



North Yorkshire and York Local Nature Recovery Strategy (LNRS)

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

February 2026

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. To access the other parts of the LNRS, please visit: northyorks.gov.uk/lnrs-documents

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

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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 intended for politicians, land managers, town planners and wider stakeholders
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
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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 seven 'habitat' categories:

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

We have used these categories throughout the strategy to allow the easy identification of priorities and measures that are most relevant to particular habitats or land use types. We recognise that there is some crossover between the categories, and that some of the categories primarily relate to land use or landscape type, rather than a specific habitat type. For example, the 'Farmland' category relates to North Yorkshire and York's farmed landscape, and this could include within it a variety of different habitat types. Where a measure (action) within one category is also highly relevant to another category, this is noted in the tables in Section B of this document e.g. 'Also see related priority **WLD_P04**'.

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.

Unmapped measures are particularly relevant to the ‘central belt’ of North Yorkshire (the area in between the A1 and A19 road corridors), with the Vale of York and Vale of Mowbray having a relatively small number of focus areas with mapped measures in the Local Habitat Map. They are also highly relevant to the Vale of Pickering, in between the A170 and A64 road corridors. The prevalence of agricultural land in these areas of the county provides considerable opportunity to enhance linear connectivity for nature through implementing the unmapped Farmland measures, such as those under priority FRM_P01 (enhance and expand arable field margins) and FRM_P05 (expand the hedgerow network). Enhancing the linear connectivity provided by watercourse corridors would also be particularly beneficial in these areas, through implementing Water and Wetlands measures such as those under priority WET_P01 (enhance and expand watercourse habitats) and WET_P07 (expand riparian woodland).

Section A – Overview of Priorities and Measures

The Local Habitat Map and Biodiversity Net Gain (BNG)

The LNRS Local Habitat Map has a direct linkage with Biodiversity Net Gain (BNG)¹ 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 1990,² 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.

¹ Understanding biodiversity net gain – Defra <https://www.gov.uk/guidance/understanding-biodiversity-net-gain>

² Town and Country Planning Act 1990 – legislation.gov.uk <https://www.legislation.gov.uk/ukpga/1990/8/contents>

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)’.

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

³ NERR137 Edition 1 State of Natural Capital Report for England 2024 – risks to nature and why it matters – Natural England <https://publications.naturalengland.org.uk/publication/6683489974616064>

Benefits from nature included in the State of Natural Capital report, but not used in the LNRS:

- Produce from the sea*²
- Aquaculture*²
- Cultural benefits*³

**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*

6. Contribution to National Environmental Objectives (NEOs)

In 2018, the government's 25 Year Environment Plan (25YEP)⁴ 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:

1. Clean air
2. Clean and plentiful water
3. Thriving plants and wildlife
4. Reducing the risks of harm from environmental hazards
5. Using resources from nature more sustainably and efficiently
6. Enhancing beauty, heritage and engagement with the natural environment
7. Mitigating and adapting to climate change
8. Minimising waste
9. Managing exposure to chemicals
10. Enhancing biosecurity

Under the Environment Act 2021,⁵ Government is committed to reviewing the 25YEP every five years. The Environmental Improvement Plan (EIP) 2025⁶ is the current revision of the 25YEP, which sets out the specific targets and commitments made under each of the above categories. The overarching goal of the EIP is restored nature (Goal 1), creating a network of bigger, better and more resilient habitats to help nature thrive. LNRS are recognised as key strategies that can help contribute to this overarching goal of the EIP. Whilst restoring nature is the primary objective of the LNRS, and is therefore the focus of our priorities and measures, many of them will also contribute to the other, wider goals of the EIP.

The other goals of the EIP are set out below. Goals (and their associated targets) that the LNRS can particularly contribute to are highlighted in green.

- **Goal 2: Air** – achieve clean air.
- **Goal 3: Water** – ensure English waters are clean, resilient and plentiful.
- **Goal 4: Chemicals and pesticides** – minimise environmental risks from chemicals and pesticides.
- **Goal 5: Waste** – minimise waste by designing it out of the system, reusing and recycling materials wherever possible.
- **Goal 6: Resources** – ensure that natural resources are produced, managed and consumed sustainably.

⁴ 25 Year Environment Plan – Defra <https://www.gov.uk/government/publications/25-year-environment-plan>

⁵ Environment Act 2021 – legislation.gov.uk <https://www.legislation.gov.uk/ukpga/2021/30/contents>

⁶ Environmental Improvement Plan 2025 – Defra <https://www.gov.uk/government/publications/environmental-improvement-plan-2025/environmental-improvement-plan-eip-2025>

Section A – Overview of Priorities and Measures

- **Goal 7: Climate change** – reduce greenhouse gas emissions to accelerate to net zero and work to prepare the natural environment for the effects of climate change.
- **Goal 8: Reducing environmental hazards** – reduce the risk of harm to people, the environment and the economy from natural hazards.
- **Goal 9: Biosecurity** – enhance biosecurity to protect our natural environment and boost the health and resilience of plants, animals, ecosystems and people.
- **Goal 10: Access to nature** – ensure inclusive access to nature and protect nature's beauty and heritage.

The EIP sets out specific interim targets under each of these goals. These targets, along with the statutory Environment Act 2021 targets, are referred to collectively as the National Environmental Objectives (NEOs). The targets are summarised in Annex 2 of the EIP.⁷ Implementation of the priorities and measures of the LNRS will help to achieve many of 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 Environmental Improvement Plan 2025, Annex 2: Full list of revised EIP interim targets – Defra
<https://www.gov.uk/government/publications/environmental-improvement-plan-2025/environmental-improvement-plan-eip-2025>

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.

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, to help implement nature-based solutions 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
- 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 planning policy and the development process
- inform the measures (actions) being undertaken as part of on-site and off-site habitat creation through Biodiversity Net Gain (BNG)¹

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.

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

1. 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, watercourse 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 LNRS priority species into areas of suitable habitat, where appropriate and that will enhance resilience to climate change, following best practice principles including the IUCN 'Guidelines for Reintroductions and Other Conservation Translocations'. ⁸
2	Support the propagation of relevant LNRS priority plant species of local provenance, particularly those that are rare or have poor dispersal capabilities, through growing seeds and plug plants for use in habitat enhancement and creation schemes, and that will enhance resilience to climate change, following best practice principles.
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 help raise awareness of INNS and 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).

⁸ Guidelines for Reintroductions and Other Conservation Translocations – IUCN
<https://portals.iucn.org/library/efiles/documents/2013-009.pdf>

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, schools and youth groups, 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, including using citizen science approaches, where appropriate, 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 Conservation Evidence database ⁹). For novel or innovative approaches, actions should be informed by best available research and aim to increase the evidence base through recording and monitoring of interventions.
5	Undertake monitoring, including using citizen science approaches, where appropriate, 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.

⁹ Conservation Evidence – University of Cambridge <https://www.conervationevidence.com/>

Habitat Priorities

2. Farmland Priorities (FRM)

Farmland makes up over 70% of North Yorkshire and Yorks' 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, helping safeguard future food provision by making 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 range of wildflowers in 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, food security 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.

Priority:

FRM_P01 Enhance and expand arable field margins

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

Benefits from nature:	<ul style="list-style-type: none"> • Carbon storage • Climate regulation • Reduced chemical use 	<ul style="list-style-type: none"> • Pollination • Soil health • Water quality 	<ul style="list-style-type: none"> • Cultivated crops • Pest and disease control
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Focus species:	<ul style="list-style-type: none"> • Arable Flowers • Harvest Mouse 	<ul style="list-style-type: none"> • Turtle Dove • Tree Sparrow 	<ul style="list-style-type: none"> • Necklace Ground Beetle • Latticed Heath
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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 abundance and diversity of wildflowers in field margins through promotion of relevant funding options.	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 from nature:	<ul style="list-style-type: none"> • Sense of place • Carbon storage • Climate regulation 	<ul style="list-style-type: none"> • Pollination • Soil health • Animal welfare 	<ul style="list-style-type: none"> • Cultivated crops • Erosion control • Water quality
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Focus species:	<ul style="list-style-type: none"> • Tree Sparrow • Bats 	<ul style="list-style-type: none"> • Grey Partridge 	<ul style="list-style-type: none"> • Turtle Dove
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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 relevant funding 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 future proofing 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, such as shade for livestock and reduced water evaporation.	Enabling activity	Unmapped	Also see related priority WLD_P01

Priority:

FRM_P03 Promote high nature value farming practices

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

Benefits from nature:	<ul style="list-style-type: none"> • Educational resource • Reduced chemical use • Pollination 	<ul style="list-style-type: none"> • Soil health • Water quality • Pest and disease control 	
Focus species:	<ul style="list-style-type: none"> • Swift • Bats 	<ul style="list-style-type: none"> • Grey Partridge • Harvest Mouse 	<ul style="list-style-type: none"> • 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, while considering targeting of rare local habitats and species. 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 and 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 from nature:	<ul style="list-style-type: none"> Carbon storage Climate regulation Reduced chemical use Pollination 	<ul style="list-style-type: none"> Soil health Plentiful water Water quality Flood protection 	<ul style="list-style-type: none"> Animal welfare Reared animals and outputs
Focus species:	<ul style="list-style-type: none"> Short-eared Owl Yellow Wagtail Curlew 	<ul style="list-style-type: none"> Harvest Mouse Bats Lapwing 	<ul style="list-style-type: none"> Necklace Ground Beetle Swift

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	Improve soil health through increasing sward diversity and amending stocking approaches (e.g. rotational stocking, mob grazing etc.).	Direct action	Unmapped	
FRM_M04.5	Reduce soil compaction to improve soil structure and increase water infiltration by ensuring appropriate farming practices (including machinery and livestock management and adding soil organic matter).	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 from nature:	<ul style="list-style-type: none"> Access to nature Health and wellbeing Educational resource 	<ul style="list-style-type: none"> Sense of place Carbon storage Climate regulation 	<ul style="list-style-type: none"> Pollination Animal welfare Erosion control
Focus species:	<ul style="list-style-type: none"> Hedgehog Harvest Mouse 	<ul style="list-style-type: none"> Short-eared Owl Tree Sparrow 	<ul style="list-style-type: none"> 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	

3. Upland Priorities (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 our upland habitats excel at storing carbon but are damaged and are currently emitting this stored carbon into the atmosphere. Restoring habitat to stabilise these carbon stores is essential to our ambitions to reduce carbon emissions and will help to slow down and reduce the impact of 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 upland dry heathland using existing poor acid grassland and increased scrub to provide greater connectivity for specialist species. Trial innovative approaches to increase the resilience of upland heath habitats.
- 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 collaboratively to restore these to functioning peatland habitats.
- Expand the range of habitats present along the moorland fringe, including native woodland, scrub and rough grassland, to reduce fire risk and increase numbers of key species.

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 from nature:	<ul style="list-style-type: none"> Access to nature Health and wellbeing Educational resource 	<ul style="list-style-type: none"> Sense of place Pollination Soil health
Focus species:	<ul style="list-style-type: none"> Geyer's Whorl Snail Frog Orchid 	<ul style="list-style-type: none"> Burnet Companion Juniper <ul style="list-style-type: none"> Necklace Ground Beetle Dropwort

Measures (Actions):	Priority level of mapped measures: (P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3		
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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	Modify grazing to create a diversity of Limestone Pavement habitats, including limestone grassland, limestone outcrops, base-rich flushes, and scrub.	Direct action	Mapped (P1)	
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 (P1)	

<p>Priority:</p> <p>UPL_P02 Enhance and restore upland calcareous grassland</p> <p>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.</p>				
Benefits from nature:	<ul style="list-style-type: none"> Carbon storage Climate regulation Pollination Soil health Reared animals and outputs 			
Focus species:	<ul style="list-style-type: none"> Burnet Companion Northern Brown Argus Dropwort Field Gentian Birds-eye Primrose Waxcap fungi 			
Measures (Actions):	<p>Priority level of mapped measures:</p> <p>(P1) = Priority Level 1</p> <p>(P2) = Priority Level 2</p> <p>(P3) = Priority Level 3</p>			
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	
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 (adjust stock numbers, alter stock type to include more cattle), and manage scrub to an appropriate percentage.	Direct action	Mapped (P1)	
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 (P1)	

<p>Priority:</p> <p>UPL_P03 Enhance upland hay meadows</p> <p>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.</p>					
Benefits from nature:	<ul style="list-style-type: none"> • Access to nature • Health and wellbeing • Sense of place • Pollination • Plentiful water 				
Focus species:	<ul style="list-style-type: none"> • Devil's-bit Scabious • Necklace Ground Beetle 				
Measures (Actions):	<p>Priority level of mapped measures:</p> <p>(P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3</p>				
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 (P1)		
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 (P1)	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 (P1)	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 from nature:

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

Focus species:

- Tormentil Mining Bee
- Curlew
- Black Grouse
- Lapwing
- Waxcap fungi

Measures (Actions):

Priority level of mapped measures:

(P1) = Priority Level 1

(P2) = Priority Level 2

(P3) = Priority Level 3

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, re-wetting or adding scrapes where required, and creation of bare substrate and sandy areas for specialist insects.	Direct action	Mapped (P2)	

Priority:

UPL_P05 Enhance upland dry heath

Enhance the diversity, height and structure of existing upland dry heathland sites. Restore and create upland dry heathland using existing poor acid grassland and increased scrub to provide greater connectivity for specialist species. Trial innovative approaches to increase the resilience of upland heath habitats.

Benefits from nature:

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

Focus species:

- Petty Whin
- Merlin
- Tormentil Mining Bee
- Hen Harrier
- Adder
- Juniper
- Small Yellow Underwing
- Ring Ouzel

Measures (Actions):

Priority level of mapped measures:

(P1) = Priority Level 1

(P2) = Priority Level 2

(P3) = Priority Level 3

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 heathlands, increasing the diversity of species in heathland vegetation, supporting climate change adaptation, and increasing opportunities for people to engage with moorlands.	Enabling activity	Unmapped	
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Upland Priorities (UPL)

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 appropriate plant species where necessary. Maintain floristically-rich high-sward grass edges, through limited grazing or cutting, plus opening up of sandy bare ground areas for heath-specialist insects.	Direct action	Mapped (P2)	Also see related priority UPL_P04
UPL_M05.3	Undertake appropriate grazing (at an appropriate stocking density) or cutting regimes to provide diverse sward heights once heath develops, where required, with legal predator control, where required, to support the success of ground-nesting birds (no mechanical operations in breeding season). Implement wildfire management plans, including the creation and maintenance of firebreaks. Refer to Natural England guidance 'RP2977 Definition of Favourable Conservation Status for Heathland'. ¹⁰	Direct action	Mapped (P2)	
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 (P2)	
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 (P2)	
UPL_M05.6	Create upland dry heathland on species-poor acid grassland where appropriate, by reducing grazing pressure and reseeding to increase heath component.	Direct action	Mapped (P2)	Also see related priority UPL_P04

¹⁰ RP2977 Definition of Favourable Conservation Status for Heathland – Natural England <https://publications.naturalengland.org.uk/publication/6212544182878208>

<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>				
Benefits from nature:	<ul style="list-style-type: none"> Carbon storage Climate regulation Reduced fire risk Plentiful water Water quality Flood protection 			
Focus species:	<ul style="list-style-type: none"> Adder Small Yellow Underwing Black Grouse Bilberry Bumblebee 			
Measures (Actions):	<p>Priority level of mapped measures:</p> <p>(P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3</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 to wet heath habitat.	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 where appropriate) and introduce species (e.g. sphagnum and cottongrass) where required.	Direct action	Mapped (P1)	
UPL_M06.4	Carry out grip and gully blocking to increase wetness of wet heath sites. This can also help to reduce fire risk. Avoid burning, in accordance with legal regulations, as this increases the drying out of sites. Refer to Natural England guidance 'RP2977 Definition of Favourable Conservation Status for Heathland'. ¹⁰	Direct action	Mapped (P1)	Also see related priority UPL_P05

<p>Priority:</p> <p>UPL_P07 Enhance blanket bog</p> <p>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 collaboratively to restore these to functioning peatland habitats.</p>				
<p>Benefits from nature:</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"> • Bilberry Bumblebee • Adder • Round-leaved Sundew 				
<p>Measures (Actions):</p>				
<p>Priority level of mapped measures: (P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3</p>				
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 highly restorable, functionally connected peat on open habitats in North Yorkshire and York. Use hydrological mapping systems to better understand how blanket bogs are connected to existing peatland bodies which haven't been heavily modified. Identify areas where landowners can implement measures to rewet and restore degraded blanket bogs, such as gill and gully blocking. Also, carefully select areas where tree removal from peatland and sustainable woodland management is appropriate, based on site-specific evidence and guided by the 'Decision Support Framework for Peatland Protection' ¹¹ and the 'Forest to Bog Mapping Tool'. ¹²	Direct action	Mapped (P1)	

¹¹ Decision support framework for peatland protection, the establishment of new woodland and re-establishment of existing woodland on peatland in England – Forestry Commission and Natural England

<https://www.gov.uk/government/publications/decision-support-framework-for-peatland-protection-the-establishment-of-new-woodland-and-re-establishment-of-existing-woodland-on-peatland-in-england>

¹² Forest to bog tool – Forest Research https://forestreresearch.shinyapps.io/ForestToBog_technicalapp_2024/

Upland Priorities (UPL)

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, in accordance with legal regulations, as this increases the drying out of sites.	Direct action	Mapped (P1)	
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	

<p>Priority:</p> <p>UPL_P08 Expand moorland fringe habitats</p> <p>Expand the range of habitats present along the moorland fringe, including native woodland, scrub and rough grassland, to reduce fire risk and increase numbers of key species.</p>				
Benefits from nature:	<ul style="list-style-type: none"> Carbon storage Climate regulation Reduced fire risk 			
Focus species:	<ul style="list-style-type: none"> Black Grouse Ring Ouzel Red Squirrel Hawfinch Latticed Heath Curlew Bilberry Bumblebee 			
Measures (Actions):	<p>Priority level of mapped measures:</p> <p>(P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3</p>			
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. tree planting, natural colonisation, bracken management, deer control, livestock exclusion, targeted wildfire mitigation zones.	Direct action	Mapped (P2)	
UPL_M08.3	Increase habitat for breeding waders, including rough pasture, scrapes and wetlands (including rush control), by promoting suitable agri-environment options, working with local communities, continued monitoring, 'right tree, right place' approach and legal predator control where required, promoting the delivery of current government guidance on upland breeding waders from Defra, Natural England and the Forestry Commission.	Direct action	Unmapped	
UPL_M08.4	Increase tree and woodland cover in appropriate areas of moorland edge to create mosaics which can benefit existing priority species (e.g. Black Grouse, Red Squirrel, Hazel Dormouse) and minimise impacts on those priority species more sensitive to woodland cover (e.g. breeding waders, Ring Ouzel).	Direct action	Unmapped	Also see related measure WET_M07.5 and priority WLD_P04
UPL_M08.5	Create new, buffer and connect existing woodland with appropriate species specifications, encouraging natural colonisation where possible.	Direct action	Mapped (P2)	Also see related priority WLD_P04

4. Grassland Priorities (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. Lowland heathland provides important habitats for specialist plants, ground nesting birds, reptiles and invertebrates, many of which are rare or endangered.

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:

- Enhance, expand and 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.

Priority:

GRA_P01 Enhance species-rich grassland

Enhance, expand and buffer existing species-rich grassland sites through changes to management regimes.

Benefits from nature:	<ul style="list-style-type: none"> Carbon storage Pollination 	<ul style="list-style-type: none"> Soil health Flood protection 	
Focus species:	<ul style="list-style-type: none"> Waxcap fungi Adder's-tongue Fern 	<ul style="list-style-type: none"> Short-eared owl 	<ul style="list-style-type: none"> Devil's-bit Scabious

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 ¹³).	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

¹³ Local Investment in Natural Capital – York and North Yorkshire Combined Authority <https://yorknorthyorks-ca.gov.uk/project/local-investment-in-natural-capital/>

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 from nature:	<ul style="list-style-type: none"> • Carbon storage • Pollination 	<ul style="list-style-type: none"> • Soil health • Flood protection 	
Focus species:	<ul style="list-style-type: none"> • Water Shrew • Burnet Companion 	<ul style="list-style-type: none"> • Curlew • Lapwing 	<ul style="list-style-type: none"> • Tormentil Mining Bee • Devil's-bit Scabious

Measures (Actions):	Priority level of mapped measures: (P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3		
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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 (P2)	
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	

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 from nature:	<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"> Geyer's Whorl Snail Northern Brown Argus 	<ul style="list-style-type: none"> Burnet Companion Burnt Orchid 	<ul style="list-style-type: none"> Thistle Broomrape Frog Orchid

Measures (Actions):		Priority level of mapped measures: (P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3		
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 (P1)	
GRA_M03.3	Create lowland calcareous grassland at suitable sites through green hay spreading / reseeding and suitable ongoing management.	Direct action	Mapped (P1)	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 from nature:

- Carbon storage
- Soil health
- Pollination

Focus species:

- Harvest Mouse
- Adder
- Waxcap fungi
- Burnt Orchid

- Thistle Broomrape
- Frog Orchid

Measures (Actions):

Priority level of mapped measures:

(P1) = Priority Level 1

(P2) = Priority Level 2

(P3) = Priority Level 3

GRA_M04.1	Identify key connecting road verges and public rights of way corridors on Magnesian Limestone and modify the management to increase floristic diversity (e.g. remove arisings).	Direct action	Unmapped	Also see related priority GRA_P07
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 (P1)	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.	Direct action	Mapped (P1)	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 from nature:	<ul style="list-style-type: none"> • Carbon storage • Pollination • Soil health 			
Focus species:	<ul style="list-style-type: none"> • Waxcap fungi • Field Gentian • Heath Rivulet • Heath Dog-violet • Tormentil Mining Bee 			
Measures (Actions):	<p>Priority level of mapped measures: (P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3</p>			
GRA_M05.1	Buffer lowland heath by managing adjacent grassland sites, using appropriate grazing and other management measures, including creation of bare substrate and sandy areas for specialist insects.	Direct action	Mapped (P1)	
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 (P1)	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 from nature:	<ul style="list-style-type: none"> • Pollination • Soil health 			
Focus species:	<ul style="list-style-type: none"> • Adder • Heath Rivulet • Latticed Heath • Tormentil Mining Bee 			
Measures (Actions):	<p>Priority level of mapped measures: (P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3</p>			
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 (P1)	Also see related measures UPL_M03.4 WET_M06.3
GRA_M06.3	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. Maintain floristically-rich high sward grass edges, through limited grazing or cutting, for heath-specialist insects.	Direct action	Mapped (P1)	Also see related priority WET_P03

Priority:

GRA_P07 Enhance road verges

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

Benefits from nature:	<ul style="list-style-type: none"> • Access to nature • Health and wellbeing • Educational resource 	<ul style="list-style-type: none"> • Carbon storage • Reduced chemical use • Pollination 	<ul style="list-style-type: none"> • Soil health • Flood protection
Focus species:	<ul style="list-style-type: none"> • Harvest Mouse • Waxcap fungi 	<ul style="list-style-type: none"> • 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	

5. Woodland Priorities (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 and age structure, and to 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 is 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,¹⁴ 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.

¹⁴ Oak trees and wildlife – Woodland Trust <https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/british-trees/oak-tree-wildlife/>

Priorities:

- Protect individual existing veteran trees, identify and protect future veteran trees in existing established sites, 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 improving the management of these sites and creating linkages with long-established woodland to increase the resilience of these sites and allow for species movement, including more specialist woodland species.
- Enhance all types of existing woodland and increase tree and woodland cover by 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 existing veteran trees, identify and protect future veteran trees in existing established sites, and plant trees to become future veterans to provide habitat and facilitate the movement of specialist species.

Benefits from nature:	<ul style="list-style-type: none"> Access to nature Health and wellbeing Educational resource 	<ul style="list-style-type: none"> Sense of place Carbon storage Climate regulation
Focus species:	<ul style="list-style-type: none"> Waxcap fungi Bats 	<ul style="list-style-type: none"> Six-spotted Longhorn Beetle Lesser Spotted Woodpecker Latticed Heath

Measures (Actions):	Priority level of mapped measures: (P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3		
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WLD_M01.1	Promote the Woodland Trust Ancient Tree Inventory ¹⁵ to locate and record ancient, veteran and notable trees.	Enabling activity	Unmapped	
WLD_M01.2	Plant and protect 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.	Direct action	Unmapped	
WLD_M01.3	Protect existing veteran trees and potential future veterans with suitable fenced enclosures to protect from livestock and other herbivores. Create and promote a best practice standard for fencing and enclosures around veteran trees to address impacts of grazing and intensive arable practices. Implement best practice management of no cultivation and no inputs. Identify areas to trial 'veteranisation' of existing mature trees to increase their value to key species.	Direct action	Mapped (P1)	
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 (P2)	Also see related priority FRM_P02
WLD_M01.5	Sustainably manage parkland pasture associated with veteran trees, including use of herbal ley mixes in select areas, where this will not interfere or disturb veteran tree rooting zones or fungal associations. Plant site suited replacement parkland trees to allow future veterans to cope with predicted changes in climate, and retain standing and fallen dead wood on site to benefit insects and other wildlife.	Direct action	Mapped (P1)	Also see related measure WLD_M02.4

¹⁵ Ancient Tree Inventory – Woodland Trust <https://ati.woodlandtrust.org.uk/>

<p>Priority:</p> <p>WLD_P02 Enhance and expand wood pasture, wood meadows and open mosaic habitats</p> <p>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.</p>				
<p>Benefits from nature:</p> <ul style="list-style-type: none"> • Sense of place • Carbon storage • Climate regulation • Pollination • Clean air 				
Focus species:	<ul style="list-style-type: none"> • Turtle Dove • Juniper 	<ul style="list-style-type: none"> • Red Squirrel 	<ul style="list-style-type: none"> • Six-spotted Longhorn Beetle • Northern Hairy Wood Ant 	
<p>Measures (Actions):</p>		<p>Priority level of mapped measures: (P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3</p>		
WLD_M02.1	Identify fragmented patches of woodland that would benefit from being connected.	Enabling activity	Unmapped	<p>Also see related priorities</p> <p>FRM_P02</p> <p>FRM_P05</p>
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. Implement sustainable grazing management of this habitat, including stock rotation and reseed to improve grassland where required.	Direct action	Mapped (P2)	
WLD_M02.4	Retain standing dead wood and fallen trees to be left on site as habitat for specialist species.	Direct action	Unmapped	<p>Also see related measures</p> <p>WLD_M01.5</p> <p>WLD_M04.6</p>
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	<p>Also see related measures</p> <p>WLD_M01.3</p> <p>WLD_M01.4</p>

Woodland Priorities (WLD)

WLD_M02.6	Improve the management of wood pasture, through introducing or changing grazing type and intensity, as required, to modify the amount of tree regeneration taking place. Where becoming too wooded, thinning or pollarding of selected trees may be appropriate. Explore 'veteranisation' techniques to promote future veteran trees and associated habitat.	Direct action	Mapped (P1)	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	

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 improving the management of these sites and creating linkages with long-established woodland to increase the resilience of these sites and allow for species movement, including more specialist woodland species.

Benefits from nature:

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

Focus species:

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

Measures (Actions):

Priority level of mapped measures:

(P1) = Priority Level 1

(P2) = Priority Level 2

(P3) = Priority Level 3

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 (White Rose Forest, Forestry Commission and Natural England). Coordinate 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 or other relevant priority species).	Enabling activity	Unmapped	Also see related priority WLD_P04

Woodland Priorities (WLD)

WLD_M03.4	Increase the variety of woodland structure and species diversity within existing ancient woodlands in accordance with the UK Forestry Standard, ¹⁶ e.g. mix of tree and shrub species, coppice management, glade and woodland ride management, retention of deadwood.	Direct action	Mapped (P1)	
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 ¹⁶ and landowner aspirations.	Direct action	Mapped (P2)	
WLD_M03.6	Restore Plantation on Ancient Woodland sites (PAWS) from conifer to semi-natural woodland over appropriate timescales. Restock where appropriate in accordance with Government's policy 'Keepers of Time' ¹⁷ and good practice guide 'Managing ancient and native woodland in England'. ¹⁸	Direct action	Mapped (P1)	
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). Re-visit previously agreed agri-environment schemes to see if additional cover (scrub, natural colonisation or tree planting) could be an option.	Direct action	Unmapped	Also see related priority FRM_P02
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	

¹⁶ The UK Forestry Standard – Forestry Commission <https://www.gov.uk/government/publications/the-uk-forestry-standard>

¹⁷ Keepers of time: ancient and native woodland and trees policy in England – Defra <https://www.gov.uk/government/publications/keepers-of-time-ancient-and-native-woodland-and-trees-policy-in-england/keepers-of-time-ancient-and-native-woodland-and-trees-policy-in-england>

¹⁸ Managing ancient and native woodland in England – Forestry Commission <https://www.gov.uk/government/publications/managing-ancient-and-native-woodland-in-england>

<p>Priority:</p> <p>WLD_P04 Enhance, expand and connect new and existing woodland</p> <p>Enhance all types of existing woodland and increase tree and woodland cover by creating new species-diverse woodlands, which promotes good woodland structure, increases resilience, and produces sustainable woodland products and timber.</p>				
<p>Benefits from nature:</p> <ul style="list-style-type: none"> • 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 				
<p>Focus species:</p> <ul style="list-style-type: none"> • Burnet Companion • Tormentil Mining Bee • Hawfinch • Red Squirrel • Northern Hairy Wood Ant • Hedgehog 				
<p>Measures (Actions):</p>				
<p>Priority level of mapped measures: (P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3</p>				
WLD_M04.1	Create new species-diverse woodlands. Ensure all woodland creation through planting or natural colonisation is established and managed according to the UK Forestry Standard ¹⁶ to ensure ongoing sustainable browsing levels, including effective deer control.	Direct action	Mapped (P3)	Also see related measure WLD_M03.9
WLD_M04.2	Ensure a diverse and compatible range of species are included in planting mixes, prioritising site suited tree species and provenances, capable of thriving in both current and predicted future climate. Also consider pests and diseases by selecting species appropriate to the site using Ecological Site Classification or a similar tool.	Direct action	Mapped (P3)	
WLD_M04.3	Incorporate native ground flora into woodland creation funded by local and national funding schemes, including incorporating appropriate woodland structures, such as creating woodland clearings and canopy gaps, ponds and rides, as per UK Forestry Standard. ¹⁶ Raise awareness and advise on introducing ground flora and shrub layer into new tree-planting schemes in rural and urban environments.	Direct action	Mapped (P3)	
WLD_M04.4	Use evidence-based approaches to consider restoring woodland soil biodiversity. Use healthy local woodland soil communities to support restoration and limit the potential movement of harmful soil pathogens. Promote suitable practices to landowners, informed by ongoing pilot projects (e.g. York Community Woodland trial), and subject to confirmation that such practices are safe and appropriate for target habitats.	Direct action	Mapped (P3)	

Woodland Priorities (WLD)

WLD_M04.5	Improve the condition and structure of existing conifer plantations and broadleaf/mixed woodlands, in accordance with the UK Forestry Standard, ¹⁶ Woodland Condition Assessment Tool, ¹⁹ and landowner aspirations. Support targeted restructuring to reduce dominance of single species and promote structural and species diversity in forest management units. Aim for no more than 65% of a relevant forest management unit to be allocated to a single species. In all cases, incorporate a minimum of 5% native broadleaved trees or shrubs, 10% of other tree species and 10% open ground, or ground managed for biodiversity as the primary objective.	Direct action	Mapped (P2)	
WLD_M04.6	Retain and increase standing and fallen deadwood in all types of woodland and forest to increase habitat niches, structural diversity and encourage specialist species.	Direct action	Unmapped	
WLD_M04.7	Buffer, improve and protect existing woodland and create new woodland with resilient, site appropriate tree species in areas where red squirrels are expanding. Monitor red squirrel population in partnership with groups such as Red Squirrels Northern England and UK Squirrel Accord, working collaboratively with land managers and controlling grey squirrel population.	Direct action	Mapped (P1)	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 (P2)	

Also see related Water and Wetlands priorities:

WET_P07: Expand Riparian Woodland

WET_P08: Restore, enhance and expand wet woodland

¹⁹ Woodland Condition Assessment – Forestry Commission <https://woodlandcondition.sylva.org.uk/>

6. Water and Wetlands Priorities (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. By adopting a catchment-based approach, in tandem with traditional engineered solutions, there are many opportunities across North Yorkshire and York to deliver flood risk benefits alongside improvements in ecology and water quality. Rivers and canals act as important linear habitats through our landscapes that help to support the movement of wildlife. Many wetland habitats are also excellent carbon sinks, helping reduce our carbon emissions, in particular areas of lowland peatland such as those found in the Vale of Pickering and Vale of Mowbray.

Implementing nature-based solutions in our rivers and adjacent land can also reduce water pollution, stabilise river banks, and reduce rapid inputs of storm water, creating healthier rivers for both humans and wildlife. Good water quality is also essential for healthy rivers and aquatic ecosystems and is reflected in their Ecological Status classification in River Basin Management Plans.²⁰ These plans, along with the relevant catchment management plans²¹ provide specific measures for individual waterbodies, which should be referred to alongside the LNRS priorities and measures when considering appropriate actions for these environments.

²⁰ River basin management plans, updated 2022: introduction – Environment Agency
<https://www.gov.uk/government/publications/river-basin-management-plans-updated-2022-introduction/river-basin-management-plans-updated-2022-introduction>

²¹ Catchment Based Approach <https://catchmentbasedapproach.org/>

Priorities:

- Enhance and expand watercourse 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 diversifying 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.

<p>Priority:</p> <p>WET_P01 Enhance and expand watercourse habitats</p> <p>Enhance and expand watercourse and in-channel habitats to improve their quality and connectivity.</p>					
Benefits from nature:	<ul style="list-style-type: none"> Access to nature Health and wellbeing Educational resource Plentiful water Water quality Flood protection 				
Focus species:	<ul style="list-style-type: none"> White-clawed Crayfish Water Vole Tansy Beetle Bats Golden-ringed Dragonfly Freshwater Fish 				
Measures (Actions):	<p>Priority level of mapped measures:</p> <p>(P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3</p>				
WET_M01.1	Implement in-channel mitigation measures for all water bodies and improve in-channel habitat diversity (e.g. de-culverting, removal of barriers to fish migration, ²² 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, give rivers space to move, and alter management of streams to reduce pollution and improve riparian habitat diversity, e.g. introduce Tansy and Marsh Woundwort 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 (P1)		
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, ²² and identify gaps in knowledge.	Enabling activity	Unmapped	Also see related measure WET_M02.7	

²² It may be useful to refer to the Environment Agency's River Obstacles mapping when considering barriers to fish migration – River Obstacles – Environment Agency <https://www.data.gov.uk/dataset/0df09ef3-9220-438a-8112-6879b3a51ac5/river-obstacles>

<p>Priority:</p> <p>WET_P02 Restore natural river processes</p> <p>Restore natural river processes to reconnect rivers and floodplains, and create space for nature, water and people.</p>				
Benefits from nature:	<ul style="list-style-type: none"> Access to nature Health and wellbeing Educational resource Plentiful water Water quality Flood protection 			
Focus species:	<ul style="list-style-type: none"> Southern Iron Blue Greater Water-parsnip Freshwater Fish Water Shrew Redshank Freshwater Pearl Mussel Depressed River Mussel 			
Measures (Actions):	<p>Priority level of mapped measures:</p> <p>(P1) = Priority Level 1</p> <p>(P2) = Priority Level 2</p> <p>(P3) = Priority Level 3</p>			
WET_M02.1	Remove, address or realign artificial and engineered barriers ²² and modifications ²³ , where feasible, to allow re-establishment of natural river processes and fish migration to spawning sites 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 (P1)	
WET_M02.2	Reinstate meanders, oxbows and natural in-channel features where possible, ideally by giving rivers space to move, 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 (P2)	Also see related measure WET_M08.3
WET_M02.5	Explore opportunities for beaver re-introduction to create wetland habitats, increase dynamism in watercourse systems, and create natural flood management (NFM) opportunities.	Enabling activity	Unmapped	

²³ It may be useful to refer to the Environment Agency's Heavily Modified Water Body data and mapping when considering engineered modifications - Water Framework Directive Cycle 2 Heavily Modified Water Body Use and Physical Modification – Environment Agency [Water Framework Directive Cycle 2 Heavily Modified Water Body Use and Physical Modification - data.gov.uk](https://www.gov.uk/government/statistics/water-framework-directive-cycle-2-heavily-modified-water-body-use-and-physical-modification) and River Basin Management Plan: maps – Environment Agency [Classification | River Basin Management Plan: maps](https://www.gov.uk/government/statistics/classification-river-basin-management-plan-maps) ('heavily modified/artificial' map layers)

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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 (P1)	
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
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 from nature:	<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
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Focus species:	<ul style="list-style-type: none"> Common Toad Common Frog 	<ul style="list-style-type: none"> Emerald Damselfly 	<ul style="list-style-type: none"> White-clawed Crayfish Greater Water-parsnip
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Measures (Actions):

Priority level of mapped measures:

(P1) = Priority Level 1

(P2) = Priority Level 2

(P3) = Priority Level 3

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	

Water and Wetlands Priorities (WET)

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 (P1)	
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 expand habitat for rare or threatened species and 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 (P2)	
WET_M03.7	Identify existing ponds suitable for native crayfish ark sites and create new ponds where required.	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 help 'slow the flow'. Create new habitats (ponds, wetlands, reedbeds) and increase greenspace to help improve health and wellbeing. Promote nature-based solutions for urban households in water company business plans to help reduce nutrient losses to watercourses.	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 from nature:

- 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):

Priority level of mapped measures:

(P1) = Priority Level 1

(P2) = Priority Level 2

(P3) = Priority Level 3

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 (P1)	
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 (P1)	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 (P1)	

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 from nature:	<ul style="list-style-type: none"> • Pollination • Plentiful water 	<ul style="list-style-type: none"> • Water quality • Flood protection
Focus species:	<ul style="list-style-type: none"> • Lapwing • Water Vole 	<ul style="list-style-type: none"> • Curlew • Round-leaved Sundew

Measures (Actions):

Priority level of mapped measures:

(P1) = Priority Level 1

(P2) = Priority Level 2

(P3) = Priority Level 3

WET_M05.1	Manage flushes sustainably, including advising land managers on stock levels to maximise biodiversity.	Direct action	Mapped (P2)	
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 (P2)	

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 from nature:	<ul style="list-style-type: none"> Access to nature Health and wellbeing Carbon storage 	<ul style="list-style-type: none"> Climate regulation Pollination Soil health 	<ul style="list-style-type: none"> Plentiful water Water quality Flood protection
Focus species:	<ul style="list-style-type: none"> Yellow Wagtail Tansy Beetle 	<ul style="list-style-type: none"> Redshank Garden Tiger 	<ul style="list-style-type: none"> Lapwing 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	
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

<p>Priority:</p> <p>WET_P07 Expand riparian woodland</p> <p>Expand the amount of riparian woodland along all watercourses and at all elevations, including filling in gaps and diversifying age structure, to increase the resilience of the natural habitats (both terrestrial and water).</p>				
<p>Benefits from nature:</p> <ul style="list-style-type: none"> • Access to nature • Health and wellbeing • Carbon storage • Climate regulation • Water quality • Water cooling/shading • Flood protection 				
<p>Focus species:</p> <ul style="list-style-type: none"> • Water Vole • Bats • Water Shrew • Garden Tiger • Northern Hairy Wood Ant • Southern Iron Blue 				
<p>Measures (Actions):</p>			<p>Priority level of mapped measures:</p> <p>(P1) = Priority Level 1</p> <p>(P2) = Priority Level 2</p> <p>(P3) = Priority Level 3</p>	
WET_M07.1	Diversify the age structure of riparian woodland through tree planting (subject to consideration of tree planting in areas used by ground nesting birds) and sustainable management practices such as coppicing, so that trees are not all lost at once, and provide future in-channel habitat.	Direct action	Mapped (P3)	
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 (P3)	
WET_M07.3	Increase the amount of riparian tree and hedgerow species along watercourses, implemented through schemes such as catchment sensitive farming, ²⁴ as informed by river catchment partnership and Protected Landscape management plans etc., to help improve water quality, natural flood management (NFM) and water cooling/shading.	Direct action	Unmapped	
WET_M07.4	Create new riparian woodland (planting with a minimum width of 15-20m to either one or 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 (P3)	Also see related measures WET_M01.3 WET_M01.4 WET_M02.3

²⁴ Catchment Sensitive Farming: advice for farmers and land managers – Natural England, Defra and Environment Agency <https://www.gov.uk/guidance/catchment-sensitive-farming-reduce-agricultural-water-pollution>

WET_M07.5	Increase riparian woodland, scrub and mosaic habitats in suitable gills of upper catchments 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 (P3)	
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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 from nature:	<ul style="list-style-type: none"> • Carbon storage • Climate regulation • Plentiful water 	<ul style="list-style-type: none"> • Water quality • Flood protection 	
Focus species:	<ul style="list-style-type: none"> • Common Toad • Common Frog 	<ul style="list-style-type: none"> • Willow Tit • Water Vole 	<ul style="list-style-type: none"> • Emerald Damselfly • Water Shrew

Measures (Actions):	Priority level of mapped measures: (P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3		
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WET_M08.1	Identify wet areas of land hydrologically connected to existing wet woodland that have scope to become new habitat and create wet woodland using site suited species likely to tolerate future predicted climate change (not at the expense of existing fen habitat).	Direct action	Mapped (P1)	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 (P1)	
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

7. Urban Priorities (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, allotments, schools, business parks and road verges. 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 trees and plants, 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, both in our existing building stock and in new developments. Master planning of large-scale development sites should work with key stakeholders and partners to consider how nature recovery can be incorporated into scheme designs at an early stage.

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 and blue 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, allotments, schools and other urban areas, to make more spaces for nature and enhance connectivity.

<p>Priority:</p> <p>URB_P01 Incorporate nature into the built environment</p> <p>Incorporate green and blue infrastructure into the built environment, to provide more habitat for nature.</p>				
<p>Benefits from nature:</p> <ul style="list-style-type: none"> • 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 				
<p>Focus species:</p> <ul style="list-style-type: none"> • Hedgehog • Devil's-bit Scabious • Swift • Arable Flowers • Bats 				
<p>Measures (Actions):</p>				
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/bee boxes that are successfully used (see Natural England Green Infrastructure Framework ²⁵).	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 ²⁵ 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

²⁵ Green Infrastructure Framework – Natural England
<https://designatedsites.naturalengland.org.uk/greeninfrastructure/home.aspx>

Urban Priorities (URB)

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
URB_M01.7	Incorporate suitable 'crevices' into new build developments e.g. swift bricks, bat bricks, bee 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

Also see related Water and Wetlands priority:

WET_P01: Enhance and expand watercourse habitats

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 from nature:	<ul style="list-style-type: none"> Access to nature Health and wellbeing Educational resource Sense of place 	<ul style="list-style-type: none"> Reduced chemical use Pollination Flood protection 	<ul style="list-style-type: none"> Clean air Noise regulation Urban cooling 	
Focus species:	<ul style="list-style-type: none"> Common Toad Common Frog 	<ul style="list-style-type: none"> Waxcap fungi Hedgehog 	<ul style="list-style-type: none"> Emerald Damselfly Garden Tiger 	
Measures (Actions):	<p>Priority level of mapped measures:</p> <p>(P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3</p>			
URB_M02.1	Buffer and connect urban nature-rich spaces by identifying neighbouring land and watercourses with partners to restore or create suitable habitat, e.g. hedgerow, verge and river 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 (P1)	

Priority:			
URB_P03 Modify the management of urban grassland			
Benefits from nature:	<ul style="list-style-type: none"> • Access to nature • Health and wellbeing • Educational resource • Sense of place • Carbon storage • Reduced chemical use • Pollination • Flood protection • Clean air 		
Focus species:	<ul style="list-style-type: none"> • 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, public rights of way, urban 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. Refer to 'Urban Tree Manual' by Forest Research. ²⁶	Direct action	Unmapped	
URB_M03.5	Modify the mowing and management regimes for amenity grasslands to encourage more species diversity (e.g. set aside a percentage area for modified management). Where grassy areas are allowed to grow long over the spring and summer, implement appropriate management of annual 'hay' cut (late July to early September) and removal of arisings, with aftermath grazing or cutting as required.	Direct action	Unmapped	Also see related measure GRA_M01.2

²⁶ Urban Tree Manual – Forest Research <https://www.forestryresearch.gov.uk/publications/urban-tree-manual/>

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, allotments, schools and other urban areas, to make more spaces for nature and enhance connectivity.

Benefits from nature:

- 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 and other areas beyond the school gates.	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
URB_M04.5	Promote light pollution control measures with planning and highway authorities and residents to convey importance of protecting nocturnal habitats. Use light only when and where needed, and at a level suitable to that need. Eliminate glare and upward light and avoid high colour temperatures that impact wildlife.	Enabling activity	Unmapped	

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.

<p>Priority:</p> <p>CST_P01 Enhance rocky shore habitat</p> <p>Enhance rocky shore habitat to support specialist species, improve its connectivity with other ecosystems and the services it provides to society.</p>				
Benefits from nature:	<ul style="list-style-type: none"> Access to nature Health and wellbeing Educational resource 	<ul style="list-style-type: none"> Sense of place Carbon storage Climate regulation 	<ul style="list-style-type: none"> Flood protection 	
Focus species:	<ul style="list-style-type: none"> Blue Mussel 			
<p>Measures (Actions):</p>				
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 ²⁷ 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	Raise awareness and prevent the spread of 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	

²⁷ Concrete Coast Project – Yorkshire Marine Nature Partnership

<https://yorkshiremarinenaturepartnership.org.uk/discover/research-and-active-projects/concrete-coast-project/>

Coastal Priorities (CST)

<p>Priority:</p> <p>CST_P02 Enhance habitats for seabirds</p> <p>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.</p>				
Benefits from nature:	<ul style="list-style-type: none"> Access to nature Health and wellbeing Educational resource 	<ul style="list-style-type: none"> Sense of place Climate regulation Animal welfare 		
Focus species:	<ul style="list-style-type: none"> Sea birds 	<ul style="list-style-type: none"> 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 exploring the effectiveness of artificial habitat, such as towers) and raising awareness of their plight with the local community.	Enabling activity	Unmapped	
CST_M02.5	Monitor and protect sea bird colonies on the North Yorkshire Coast from the effects of development and disturbance.	Direct action	Unmapped	
<p>Priority:</p> <p>CST_P03 Enhance and expand existing saltmarsh</p> <p>Enhance, expand and connect existing saltmarsh to increase resilience of this fragile and fragmented habitat.</p>				
Benefits from nature:	<ul style="list-style-type: none"> Educational resource Carbon storage Pollination 	<ul style="list-style-type: none"> Water quality Erosion control 		
Focus species:	<ul style="list-style-type: none"> Strawberry Clover 			
Measures (Actions):		Priority level of mapped measures: (P1) = Priority Level 1 (P2) = Priority Level 2 (P3) = Priority Level 3		
CST_M03.1	Enhance existing saltmarsh through sympathetic management and identify opportunities to expand this resource.	Direct action	Mapped (P1)	

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 section 4 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 60 ‘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 LNRS Species Guidance allows the grouping of candidate species into species assemblages, where species share the same habitat requirements and would benefit from the same recovery measures. Five species assemblages were chosen, where species of the same taxa were benefitting from the same range of LNRS measures, adding an additional 42 species. Other commonly used species assemblages, such as farmland birds and wading birds, were not chosen because potential species within these assemblages varied in the LNRS measures

associated with them. The full methodology can be found in Appendix 2 and the outputs of this process can be found in Table 1 and Table 2 at the end of this section of the document.

5. Bespoke Species Measures

In addition to the habitat-based priorities and measures set out in Section B of this document, we have also developed a series of additional species measures, intended to address the needs of each of the LNRS Focus Species. This recognises that these species require additional interventions, over and above increasing appropriate habitat via the LNRS measures, as habitat loss is not the sole reason for their decline. In the first instance, the species measures came from the Species Evidence Base, a national tool provided by Natural England, which were then reviewed by local experts and additional measures added, where required.

The list of species measures can be found in Appendix 7.

IUCN Red Data Book Conservation Status Categories²⁸

(To be read in conjunction with species tables on following pages, see ‘Conservation Status (RDB)’ column)

LC = Least Concern

NT = Near Threatened

VU = Vulnerable

EN = Endangered

CR = Critically Rare

RE = Regionally Extinct

NA = Not Applicable / Not Evaluated

DD = Data Deficient

²⁸ The IUCN Red List of Threatened Species – IUCN <https://www.iucnredlist.org/>

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, canals
<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, canals
<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, canals, lakes, open woodland
<i>Asio flammeus [br]</i>	Short-eared Owl	Birds	EN	Upland heathland, upland grassland, canals
<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, canals
<i>Falco columbarius [br]</i>	Merlin	Birds	EN	Upland heathland, canals
<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, canals
<i>Numenius arquata [br]</i>	Curlew	Birds	EN	Upland grassland, upland heathland, blanket bog, rush pasture, lowland grassland, canals
<i>Passer montanus [br]</i>	Tree Sparrow	Birds	VU	Broadleaved woodland, wood pasture and parkland, hedgerows, grasslands, arable field margins, canals
<i>Perdix perdix [br]</i>	Grey Partridge	Birds	VU	Grassland, arable land, canals
<i>Poecile montanus [br]</i>	Willow Tit	Birds	EN	Wet woodland, riparian woodland and scrubby areas, canals

Section C – Species

Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<i>Poecile palustris [br]</i>	Marsh Tit	Birds	NT	Broadleaved woodland, wet woodland and scrub, farmland with woody areas, canals
<i>Streptopelia turtur [br]</i>	Turtle dove	Birds	CR	Open woodland; tall, thick hedgerows in farmland, parkland, arable land, canals
<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, canals
<i>Vanellus vanellus</i>	Lapwing	Birds	VU	Grassland, upland hay meadows, arable land, wetlands, floodplain grazing marsh, canals
<i>Aricia artaxerxes</i>	Northern Brown Argus	Butterflies	VU	Upland and lowland calcareous grassland with scrub, canals
<i>Austropotamobius pallipes</i>	White-clawed Crayfish	Crayfish	NA	Rivers, canals, 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, canals, wetlands, ditches, mixed woodland
<i>Erinaceus europaeus</i>	West European Hedgehog	Mammals	VU	Urban spaces and gardens, grassland, mixed woodland, heathland, arable land, canals
<i>Micromys minutus</i>	Harvest Mouse	Mammals	NT	Tussocky grasslands, hedgerows, field margins, road verges, reedbeds, ditches, canals
<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, canals
<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

Section C – Species

Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<i>Arctia caja</i>	Garden Tiger	Moths	NA	Gardens, damp meadows, fens, riverbanks, canals, open woodland
<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				
<i>Myotis brandtii</i>	Brandt's Bat	Mammals	DD	
<i>Myotis daubentonii</i>	Daubenton's Bat	Mammals	LC	
<i>Myotis mystacinus</i>	Whiskered Bat	Mammals	DD	
<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 alcathoe</i>	Alcathoe Bat	Mammals	DD	
Sea Bird Assemblage				
<i>Rissa tridactyla [br]</i>	Kittiwake	Birds	CR	Coastal cliffs and rocks, urban areas
<i>Fulmarus glacialis [br]</i>	Fulmar	Birds	LC	
<i>Larus argentatus [br]</i>	Herring Gull	Birds	EN	
Arable Flowers Assemblage				
<i>Centaurea cyanus</i>	Cornflower	Vascular plants	NA	Arable Field Margins, parks and gardens
<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	
<i>Glebionis segetum</i>	Corn Marigold	Vascular plants	NA	

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Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<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				
<i>Gliophorus psittacinus</i>	Parrot Waxcap	Fungi	NA	Grasslands, verges, churchyards, woodland
<i>Hygrocybe punicea</i>	Crimson Waxcap	Fungi	NA	
<i>Porpolomopsis calyptriformis</i>	Pink Waxcap	Fungi	NA	
Freshwater Fish Assemblage				
<i>Anguilla anguilla</i>	European Eel	Freshwater Fish	CR	Rivers and streams, canals
<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	

6. 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 Table 3 and Table 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.

Species Recovery Projects list

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

Future migrants list

The LNRS Species guidance includes a recommendation to consider species that may move into the LNRS strategy area in the future due to migration related to climate change. Table 4 below provides a list of species that could feasibly become established within 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.

Section C – Species

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

Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<i>Hirudo medicinalis</i>	Medicinal Leech	Annelid	NA	Freshwater bodies, freshwater ponds.
<i>Andrena tarsata</i>	Tormentil Mining Bee	Bees, wasps, ants & sawflies	NA	Heathlands, acid grasslands, rush pastures, glades/rides in conifer plantations.
<i>Crex crex</i>	Corn crake	Birds	LC	Grassland, especially hay meadows and rough pasture
<i>Streptopelia turtur</i>	Turtle Dove	Birds	CR	Open woodland; tall, thick hedgerows in farmland, parkland, arable land
<i>Coenonympha tullia</i>	Large Heath	Butterflies	EN	Wetland.
<i>Austropotamobius pallipes</i>	White-clawed Crayfish	Crayfish	NA	Marshland, shaded woodland floor, wet woodland
<i>Chrysolina graminis</i>	Tansy beetle	Leaf beetles and allies	EN	Rivers, ponds
<i>Castor fiber</i>	Beaver	Mammals	EN	Tall sward on riverbanks
<i>Martes martes</i>	Pine Marten	Mammals	LC	Woodland, slow moving river valley bottoms, floodplains
<i>Muscardinus avellanarius</i>	Hazel Dormouse	Mammals	VU	Woodland.
<i>Electrogena affinis</i>	Scarce Dusky Yellowstreak	Mayfly	DD	Coniferous woodland, broadleaved woodland, mixed woodland, hedgerows
<i>Margaritifera margaritifera</i>	Freshwater pearl mussel	Molluscs	CR	Rivers and streams
<i>Myxas glutinosa</i>	Glutinous Snail	Molluscs (non-marine)	VU	Rivers and streams, lakes.
<i>Succinella oblonga</i>	Small amber snail	Molluscs (non-marine)	CR	Marshland, calcareous stony unvegetated/muddy flushes, short grasses in damp areas.
<i>Trucatellina cylindrica</i>	Cylindrical Whorl Snail	Molluscs (non-marine)	EN	Short sward & bare grounds, short calcareous grassland on sandy or stony ground.
<i>Epione vespertaria</i>	Dark Bordered Beauty	Moths	NA	Damp woodlands, wet heathlands.
<i>Odontomyia hydroleon</i>	Green Barred Colonel	Soldier flies and allies	CR	acid & sedge peats, calcareous springs and seepages
<i>Carex ericetorum</i>	Rare Spring-sedge	Vascular plants	VU	Upland calcareous grassland.

Section C – Species

<i>Cypripedium calceolus</i>	Lady's Slipper Orchid	Vascular plants	CR	Limestone pavement, calcareous grasslands, broadleaved and mixed woodland.
<i>Gentianella campestris</i>	Field Gentian	Vascular plants	VU	Upland calcareous grassland, lowland dry acid grassland, calaminarian grassland, lowland meadow.
<i>Neotinea ustulata</i>	Burnt Orchid	Vascular plants	EN	Dwarf shrub heath, upland heathland, Upland birchwood, upland oakwood, calcareous grassland, limestone pavement.
<i>Juniperus communis</i>	Juniper	Vascular plants	LC	Standing open water, aquifer fed naturally fluctuating water bodies
<i>Pilularia globulifera</i>	Pillwort	Vascular plants	NT	Rivers, reedbeds, lowland fens, upland flushes, fens and swamps, standing open water and canals.
<i>Sium latifolium</i>	Greater Water-parsnip	Vascular plants	EN	Lowland calcareous grassland, dry grasslands and scrub on chalk or limestone.
<i>Hydroporus scalesianus</i>	A diving beetle	Water Beetles	VU	Lakes, marshland with acidic conditions.
<i>Hydrochus brevis</i>	A water scavenger beetle	Water Beetles	VU	Fens, ponds.
<i>Hydraena pulchella</i>	N/A	Water Beetles	VU	Streams, standing open water.

Section C – Species

Table 4 – Potential future migrant species

Species	Common Name	Taxon	Conservation Status (RDB)	Associated Habitat
<i>Bubulcus ibis</i>	Cattle Egret	Birds	LC	Grasslands grazed by cattle and sheep.
<i>Grus grus</i>	Common Crane	Birds	VU	Fenland and other wetlands, woodland clearings, fields and meadows near water.
<i>Haliaeetus albicilla</i>	White-tailed Eagle	Birds	EN	Rocky coasts, large lakes.
<i>Himantopus himantopus</i>	Black-winged Stilt	Birds	NA	Shallow coastal lagoons, reservoirs and old gravel pits, other sheltered coastal sites.
<i>Locustella lusciniooides</i>	Savi's Warbler	Birds	CR	Reedbeds.
<i>Luscinia megarhynchos</i>	Nightingale	Birds	VU	Hedgerows, scrub, coppice woodland, woodland edges.
<i>Platalea leucorodia</i>	Spoonbill	Birds	VU	Coastal marshes, river valleys with open water and reeds.
<i>Plegadis falcinellus</i>	Glossy Ibis	Birds	NA	Wetlands, damp fields.
<i>Aeshna isosceles</i>	Norfolk Hawker	Dragonflies and damselflies	EN	Acid & sedge peats, unspoilt grazing marsh dyke systems, rushy margins, well vegetated lakes and ponds.
<i>Brachytron pratense</i>	Hairy Dragonfly	Dragonflies and damselflies	LC	Acid & sedge peats.
<i>Erythromma najas</i>	Red-eyed Damselfly	Dragonflies and damselflies	LC	Marshland.
<i>Leucorrhinia dubia</i>	White-faced Darter	Dragonflies and damselflies	EN	Acid & sedge pools, deep oligotrophic, acidic bog pools with rafts of sphagnum at the edge.
<i>Lota lota</i>	Burbot	Freshwater Fish	RE	Rivers.
<i>Acipenser sturio</i>	Common Sturgeon	Freshwater Fish	CR	Rivers and streams, estuaries.
<i>Euplagia quadripunctaria</i>	Jersey Tiger	Moths	NA	Gardens, rough and disturbed ground, coastal areas.

Glossary

Acid Grassland: Grassland that grows on nutrient-poor, free-draining soils with a low pH of approximately 4 to 5.5. It often occurs on acidic rocks or superficial deposits such as sands and gravel.

Agroforestry: The practice of integrating trees and shrubs into farming systems, combining agriculture and forestry on the same land, whilst maintaining or enhancing agricultural outputs.

Ancient Woodland: Woodland that has existed continuously since at least 1600 CE (common era), supporting unique biodiversity and ecosystems.

Ancient Trees: A tree that has reached full maturity and is old, or aged, in comparison with other trees of the same species. In this ancient stage the tree may remain alive and healthy for many decades and often centuries.

Areas of Particular Importance for Biodiversity (APIBs): An LNRS category used to refer to all existing nationally and internationally designated conservation sites (such as Sites of Special Scientific Interest), Local Nature Reserves, Local Wildlife Sites, and areas of irreplaceable habitat. APIBs form the core of the LNRS's strategic nature network.

Areas that Could Become of Particular Importance for Biodiversity (ACBs): An LNRS category used to refer to areas identified within the LNRS where nature recovery efforts should be focused to achieve the greatest benefits for biodiversity and the wider environment. ACBs form the remainder of the LNRS's strategic nature network (outside of APIB areas).

Biodiversity: The variety of plant, animal, and microbial life within a specific habitat or ecosystem.

Biodiversity Net Gain (BNG): A legislative requirement for development to leave biodiversity in a measurably better state than before development took place. Achieved through habitat creation, restoration, or enhancement.

Blanket Bog: A type of peatland found in cool, wet climates, characterised by layers of peat that cover large, undulating areas of ground. Generally an upland habitat, it can be found where peat has accumulated to a depth of at least 0.5 metres, typically on flat or gently sloping ground where drainage is poor.

Citizen Science: Research that is undertaken by members of the public, often in collaboration with a research organisation or a non-governmental organisation (NGO), and often utilising modern recording technologies such as smartphone apps.

Climate Resilience: The ability of habitats or species to adapt to, and recover from, the impacts of climate change, such as increases in extreme weather events over time.

Connectivity: The degree to which different habitats are linked to allow the movement of species and the flow of ecological processes, essential for maintaining biodiversity and ecosystem health.

Corridors: Linear features (e.g. hedgerows and rivers) that can connect fragmented habitats, allowing species movement between them.

Glossary

Countryside Stewardship Scheme:

Countryside Stewardship (CS) sits under ELMs (see below) and provides financial incentives for farmers, foresters and land managers to look after and improve the environment, including setting aside part of their land for nature.

ELMs (Environmental Land Management Schemes):

Environmental land management schemes pay farmers and landowners to deliver environmental benefits and is an umbrella term covering the following schemes: Sustainable Farming Incentive (SFI), Countryside Stewardship (CS) schemes and Landscape Recovery (LR) schemes.

ELMs replace the Basic Payment Scheme (BPS) which existed under the Common Agricultural Policy (CAP).

Fen: A wetland, groundwater-fed habitat that supports a wide range of plant and animal life. Fens are usually peat-forming habitats and the water table is near the ground surface for much of the year.

Floodplain Meadow: Wet grassland in lowland floodplains, crucial for flood management, biodiversity, and pollinators.

Flush: A wetland habitat where groundwater emerges at the surface and is held up by impermeable soils and rock, creating a linear flow of water across the ground.

Focus Species: A condensed list of species that have been identified as top priorities for nature recovery action within the LNRS. The species have been selected for their strategic importance for nature recovery and can be used to help monitor changes and engage land managers and the public.

Green Infrastructure: A network of multi-functional green and blue spaces and other natural features, both urban and rural, which is capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and their prosperity²⁹.

Hedgerow: Lines of shrubs or small trees often used as field boundaries, essential for wildlife corridors, shelter, and pollination.

Invasive Non-Native Species (INNS):

Species introduced to an area that are not native to that area, such as Signal Crayfish or Himalayan Balsam, that harm local ecosystems.

Landscape Recovery (LR): A scheme that sits under ELMs (see above) and aims, through financial incentives, to support large-scale projects that deliver landscape-scale environmental benefits. This could include actions such as flood management, natural flood alleviation, and improving water quality.

Local Habitat Map: An online map developed as part of the North Yorkshire and York LNRS that shows existing Areas of Particular Importance for Biodiversity (APIBs) and a strategic network of Areas that Could Become of Particular Importance for Biodiversity (ACBs).

²⁹ Revised National Planning Policy Framework 20 July 2021 – Annex 2: Glossary

Glossary

Local Nature Recovery Strategy (LNRS): A strategic plan developed at a local level to guide actions for nature recovery, enhancements to biodiversity, and improvements to ecosystem services, involving collaboration among various stakeholders. LNRS are a statutory requirement, introduced by the Environment Act 2021.

Long established Woodland: Woodlands that have been present for a significant period, typically since at least 1893.

Lowland Calcareous Grassland: Grasslands on lowland limestone or chalk soils, known for their rich plant diversity, including rare orchids.

Lowland Heath: Heathlands typically found below 300m above sea level and characterised by infertile soils, heathers, and gorses.

Lowland Meadow: Grasslands traditionally used for hay production, rich in wildflowers and supporting pollinators and ground-nesting birds.

Magnesian Limestone Grassland: Grasslands that are unique, species-rich habitats that grow on outcrops of Magnesian Limestone.

Measures: Practical 'on the ground' actions that will help to deliver the aims of an LNRS priority.

National Landscape: A designated area of land in the UK, previously known as an Area of Outstanding Natural Beauty (AONB), that is of national importance for its natural beauty and is protected in the national interest. The Nidderdale National Landscape and the Howardian Hills National Landscape both sit within North Yorkshire.

National Park: An area of the UK countryside that is protected by law to conserve and enhance the natural beauty, wildlife and cultural heritage of an area and to promote public understanding and enjoyment of these qualities. Both the North York Moors National Park and the Yorkshire Dales National Park are primarily located within North Yorkshire.

Nature Recovery Network (NRN): A strategic network of ACBs where nature recovery activity should be focused to create bigger, better, and more joined up natural habitats.

Natural Capital: Elements of nature (e.g. rivers, woodlands, soil) that provide goods and services essential for human life and well-being.

Non-governmental organisation (NGO): An entity that is not part of government and can include non-profit or for-profit entities.

Open Mosaic Habitat: A biodiversity-rich mix of different habitats that features a patchwork of bare ground, patchy grassland and other vegetation like scrub and flowers. They are an important habitat for a large number of rare invertebrates.

Parkland: A mosaic habitat with grazing animals, valued for their trees, especially veteran or ancient trees, and the plants and animals they support. They have their origins in medieval hunting forests and 19th Century designed landscapes.

Priority: An objective that has been identified as being particularly important for our region and can contribute to the end results that an LNRS is seeking to achieve. In essence what we are seeking to do and why we are seeking to do it.

Glossary

Priority Species: A longlist of 634 species that are in decline or suffering 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.

Riparian Woodland: Wooded areas along rivers and streams that support rich biodiversity, prevent erosion, and improve water quality.

Saltmarsh: A coastal wetland ecosystem regularly flooded by saltwater tides and characterised by salt-tolerant plants and fine sediments.

Species-rich Grassland: An open, grassy habitat with a high diversity of native wildflowers and grasses, maintained by traditional methods like grazing and cutting.

Stepping Stones: Small areas of habitat that provide refuge and facilitate species movement between larger habitat areas.

Sustainable Farming Incentive (SFI): A scheme that sits under ELMs (see above) and rewards farmers financially to undertake sustainable farming practices. This includes actions such as improving soil health, managing hedgerows and field margins, growing cover crops and reducing inorganic fertiliser use.

Veteran Trees: Trees that are usually in their second or mature stage of life and have developed some features found on ancient trees, such as decay or dead wood.

Upland Calcareous Grassland: Grassland habitat found at higher altitudes on shallow, lime-rich soils over underlying rock such as limestone, typically occurring at elevations of 250-300 metres above sea level.

Wet Grassland: Floodplain habitats with seasonal waterlogging that support diverse wildlife, including breeding waders and pollinators.

Wet Heath: Damp areas found within lowland and upland heathlands normally found on flat ground between dry heath and valley mires.

Wet Woodland: Waterlogged woodlands dominated by species like Willow, Alder, and Birch, providing flood control and biodiversity benefits.

Wood Pasture: A mosaic habitat with trees and grazing animals, created through traditional management like grazing and pollarding. Veteran and ancient trees can often be associated with this habitat.

To access LNRS documents

Online: northyorks.gov.uk/lnrs-documents

A paper copy of the documentation is available to view at the North Yorkshire Council Customer Services Hub, Campus Buildings, Treadmills, East Road, Northallerton, DL6 1AU (open office hours, Monday to Friday)

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