe punicea</i>	Crimson Waxcap	Fungi	NA	
<i>Porpolomopsis calyptriformis</i>	Pink Waxcap	Fungi	NA	
Freshwater Fish Assemblage				Rivers and Streams
<i>Anguilla anguilla</i>	European Eel	Freshwater Fish	CR	
<i>Lampetra fluviatilis</i>	European River Lamprey	Freshwater Fish	LC	
<i>Lampetra planeri</i>	Brook Lamprey	Freshwater Fish	LC	
<i>Petromyzon marinus</i>	Sea Lamprey	Freshwater Fish	LC	
<i>Salmo salar</i>	Atlantic Salmon	Freshwater Fish	EN	
<i>Salmo trutta</i>	Sea/Brown Trout	Freshwater Fish	NA	
<i>Cottus gobio</i>	Bullhead	Freshwater Fish	LC	

7. Species Recovery Projects list

Many priority species have existing or planned species recovery projects associated with them. The LNRS will work with these, where possible, to ensure that delivery of LNRS measures support the ambitions of the species recovery projects. A list of known species currently being focused on by organisations with the LNRS area is provided in Table 3 below (n.b. this is not an exhaustive list).

Table 3 – Species associated with existing or planned species recovery projects

Species	Common Name	Taxon	Conservation Status
<i>Hirudo medicinalis</i>	Medicinal Leech	Annelid	NA
<i>Andrena tarsata</i>	Tormentil Mining Bee	Bees, wasps, ants & sawflies	NA
<i>Crex crex</i>	Corn crake	Birds	LC
<i>Streptopelia turtur</i>	Turtle Dove	Birds	CR
<i>Coenonympha tullia</i>	Large Heath	Butterflies	EN
<i>Austropotamobius pallipes</i>	White-clawed Crayfish	Crayfish	NA
<i>Chrysolina graminis</i>	Tansy beetle	Leaf beetles and allies	EN
<i>Castor fiber</i>	Beaver	Mammals	EN
<i>Martes martes</i>	Pine Marten	Mammals	LC
<i>Muscardinus avellanarius</i>	Hazel Dormouse	Mammals	VU
<i>Electrogena affinis</i>	Scarce Dusky Yellowstreak	Mayfly	DD
<i>Margaritifera margaritifera</i>	Freshwater pearl mussel	Molluscs	CR
<i>Epione vespertaria</i>	Dark Bordered Beauty	Moths	NA
<i>Odontomyia hydroleon</i>	Green Barred Colonel	Soldier flies and allies	CR
<i>Carex ericetorum</i>	Rare Spring-sedge	Vascular plants	VU
<i>Cypripedium calceolus</i>	Lady's Slipper Orchid	Vascular plants	CR
<i>Gentianella campestris</i>	Field Gentian	Vascular plants	VU
<i>Neotinea ustulata</i>	Burnt Orchid	Vascular plants	EN
<i>Juniperus communis</i>	Juniper	Vascular plants	LC
<i>Pilularia globulifera</i>	Pillwort	Vascular plants	NT
<i>Sium latifolium</i>	Greater Water-parsnip	Vascular plants	EN

8. Migrants list

The LNRS Species guidance includes a recommendation to consider species that may move into the LNRS area in the future due to migration related to climate change. Table 4 below provides a list of species that could feasibly become established in the strategy area. The list is based purely on the opinion of local experts, as there are historic records in North Yorkshire and York for almost all the species. Therefore, there is a strong likelihood that they could become established, with suitable levels of required habitat and other environmental factors being favourable.

Table 4 – Potential future migrant species

Species	Common Name	Taxon	Conservation Status
<i>Aquila chrysaetos</i>	Golden Eagle	Birds	NT
<i>Bubulcus ibis</i>	Cattle Egret	Birds	LC
<i>Grus grus</i>	Common Crane	Birds	VU
<i>Haliaeetus albicilla</i>	White-tailed Eagle	Birds	EN
<i>Himantopus himantopus</i>	Black-winged Stilt	Birds	NA
<i>Locustella luscinioides</i>	Savi's Warbler	Birds	CR
<i>Luscinia megarhynchos</i>	Nightingale	Birds	VU
<i>Platalea leucorodia</i>	Spoonbill	Birds	VU
<i>Plegadis falcinellus</i>	Glossy Ibis	Birds	NA
<i>Aeshna isosceles</i>	Norfolk Hawker	Dragonflies and damselflies	EN
<i>Brachytron pratense</i>	Hairy Dragonfly	Dragonflies and damselflies	LC
<i>Erythromma najas</i>	Red-eyed Damselfly	Dragonflies and damselflies	LC
<i>Leucorrhinia dubia</i>	White-faced Darter	Dragonflies and damselflies	EN
<i>Lota lota</i>	Burbot	Freshwater Fish	Data deficient
<i>Acipenser sturio</i>	Common Sturgeon	Freshwater Fish	CR
<i>Euplagia quadripunctaria</i>	Jersey Tiger	Moths	NA