South Yorkshire Local Nature Recovery Strategy

Pre-consultation draft

22nd April 2026

Version table

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Foreword

From South Yorkshire's Mayor, Oliver Coppard – to be added for the public consultation version

How to use this document

This document sets the strategic direction for nature recovery in South Yorkshire. It's aim is to introduce the Strategy process, provide an understanding of South Yorkshire's landscape, its unique natural environments, why 'nature recovery' is needed in our region, and what priorities have been established collaboratively for nature recovery action going forward.

This document is not intended to provide an exhaustive account of the Strategy development process, or the full detail of outputs that have fed into its development. Instead, this document provides a core reference point and is supported by several other documents and resources which are listed below:

- A detailed **interactive Local Habitat Map** [link]. This contains spatial data including existing areas of importance for biodiversity and mapped opportunities for areas that could become particularly important for biodiversity.
- Annex A – Priority Species list – see Section 4
- Annex B – Species prioritisation methodology – see Section 4
- Annex C – Mapping methodology – see Section 5
- Annex D – Strategic Significance in mapped Measures – see Section 6
- Annex E – RSK stakeholder engagement report – see Section 2

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Executive Summary

The South Yorkshire Local Nature Recovery Strategy (LNRS) sets out our plan to reverse nature's decline, restore habitats at scale, and strengthen climate resilience across the Region.

The LNRS marks the first comprehensive, evidence-based framework for reversing the decline in habitats and species that has been happening in South Yorkshire and the UK for decades. It is our opportunity to tackle this decline in a strategic manner through locally coordinated actions involving public bodies, private sector and local residents and communities, all of whom will be essential to deliver successful change. Targeted actions will deliver new habitats and enable existing ones to grow, particularly by expanding and joining them up, and to allow existing and reintroduced species to thrive.

However, this is not just nature for nature's sake. The Covid pandemic demonstrated the significant value of nature to health and wellbeing, with people seeking greater access to nature in both urban and rural areas. Nature needs to be an inherent part of both our built environments and future new development. The LNRS therefore includes priorities and measures for nature recovery and enhancements that will help shape future new growth opportunities, adapting to constraints and embedding nature from the start within new developments and growth locations to create sustainable communities where people want to live, work and thrive themselves.

Mission, Vision & Principles

*Our **Mission** is to restore thriving, connected natural habitats across South Yorkshire for multiple benefits to people and nature across the region.*

*Our **Vision** is to deliver landscape scale nature recovery activity at pace in South Yorkshire, maximising the Region's contribution to the UK's commitment to positively manage 30% of land and sea for nature in England by 2030.*

Success will be reliant on adopting the **Strategy's Principles** of partnership working and a shared endeavour.

1. **Improve the quality and extent of habitats** – bigger, better, more, connected.
2. **Build climate resilience** – using nature to help mitigate and adapt to heat, drought, flooding and wildfire risk.
3. **Work in partnership** – recognising that every landowner, community and organisation has a role.
4. **Value wildlife everywhere** – not only in designated sites, but across urban, farmed and post-industrial landscapes.
5. **Connect people with nature** – prioritising places with greatest need and supporting responsible access.

6. **Learn, adapt and invest** – using the best evidence and maintaining a long-term commitment to delivery.
7. **Recover our lost and declining species** – reversing the long-term decline in abundance and diversity of our key species.

How the Strategy Was Developed

SYMCA was appointed as the 'Responsible Authority' to develop the South Yorkshire LNRS with the duty to prepare, publish, and review this Strategy in partnership with 'Supporting Authorities' which includes the Local Authorities in Barnsley, Doncaster, Rotherham and Shefield, alongside the Peak District National Park Authority and Natural England. We have also worked closely with a range of other organisations and natural environment experts.

Other environmental groups, landowners and local communities have also played a key role in preparing the Strategy, with over 1,800 contributions submitted through engagement in workshops, farmer events, public events and activities across the Region, an online survey, and specialist mapping workshops.

The State of Nature in South Yorkshire

South Yorkshire has a variety and abundance of natural habitats. Landscapes include upland moors, lowland bogs, ancient woodlands, farmed land, a network of watercourses, post-industrial sites and dense urban environments. These together are a significant factor in our Region's quality and attractiveness, which we need to foster to provide healthier and accessible natural environments for the benefit of nature, our residents and visitors.

However, although our existing landscapes are rich in ecological value, nature is in significant decline:

- 57% of habitats are in poor condition.
- Key species such as water vole, curlew and many plants and insects are declining.
- Major pressures include development, climate change, water pollution, habitat fragmentation and invasive species.

Despite these challenges, we have nationally significant assets such as Thorne and Hatfield Moors, which form England's largest area of lowland raised bog, and major success stories like the designation of Dearne Valley Wetlands Site of Special Scientific Interest (SSSI) and the return of breeding Atlantic salmon to the River Don after 200 years.

Priorities and Measures

The LNRS identifies 24 Priorities and 130 Measures (102 habitat-based; 28 overarching) covering water environments, grasslands and heathlands, woodlands and trees, urban nature, and cross-cutting enabling actions. 32 of these Measures are spatially mapped, identifying where action can have the greatest impact.

We have also identified more than 200 scarce or declining species, including 70 birds, 56 plants, 55 insects, 15 mammals, and 4 reptiles. There are also 11 species identified that are suitable for reintroduction, including Eurasian Beaver, Pine Marten and Hazel Dormouse.

Delivering the Strategy

There are a number of key challenges that will impact on the delivery of the Strategy that will need to be considered and mitigated, including development pressures, climate impacts, water quality, fragmented habitats, agricultural intensification, invasive species and visitor pressure. Successful delivery of the LNRS ambitions and priorities will therefore not be easy, but the benefits for both nature and residents will be worth it.

Equally, there are several key opportunities that can be adopted and scaled up to accelerate delivery including in relation to Biodiversity Net Gain (BNG), nature-based solutions for flood resilience, woodland expansion, wetland restoration, urban greening, regenerative farming and community stewardship and improvements in health and wellbeing across South Yorkshire.

There are many examples of successful nature recovery in practice in the Region, which we can build upon to achieve this Strategy's ambitions including the Dearne Valley Wetlands SSSI[1], Shefield Lakeland Partnership[2], Limestone Ridge Nature Recovery Group, Source to Sea Nature-based Solutions Programme[3], and Carr Lodge[4] wet grasslands, amongst others.

No one organisation is responsible for delivering our Strategy – it will need all of us working together to achieve our collective ambitions. The LNRS provides the framework to bring about a coalescence of actions and activities that will be needed to restore thriving, connected natural habitats; embed nature recovery into spatial land-use planning, investment, land management and community action; and truly deliver a nature recovery renaissance for the benefit of the people and nature of South Yorkshire.

[1] Wildlife in South Yorkshire's Dearne Valley is given special protection | Yorkshire Wildlife Trust
[2] Sheffield Lakeland Partnership
[3] Source to Sea Nature-Based Solutions | Connected By Water | Working across South Yorkshire to increase resilience to flooding and the changing climate
[4] Carr Lodge – The Land Trust

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Mission, vision and principles

Mission

Our mission is to restore thriving, connected natural habitats across South Yorkshire for multiple benefits to people and nature.

Vision

To deliver landscape scale nature recovery activity at pace in South Yorkshire, maximising the region's contribution to the UK's commitment to positively manage 30% of land and sea for nature in England by 2030.

Our seven Principles

Success on delivering the LNRS Mission and Vision will be reliant on embedding the following seven principles throughout both future delivery and review of this Strategy.

1. **Improve the quality and extent of habitats** – *bigger, better, more, connected*.

   Embed key concepts of nature recovery:
   - Enhance existing important habitats (**better**) and extend their range (**bigger**)
   - Reconnect fragmented habitats to strengthen ecological networks (**connected**), and establish new nature sites (**more**)

2. **Build climate resilience** – *using nature to help mitigate and adapt to heat, drought, flooding and wildfire risk*.

   Promote the role that natural habitats play in managing regional climate risks such as heatwaves, wildfires, and flooding due to pressures from climate change.

3. **Work in partnership** – *recognising that every landowner, community and organisation has a role*.

   - Work in partnership, recognising that All public, private, and voluntary organisations, along with local communities have a part to play.
   - Develop opportunities for collaboration across communities to recover nature in South Yorkshire as part of a joined-up, coherent plan of action.
   - Work closely with landowners and land managers to unlock opportunities for nature recovery activity.

4. **Value wildlife everywhere** – *not only in designated sites, but across urban, farmed and post-industrial landscapes*.

    - Value wildlife across our region.
    - Emphasise the importance of wildlife wherever it exists, including in roadside verges, pocket parks, back yards, and former industrial sites.

5. **Connect people with nature** – *prioritising places with greatest need and supporting responsible access.*

    Connect people to nature by ensuring our residents can engage with nature to improve their health and wellbeing, from the youngest to the oldest, particularly in places that are deprived of accessible natural habitats and sufer from high rates of deprivation, while managing risks that recreational pressure can bring, and celebrating the cultural heritage of our natural habitats.

6. **Learn, adapt and invest** – *using the best evidence and maintaining a long-term commitment to delivery.*

    - Keep learning, adapting and investing in delivery.
    - Continue developing our understanding, drawing upon the best available science and local knowledge, in responding to shifting challenges and opportunities for delivery.

7. **Recover our lost and declining species** – *reversing the long-term decline in abundance and diversity of our key species*.

    We will target action that can support populations of at-risk species to thrive and re-introduce locally extinct species where suitable.

1. Introduction

Why do we need a Local Nature Recovery Strategy?

What you told us:

"We are all part of nature whether we realise it or not. Disconnection from nature results in many problems for us and the world."

The LNRS provides for the first time, a comprehensive framework for reversing the decline in habitats and species that has been happening in South Yorkshire and the UK for decades. It presents the opportunity for tackling this decline in a strategic manner through locally coordinated actions involving public bodies, private sector and local residents and communities, all of whom will be essential to deliver successful change. Targeted actions will enable new habitats and species to be introduced and existing ones to grow, particularly by expanding and joining up habitats to enable habitats and species to thrive.

However, this is not just nature for nature's sake. The Covid pandemic demonstrated the significant value of nature to people's health and wellbeing, with residents seeking greater access to nature in both urban and rural environments. Nature therefore needs to be an inherent part of both our built environments and future new development. The LNRS therefore includes priorities and measures for nature recovery and enhancements that will help shape future new growth opportunities, adapting to constraints and embedding nature from the start within new developments and growth locations to create sustainable communities where people want to live, work and thrive themselves.

The natural world underpins our existence. Biodiversity and ecosystems provide us with everything we need to survive and thrive including food, water, medicine, and material goods. Ecosystems also provide supporting services, such as climate regulation and nutrient cycling, to support our survival. Natural England's Strategy[5] (2025) emphasises the importance of nature for our economy and society:

> "*Nature plays a vital role as the foundation of economic growth. It is essential national infrastructure, alongside transport, energy and communication networks. Yet continued unsustainable use threatens the natural systems that underpin our economy, our health and our national security. Securing the future of these natural systems brings financial certainty and widespread resilience,*

[5] Natural England's Strategy: Recovering Nature for Growth, Health and Security - GOV.UK

helping to protect our food and water supplies, and manage climate impacts such as flooding and extreme heat."

'Ecosystem services' provides a useful framework for understanding the wider benefits people obtain from nature, arising from the way ecosystems function and interact. They include provisioning services such as food, water, and raw materials; regulating services like climate regulation, flood control, pollination, and water purification; cultural services such as recreation, wellbeing, and spiritual value; and supporting services like soil formation and nutrient cycling that underpin all other services, together sustaining human health, livelihoods, and quality of life.

The benefits of nature for health and wellbeing are now widely recognised, reinforcing the need for[6], easily accessible wildlife-rich natural spaces where people live, work and play. For example, allotments and community gardens provide opportunities to engage local communities in hands-on conservation, fostering stewardship and awareness that strengthens long-term ecological resilience.

Shefield and Rotherham's Wild at Heart project[7] is a social group for adults with the aim of exploring local green spaces to use the natural world to help boost wellbeing, learn new skills and hobbies, and make new friends in the community. Analysis of this project on behalf of The Wildlife Trusts indicates that in terms of return on investment, for every £1 invested, there is £1.19 of additional benefit in terms of reduced costs to the NHS[8].

However, vast inequalities still exist as those living in the most deprived areas are ten times less likely to live close to natural spaces: in the UK only 35% of households with annual incomes below £10,000 live within a 10-minute walk of a publicly accessible natural green space[9].

Perhaps because of its value, and our dependency on it, nature is under threat. Changes in land and sea use have been identified as a key driver of "unprecedented" biodiversity and ecosystem loss and damage over the past 50 years, alongside direct exploitation for natural resources, the climate crisis, pollution, and the spread of invasive species[10].

[6] Healthy Outdoors: A guide for measuring health outcomes when evaluating outdoor interventions - NECR725

[7] https://www.wildsheffield.com/discover/your-community/wild-at-heart/

[8] https://www.wildlifetrusts.org/news/health-projects-save-nhs-time-and-money

[9] https://www.wildlifetrusts.org/nature-health-and-wild-wellbeing

[10] United Nations Environment Programme (UNEP) (2023) Five drivers of the nature crisis. Available at: https://www.unep.org/news-and-stories/story/five-drivers-nature-crisis

In 2021 the UK Government commissioned an independent report into the Economics of Biodiversity which highlighted that we have "*collectively failed to engage with Nature sustainably, to the extent that our demands far exceed its capacity to supply us with the goods and services we all rely on*"[11].

Nature is declining across the UK, and South Yorkshire reflects this pattern. More than half of our mapped habitats are in poor condition, and many species have declined sharply. At the same time, the region faces increased flood risk, extreme heat, and continued pressure from development and competing land uses.

In South Yorkshire, each of the Local Authorities have declared crises relating to climate and the environment. In addition to each declaring a 'climate' emergency, a 'biodiversity emergency' (Doncaster), 'nature crisis' (Rotherham), 'nature emergency' (Shefield), and 'environmental emergency' (SYMCA) were declared between 2019-2022. All Local Authorities continue to play an active role in local and regional Climate and Biodiversity Commissions, to explore and inform the actions needed to tackle these interconnected emergencies. This has included dedicated strategies and plans, such as Doncaster's Climate Commission Report[12] and Shefield's Decarbonisation Routemaps[13], alongside regional engagement through the Yorkshire & Humber Climate Commission[14].

South Yorkshire's Local Nature Recovery Strategy is our opportunity to set out how we will work towards shared ambitions to address nature's decline in our region, to build on our success stories and ensure our communities and visitors can make the most of the benefits that nature brings.

What you told us:

"Nature on our doorstep is what we see and experience every day, so any improvement to it will directly impact the quality of our lives and our sense of place and connection to where we live and what surrounds us."

Our LNRS provides:

- a **shared evidence base**
- a single, strategic view of **where and how nature recovery should happen**
- a framework for **targeting investment**, including Biodiversity Net Gain and Environmental Land Management schemes (ELMs)
- clarity for planning, developers, landowners and communities

[11] Dasgupta, P. (2021) The Economics of Biodiversity: The Dasgupta Review. (London: HM Treasury). Available at: https://assets.publishing.service.gov.uk/media/602e92b2e90e07660f807b47/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf

[12] https://www.teamdoncaster.org.uk/environment-and-climate

[13] https://www.sheffield.gov.uk/sites/default/files/2024-04/decarbonisation-routemap.pdf

[14] https://yorksandhumberclimate.org.uk/

This strategy is prepared in line with the **Environment Act (2021)** and will guide how South Yorkshire plays its part in delivering national targets for species recovery, habitat improvement and 30by30.

What you told us:

"Please do all you possibly can to address Nature Decline before it's too late. Humans need nature to survive. I want my grandchildren to experience nature at its finest and themselves understand how to care and protect it."

In recognition of the immediate need for action to halt biodiversity loss and recover nature, both at a local and global level, the Global Biodiversity Framework[15], adopted in 2022, includes the commitment by nations to protect 30% of their land and seas for nature, by 2030 ('30by30'). Local Nature Recovery Strategies are part of England's statutory commitment to action for nature recovery, and the South Yorkshire LNRS will play a crucial role in steering this and informing the delivery of wider environmental and sustainability benefits - the broad range of positive outcomes that natural habitats and biodiversity improvements provide beyond their immediate ecological value, such as cleaner air, flood mitigation, and carbon storage. These benefits often extend to human health, recreation, and economic gains, even though they can be dificult to fully quantify or monetise.

Who is the LNRS for?

The strategy is designed for:

- **Public authorities (local, regional, and national)** – to integrate into strategic investment and planning including through Local Plan development, applying Biodiversity Net Gain (BNG), and to inform the forthcoming Sustainable Development Strategy (SDS), and wider funding and regulatory support
- **Environmental organisations, conservation bodies, partnerships, partnerships and practitioners** – to support with local expertise, project development and delivery
- **Farmers, landowners and land managers** – to guide Environmental Land Management options and long-term land use decisions
- **Developers and investors** – to identify strategic significance and fund habitat creation
- **Residents, communities, volunteers and environmental groups** – to support local action, benefit from improved access, health and resilience, and better understand what actions we can all take for nature

[15] https://www.cbd.int/gbf

- **Businesses and anchor institutions** – to invest in nature-based solutions and wellbeing
- **Universities and educational institutions** – to develop skills for delivery

SYMCA leads the strategy working with the four South Yorkshire Councils, Natural England, The Peak District National Park Authority and a wide partnership of organisations.

Strategic context

Our Strategy has been prepared within a complex context of global, national, regional and local strategies, policies and targets (see these Appendix 1 for further detail). The, below provides a summary of how the LNRS will complement these:

- **Environment Act (2021).** The Act establishes Local Nature Recovery Strategies as a statutory requirement and embeds duties on biodiversity, planning and habitat creation. The LNRS provides South Yorkshire's mechanism for delivering these duties in a coordinated and locally relevant way.
- **Environmental Improvement Plan (2025).** The Plan sets national targets for species recovery, habitat improvement, water quality and access to nature. The LNRS translates these national goals into spatial priorities and practical measures that can be delivered across South Yorkshire.
- **30by30 Commitment.** The UK's commitment to protect 30% of land for nature by 2030 requires rapid identification and enhancement of land capable of contributing to this target. The LNRS maps these opportunities and provides a clear pathway for South Yorkshire's contribution.
- **Protected Landscapes Duty (2023)**. This requires public bodies and utility companies to "seek to further" the conservation and enhancement of National Parks and National Landscapes, most relevant in our region for the Peak District National Park.
- **Planning and Infrastructure Act (2025).** The Act introduces the Spatial Development Strategy for South Yorkshire, and the LNRS will form its environmental evidence base. This ensures future growth, regeneration and infrastructure planning fully integrates nature recovery and ecological connectivity.
- **National Planning Policy Framework (NPPF) (Consultation draft, December 2025)**. Proposed changes to the NPPF would further embed delivery of LNRS through the planning system. Development plans will take account of opportunities for nature recovery as outlined in the LNRS.
- **South Yorkshire Strategy.** The Strategy aims to build stronger, healthier and more resilient communities, and recognises the role of high-quality natural environments in achieving this. The LNRS directly supports these ambitions by

guiding investment in nature-based solutions, improving access to green spaces, and strengthening the environmental foundations of place-making.

- **South Yorkshire Local Growth Plan.** The Growth Plan identifies environmental resilience, greener development and enhanced natural assets as essential for long-term economic strength. The LNRS provides the framework for delivering these outcomes on the ground, aligning nature recovery with economic regeneration, skills and investment priorities.
- **Connected by Water.** This partnership sets out the region's catchment-wide response to flooding and water management. The LNRS complements and strengthens this approach by mapping where nature-based solutions—such as wetlands, floodplain restoration and tree planting—will deliver the greatest ecological and resilience benefits.
- **Neighbouring LNRS Areas.** Many of South Yorkshire's key habitats and catchments cross local authority and county boundaries. Aligning with neighbouring LNRSs ensures joined-up ecological networks, coordinated species recovery, and coherent planning across wider landscapes.

2. How the Strategy was developed

South Yorkshire Mayoral Combined Authority (SYMCA) was appointed as the 'Responsible Authority' to develop a Local Nature Recovery Strategy for South Yorkshire. As such, it has a statutory duty to prepare, publish, and review this Strategy.

Alongside the role of SYMCA as 'Responsible Authority', the legislation defined the complementary role of 'Supporting Authority' which is appointed to all Local Planning Authorities in the strategy area. For South Yorkshire, this includes the Local Authorities in Barnsley, Doncaster, Rotherham and Shefield, alongside the Peak District National Park Authority and Natural England.

A governance model for development of the LNRS was agreed at the Mayoral Combined Authority Board meeting on 12 September 2023. Wider stakeholder organisations joined the 'Working Group' to provide subject matter expertise in support of strategy development. An 'Advisory Panel' was also established in early 2024 in order to provide wider perspectives in support of developing a well-rounded strategy.

The Environment (Local Nature Recovery Strategies) (Procedure) Regulations 2023) sets out the process that must be followed in preparing a LNRS and Government has published further statutory guidance which provides greater detail about what LNRSs must contain and the process they should follow.[16] The Department for Environment, Food & Rural Afairs (Defra) set out a five stage sequence of steps to be followed in producing the Strategy from mapping areas of particular importance for biodiversity, through to identifying priorities and measures for local habitat and species improvements and mapping these geographically across the region.

Between 2024 and early 2026, over 1,800 contributions have submitted help shape the Strategy. Engagement included workshops, farmer events, public activities across the region, an online map-based survey, and specialist mapping workshops. This Strategy reflects these views and sets out how they translate into priorities and mapped opportunities.

Governance model

In consultation with key partner organisations, SYMCA developed a governance model to formalise roles and responsibilities to support Strategy preparation. Over time this model was revised to form three key groups.

Working together, the members of these groups provided essential input for developing the Strategy content.

[16] Local nature recovery strategy Statutory Guidance

- **Working Group**. This group met regularly to provide subject matter expertise and steer across all aspects of Strategy preparation.

  Organisations represented are: **South Yorkshire Mayoral Combined Authority**, **Barnsley Metropolitan Borough Council**, **City of Doncaster Council**, **Rotherham Metropolitan Borough Council**, **Shefield City Council**, **Natural England**, **Peak District National Park Authority**, Shefield & Rotherham Wildlife Trust, Yorkshire Wildlife Trust, Environment Agency, Forestry Commission, and Don Catchment Rivers Trust.

- **Steering Group**. This group provided oversight of the Strategy direction, ensuring compliance with Defra's Statutory Guidance, and to act as its sponsor through sign-of processes. This group consists of all six 'Supporting Authorities' alongside SYMCA, indicated by those organisations listed in bold above.

- **Advisory Panel**. Appointed through an application and interview process, the Panel met at key milestones to introduce a range of perspectives to ofer challenge, generate new ideas and ofer alternative perspectives on key topics.

  Members of the Panel are listed on the LNRS webpage available at : Greener Future - South Yorkshire MCA.

Wider engagement

SYMCA commissioned RSK Environment Ltd. to lead a range of wider engagement events to inform the Local Nature Recovery Strategy. This included workshops, farmer engagement events and meetings, public engagement events, and a two-part online survey. It took place, consistent with both statutory and non-statutory Guidance, from May to November 2024.

RSK Environment Ltd. delivered the following, engaging a total 1,845 responses:

- 14 workshops for planners, environmental non-government organisations, organisations that operate at the landscape-scale, green space and partnership groups, parish councils and large landowners: a total of 229 attendances
- 2 workshops for farmers: a total of 21 attendances
- A stand at 8 public events: total 565 attendances
- An online survey on the Participatr platform which involved a series of questions (963 responses) as well as a map-based element (78 responses)

For a detailed overview please see the report published by RSK Environment Ltd. available in Annex E.

SYMCA also led further stakeholder engagement. This included an event hosted by Bradfield Farmers attended by the mayor, representation at the Great Yorkshire Show 2025, and further bespoke workshops – see Sections 4 and 5 below.

Key findings from the above stakeholder engagement include:

- There is strong support for **wilder, more natural green spaces** in both urban areas and the wider landscape, alongside landscapes that remain productive.
- **Accessibility is critical**, including well maintained paths, seating, safe routes, transport links, and inclusive access for people with mobility needs.
- Broad agreement on the need to **balance nature recovery with food production and renewable energy**, rather than treating these as competing objectives.
- **Beavers** were the most frequently supported species for reintroduction, followed by water voles; views on larger predators were more mixed.
- Priority species groups include **invertebrates, plants, trees and birds**, with key habitats being **woodlands (including wood pasture), wetlands, grasslands/meadows and riparian corridors**.
- **Nature friendly farming is supported**, but farmers need clear guidance on how to integrate nature while maintaining productivity, particularly in upland and tenanted contexts.
- The **largest barrier to nature recovery is funding**: insuficient levels, short time horizons, competitive delivery models, and lack of long-term certainty undermine confidence and uptake.
- Existing schemes (e.g. BNG, Landscape Recovery) are seen as **misaligned with farm business realities**, tenure arrangements, climate risk and extreme weather, raising concerns about deliverability (e.g. conservation grazing, scrub expansion).
- Developers and profit-driven decision-making were widely perceived as **not prioritising nature recovery**, alongside concerns about land use, ownership, and political will.
- Many organisations already have aligned plans; the **LNRS should act as a unifying, practical framework**, dovetailing with existing schemes, compatible with software and planning processes, and consistent with neighbouring counties.
- **Collaboration, landowner cooperation, and public education** are essential, including improving understanding of nature's importance and addressing behaviours (e.g. dog walking impacts), to achieve landscape scale recovery.

3. Area Description

Purpose

In accordance with Defra's statutory guidance[17] our LNRS should provide an 'Area Description', which comprises the South Yorkshire metropolitan county. This is required to inform the setting of priorities for recovering and enhancing biodiversity and environmental improvement within the strategy area.

According to the guidance, the purpose of this Area Description is to identify:

- *The range of habitats in the strategy area and their general distribution – especially priority habitats. They should also include habitats of local importance, including ones that support scarce or declining species;*
- *How this distribution and extent of habitats has changed in recent decades, including habitats that may have been lost entirely from the strategy area;*
- *The species or groups of species for which the strategy area is, or could feasibly be, of national importance;*
- *Anticipated future pressures likely to influence species or the extent, distribution or quality of different habitat types – including recognising the impact of climate change scenarios and anticipated new developments, including house building and infrastructure;*
- *Wider environmental issues affecting part or all of the strategy area which changes in land use or management could help to address – for example improvements to the water environment, flood risk management, or climate mitigation and adaptation.*

This chapter is structured to provide information on:

- The state of nature in South Yorkshire.
- The importance of biodiversity in South Yorkshire.
- The diverse landscapes and habitats of South Yorkshire, based on National Character Areas (NCAs) and a focus on the urban and riverine environments which flow across the NCA boundaries, how these have changed over time, and identifying important habitats and sites
- The challenges and opportunities for nature recovery in our region.

[17] Local nature recovery strategy statutory guidance

Introduction to the South Yorkshire Local Nature Recovery Area

Overview

South Yorkshire's LNRS area includes the four Local Authorities in the region: Barnsley, Doncaster, Rotherham and Sheffield. The eastern part of the Peak District National Park covers much of the uplands within Barnsley and Sheffield, comprising 11% of South Yorkshire.

The land area covers 1552 km^2 (599 sq. miles) of mixed geologies and topographies, including upland and lowland landscapes, with significant areas of farmland, major rivers, transport infrastructure, urban centres and industrial uses – old and new. The biodiversity across this varied landscape has been, and continues to be, influenced by the land use pressures. These include agricultural intensification, pollution, upland management, waterway modification, industrialisation and urban expansion. In addition to these long-standing pressures, climate impacts, the spread of invasive species, and changes in energy infrastructure, pose further challenges to species and habitats across South Yorkshire.

The area has some amazing biodiversity of national and international importance. For example, both the lowland raised bog of the Humberhead Levels to the east and the upland heathland and blanket bog to the west are rare habitats in western Europe and support special bird assemblages including European nightjar and rare reptiles such as adders. A narrow band of magnesian limestone runs through the county and supports calcareous grassland that is nationally rare. The river valleys such as the Dearne and the Don contain several wetland mosaics and support important migratory and breeding birds such as bittern. South Yorkshire, particularly around Sheffield is one the most wooded areas of the country, many of these are classified as ancient woodlands.

Most of South Yorkshire sits within the Don and Rother Catchment Management, with the Idle and Torne Management Catchment covering of Doncaster in the northeast of the region. The Don and Torne flow into the River Ouse and River Trent respectively. South Yorkshire therefore has natural connectivity to the surrounding regions of Derbyshire, West Yorkshire, North Yorkshire and York, East Riding and Hull, Nottinghamshire and Lincolnshire.

Finally, the diverse landscapes found across South Yorkshire support forestry, woodland, extractive industries such as quarries, and a varied agricultural land use from intensive arable and livestock production to less intensive and extensive grazing of uplands. Agriculture, and the management of farmland across the landscape, has a significant role to play in nature recovery given that it comprises over 40% of the land use.

Industrial legacy

A large part of the landscape and habitats in the area are shaped by historic coal mining and other mineral extraction activities, as well as peat extraction. Since the closure of the coal mining industry (most active from the post-war period until late 1990s) the landscape within South Yorkshire has changed significantly. These structural changes to industrial activity, including the removal of deep mine colliery infrastructure, railway sidings, opencast coaling activity and coking works, have enabled landscape scale restoration over several years, resulting in a significantly enhanced natural environment.

Mineral extraction is still present in South Yorkshire, mainly for limestone and sand/gravel, and some disused quarries are now important for wildlife, with species including Peregrine Falcon known to nest on cliff and quarry, faces whilst the mineral substrates can give rise to diverse plant communities.

This industrial legacy sits within and around the four major urban areas of Sheffield, Doncaster, Barnsley and Rotherham. The networks of rivers and streams enabled industrial development in Sheffield, leading to more intensive water management over time and creation of features such as canals and reservoirs. Indeed, Sheffield derives its name from the Old English meaning of "open country near the River Sheaf" while Doncaster's name is more ancient, derived from the Roman fort at a *crossing of the River Don*. These valuable blue and green habitat networks support biodiversity and provide nature corridors and 'stepping stones' allowing wildlife to move through the landscape.

In the lowland areas at Thorne and Hatfield Moors is the largest area of remaining lowland raised bogs in England. These important sites are being restored following a history of industrial peat extraction but continue to face challenges including water level management and the risk of wildfire. Outside of the Moors, land drainage and historical 'warping' (covering the peat with silt and clay) for agriculture meant almost all of the lagg fen that surrounded the bogs has been lost. The bogs themselves were also drained, then industrial scale machinery used to remove the peat for use in horticulture. By the turn of the century the habitats were in a very poor state, and areas of good habitat were very restricted. Conservation efforts are focused on restoring the unique habitats of the Moors, and on the sustainable management of the farmland that surrounds them to help recovery biodiversity and the function of the Moors for flood and carbon storage, and wider benefits. This includes getting the water levels right, controlling invasive species like Rhododendron and reintroducing bog mosses still ongoing due to the immense size of the areas involved. The lagg fen has yet to be recreated with the one small patch at Inkle moor the only good example in South Yorkshire. Recreation of lagg fen would be good in its own right but would also help with issues of water levels and drainage on the lowland bog if able to be done at a large enough scale.

How is nature doing in South Yorkshire?

The UK is recognised as one of the most nature-depleted countries in the world with the UK State of Nature report[18] (2023) showing an average 19% decline in UK biodiversity since 1970, with around 1 in 6 species now threatened with extinction. The State of Yorkshire's Nature report[19] (2024) highlights that wildlife sites across Yorkshire are '*too few, too small, and too scattered'* to form a healthy and resilient ecological network, with only one in 10 of them having any legal protection. Additionally, one in five species in Yorkshire has declined by more than 25% in as many years.

The South Yorkshire natural capital and biodiversity mapping report (2021)[20] provided a biodiversity baseline to 91% of South Yorkshire. This highlighted that:

- A large proportion (57%) of the habitats of South Yorkshire are in poor condition, in the main due to the dominance of agricultural habitats in the region
- There are a number of areas in moderate condition (16% of the region) scattered throughout the region, for example, the Site of Special Scientific Interest (SSSI) area of upland moorland in the west of the region, Thorne and Hatfield moors on the eastern edge of Doncaster, and much of the broadleaved woodland.
- There are a very small number (0.7%) of fairly good habitats, such as Wharncliffe Woods in north-west Sheffield and Barnsley, and patches of heather on Bradfield Moor (also in the north-west of Sheffield).
- There are a few scattered areas across the region where habitat is estimated to be in good condition scattered across the region, including Rabbit Ings Country Park (Barnsley), sites in the west, part of the Dark Peak and Eastern Park District Moors SSSIs, a section of Woodhouse Washlands on the border of eastern Sheffield and Rotherham, Roche Abbey Woodland (Rotherham) and Sprotbrough Flash and Gorge, and Cadeby Quarry (Doncaster).

The Sheffield State of Nature report (2018)[21] identified losses over time of priority species including white clawed crayfish, turtle dove and water vole, brought on by habitat loss, fragmentation as a result of development and invasive non-native species. Despite having statutory protection, moorland habitat and its associated species are particularly threatened by habitat loss and land management practices, notable examples include birds such as dunlin, redshank and lapwing.

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[18] https://stateofnature.org.uk/wp-content/uploads/2023/09/TP25999-State-of-Nature-main-report_2023_FULL-DOC-v12.pdf

[19] https://www.ywt.org.uk/StateofNature

[20] https://www.southyorkshire-ca.gov.uk/getmedia/f1530d63-8657-4650-90a0-43c8c04ccfa5/South-Yorkshire-natural-capital-and-biodiversity-mapping.pdf

[21] https://www.wildsheffield.com/wp-content/uploads/2018/05/sheffield_state_of_nature_2018_summary_report.pdf

Regenerating the industrial landscape in the Dearne Valley saw the establishment of wetlands of a quality which enabled designation of the Dearne Valley Wetlands SSSI, which previously held one of the country's strongest populations of willow tit, a species that has declined by 94% nationally since the 1970s. Sadly, this is no longer the case as populations have declined due to impacts such as habitat loss, climate change, and competition.

Yorkshire Wildlife Trust has identified species of key conservation concern in South Yorkshire[22], based on data from a wider Index of Yorkshire Species of Concern. This takes into account their national threat status, rarity and distribution in the region, and the degree to which the region is a stronghold for each species.

Nine of Yorkshire's 263 plant species of concern were only recorded within South Yorkshire, including species such as Bearberry, True Fox Sedge, Fen Pondweed, and Tower Mustard.

A number of nature reserves in Doncaster are noted as being particularly rich in species of concern. These include Potteric Carr, Shirley Pool and Sprotbrough Gorge SSSIs located to the east of the region, as well as the Humberhead Levels to the east of Doncaster.

Key areas of importance for macro-moth (larger moths typically with a wingspan over 20mm) species of concern are an area in Doncaster with a wide variety of Local Wildlife Sites, alongside sites such as Potteric Carr SSSI, Betwixt Fen, and a marginal area of the Hatfield Moors Special Area of Conservation (SAC). A further area of importance appears in Sheffield, containing sites such as Ecclesall Wood Local Wildlife Site.

Scarce Vapourer, one of England's rarest moths, survives in Yorkshire almost exclusively on Thorne and Hatfield Moors and at Potteric Carr Nature Reserve. Other species with a high proportion of their distribution within South Yorkshire, include species such as Great Oak Beauty, which appears to be thriving on both Thorne and Hatfield Moors.

39 of Yorkshire's 53 bird species of concern were recorded as wintering within or overlapping with the South Yorkshire boundary. Key areas include wetland sites such as the Dearne Valley Wetlands, Denaby Ings, and Potteric Carr SSSIs. Some of the species with the highest proportions of their distributions in our region are those for which the Dearne Valley Wetlands are recognised as being nationally important for, such as the non-breeding Shoveler. A further area of importance is the corridor around the River Rother – bordering Rotherham and South East Sheffield - including Local Wildlife Sites such as Rother Valley Country Park, Woodhouse Washlands, Waverley Lakes, Catcliffe Flash and Pithouse West.

[22] South Yorkshire Species of Concern. Yorkshire Wildlife Trust. May 2025.

Areas in South Yorkshire that support high numbers of rare breeding birds tend to align with the Pennine ridge, including the Peak District and South Pennine Moors, along with nearby wetland habitats. Many ground nesting wading birds found in South Yorkshire, including Curlew continue to face extensive declines, now occurring in only a limited number of locations; increasingly threatened by development and reliant on expansive habitats which are very difficult to restore.

Whilst development pressures can lead to detrimental impacts on habitats and species, they also present opportunities to secure gains in biodiversity and nature recovery. However, recent research[23] indicates that across England, only 53% of the ecological mitigations and enhancements that developers have committed to undertake are in place on the ground, with 39% of the trees detailed on planting plans missing or dead, and nearly half of the native hedges that were supposed to be laid not existing. Although the research has been anonymised the report notes confidence that the same patterns would be likely to show up anywhere, indicating that this could be an issue within South Yorkshire.

However, across South Yorkshire, there have also been success stories demonstrating how nature can bounce back with the right actions. For example:

- Three of the original 12 national 'Nature Improvement Areas' were in, or partly in, South Yorkshire (Humberhead Levels, Dearne Valley and Dark Peak). These initiatives helped provide a foundation for nature recovery moving forward, including accelerating and broadening the scope of biodiversity activities.
- Humberhead Levels (see case study on page 107).
- Designation of the Dearne Valley SSSI (see case study on page 28).
- 15% tree and woodland coverage in South Yorkshire is the highest in Yorkshire. It provides a good platform to build on, with the South Yorkshire Woodland Partnership playing a key role in working to increase tree and woodland canopy cover and to help address biodiversity decline (see case study on page 48).
- The Sheffield Lakeland Landscape Partnership working to preserve and improve the natural and built heritage of this unique area, which has delivered a wide range of benefits including natural flood prevention and habitat creation for bats, owls and other small woodland birds.
- Through improved water quality and the installation of fish passes, otter and several fish species have recolonised the River Don whose catchment covers a substantial area of South Yorkshire. 2025 was the first time in 200 years that Atlantic salmon bred in the River Don.

[23] https://wildjustice.org.uk/general/lost-nature-report/

Through the development and delivery of this Strategy we have an opportunity to build on these initiatives and create new opportunities across the landscape to create resilient, connected habitats, enhanced biodiversity and improved overall ecosystem resilience, and provide wider benefits such as reduction of flood risk, cleaner air, and improvements in water quality to the people across South Yorkshire and further afield.

The importance of biodiversity and landscape in South Yorkshire

Driven by the need to mitigate the climate and biodiversity crises across South Yorkshire, SYMCA, along with all four Local Authorities and wider partners, commissioned an assessment[24] of South Yorkshire's natural capital, the benefits that it provides and the opportunities to enhance it. Natural capital is defined as "the natural resources and environmental features in a given area, regarded as having economic value or providing a service to humankind". The assessment reported an estimated annual value of £550 million of natural capital goods and services in South Yorkshire, with an asset value worth £18 billion over 50 years (present value). The value of air quality regulation (£237 million annually), recreation (£188 million annually), and physical health (£68 million annually) being particularly large. Practices such as 'green social prescribing' support people to engage in nature-based interventions and activities to improve their mental and physical health, particularly in communities affected by health inequalities. Social prescribing has been shown to reduce demand on the health and social care system, reduce health inequalities, and improve mental health outcomes.[25] A recent pilot programme led through by South Yorkshire Integrated Care Board describes benefits to people's lives through engaging with nature locally.[26]

Important habitats and sites

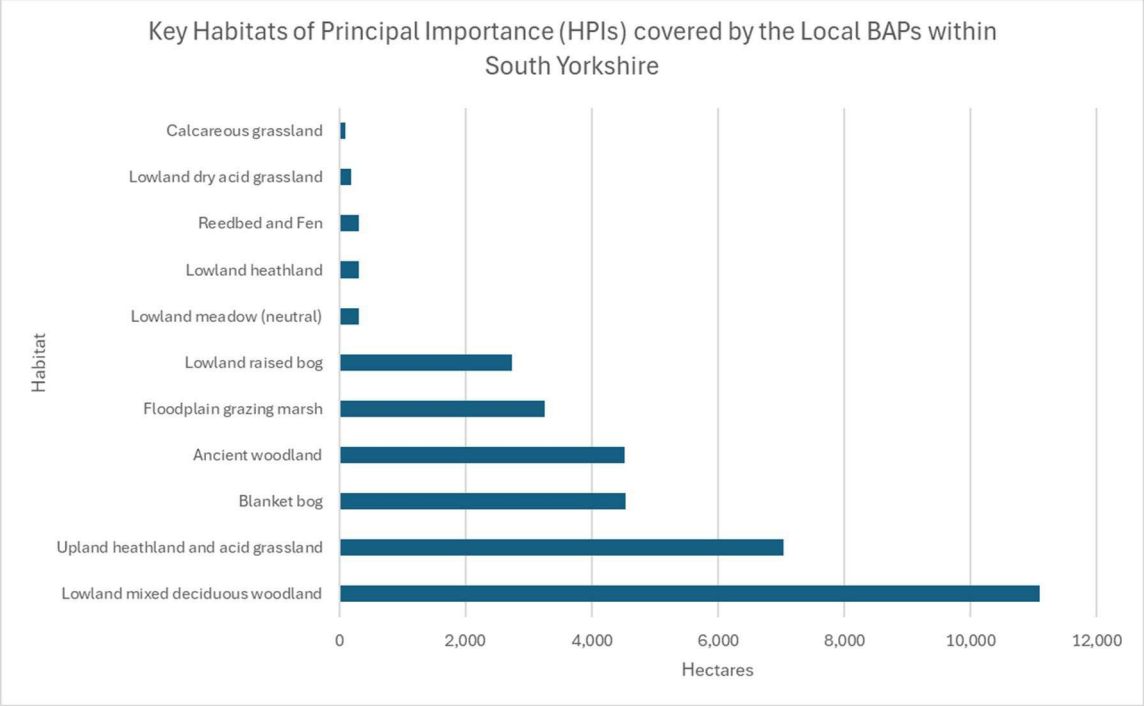
Land cover in South Yorkshire comprises a mosaic of broad habitats including grassland, woodland, heathland, wetland and bog (see Appendix A(i) for more detail). Where referred to, the term moorland encompasses a range of upland habitats, including upland heathland, acid grassland, blanket bogs, upland flushes, fens and swamps. Habitats of particular importance within the region are highlighted by partnership documents and strategies (for example, the four local Biodiversity Action Plans across Sheffield, Barnsley, Rotherham and Doncaster).

Figure 1 and the list below describe Habitats of Principal Importance in terms of (a) having characteristics that support a wide variety of flora and fauna, (b) their scarcity,

[24] https://www.southyorkshire-ca.gov.uk/getmedia/f1530d63-8657-4650-90a0-43c8c04ccfa5/South-Yorkshire-natural-capital-and-biodiversity-mapping.pdf
[25] The impact of social prescribing on health service use and costs
[26] New funding boost for green social prescribing in South Yorkshire :: South Yorkshire I.C.B

or (c) due to being under pressure from factors that may cause degradation or loss of habitat[27]. Further detail is provided in the table at Appendix A(ii).

Figure 1: Key Habitats of Principal Importance covered by the Local Biodiversity Action Plans within South Yorkshire



- Lowland mixed deciduous woodland covers over 7% of our region, and irreplaceable (ancient) woodland split almost equally between Planted Ancient Woodland Sites and Ancient Semi Natural Woodland covers 2.9% of South Yorkshire
- Upland heathland and acid grassland covers extensive areas (4.53% of our region), and along with blanket bog (2.92%) and lowland raised bog (1.77%) the vast majority of these habitats are in unfavourable recovering condition (failing to meet required standards but have appropriate management in place)
- Floodplain grazing marsh is important for wetland birds
- Lowland meadow (neutral Ph) contains a high proportion and species richness of broadleaved herbaceous flowers
- Lowland heathland is scarce and fragmented across South Yorkshire, with the largest area in Doncaster, primarily in the east of the district
- Reedbed and Fen (0.20%) located within the Dearne Valley is an important site for bittern
- Lowland dry acid grassland (0.12%) and calcareous grassland (0.06%) cover very areas of our region

Other important habitats include:

- Purple moor grass and rush pasture (pockets found in poorly drained acidic soils)

[27] Data taken from the Natural England Priority Habitat Inventory where habitats classifications correspond.

- Upland oakwood (an ancient woodland type found in uplands)
- Wet woodland (such as Willow carr, woodland with alder and ash dominant)
- Wood-pasture and Parkland (which can provide a mosaic of species rich grassland along with veteran trees)
- Arable field margins (around field boundaries, generally managed for wildlife)
- Scrub (containing short woody species such as hawthorn, blackthorn and bramble)
- Rivers and streams (providing habitat corridors for both aquatic and terrestrial species)
- Standing water (such as ponds and reservoirs providing habitats and connectivity)
- Open mosaic Habitat (brownfield or post-industrial land that often has little organic matter)
- Traditional orchards (planted at low densities and managed in a low intensity way)
- Inland rock habitats (mainly on gritstone in the Dark Peak and limestone in the Magnesian Limestone area)

Some of these habitats are of such importance that they are protected by law through site designation. South Yorkshire supports 40 Sites of Special Scientific Interest , three Special Areas of Conservation , two Special Protection Areas and one National Nature Reserve (see Appendix B) – which are all national or international designations meaning they are considered to support habitats and species which have national or international importance owing to their rarity, species assemblages or breadth of diversity. Collectively these designations protect an area of 15,264 hectares, or 9.8% of South Yorkshire. On a more local level, Local Nature Reserves cover 1,127 hectares and are places with wildlife or geological features that are of special interest locally (see Appendix B).

Whilst not offering additional legal protection to that already present on a site, Local Wildlife Sites are recognised in local planning policy and land management decisions. They play an important role in supporting important species and habitats (including those of principal importance) and that provide connectivity. There is a total of 718 Local Wildlife Sites within South Yorkshire, covering an area of 15, 726 hectares – nearly as much as the combined total for statutory sites, emphasising their collective importance and value. Since Local Wildlife Sites are non-statutory (i.e. not required by law) and have no legal protection, and lack of specific funding for their management, they rely on good local planning policies and land management decisions[28]. Furthermore, changes in farming practices and increased urban pressures are contributing to deterioration in habitat quality. This is reflected in the fact that, for example, as of March 2025, only 15% of Local Wildlife Sites in Sheffield were being managed to conserve their nature conservation interest (i.e. in 'positive conservation management' - see Appendix B for details of Local Wildlife Sites in positive management in South Yorkshire).

However, as Table 2 shows, almost 19% of the area covered by SSSIs within South Yorkshire has been assessed as being in favourable condition (where their habitats and features are in a healthy state and are being conserved by appropriate management) according to the most recent assessment on each site. Sites such as the Dearne Valley Wetlands score highly. A further 63% of SSSIs have also been identified as 'Unfavourable recovering', meaning that actions to achieve favourable status have been identified, but not yet achieved. It is also particularly important to note the 10% of the total area of SSSI units assessed as being in an 'unfavourable no change' condition. This condition status implies that the designated feature will not reach 'favourable' condition in these areas unless changes are made to management or external pressures.

[28] https://www.wildlifetrusts.org/sites/default/files/2025-10/25AUG_LWS_FINAL-DIGITAL.pdf

Table 2. The condition status of SSSIs sites in South Yorkshire, as reported in the most recent assessment for each site.

SSSI type and condition	Area (hectares)	Percentage of SSSI total area (%)
Favourable condition	2,860.68	18.8
Unfavourable recovering condition	9,537.73	62.7
Unfavourable condition no change	1,573.76	10.3
Unfavourable declining	1,228.01	8.1
Not Assessed	6.61	>0.0

Note:

- Favourable - the designated feature is being adequately conserved
- Unfavourable recovering - The feature is not yet fully conserved but the necessary actions to achieve favourable condition have been identified and recorded, at least one action underway and no actions behind schedule.
- Unfavourable condition no change - the feature is not being conserved, necessary actions have not been identified and recorded, none of the actions underway and at least one action behind schedule
- Unfavourable declining - the feature is not being conserved and is becoming progressively worse.

Landscapes of South Yorkshire

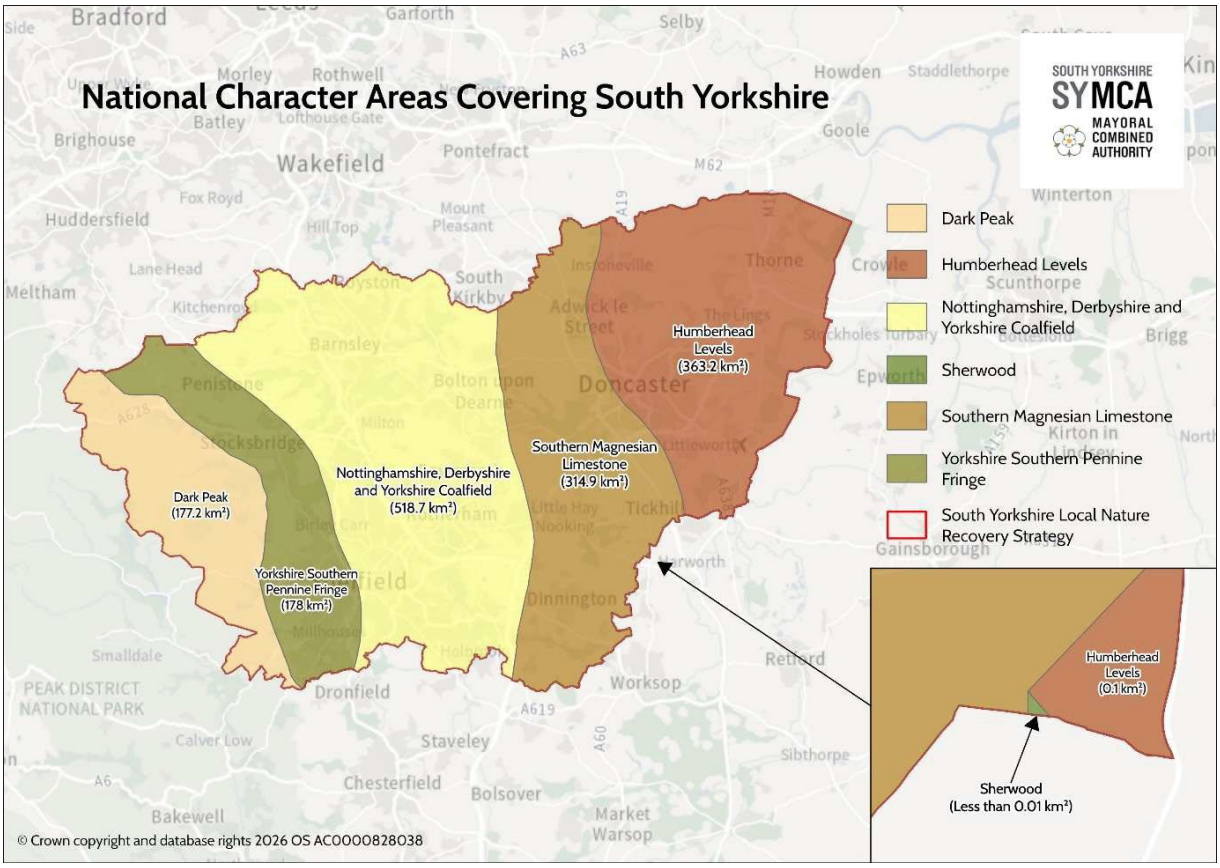
This section describes the diverse landscapes and habitats of South Yorkshire. We use National Character Areas (NCAs) in order to identify distinctive features in terms of landscape, biodiversity, geodiversity, history, and cultural and economic activity. However, this section begins with a focus on the urban and riverine environments which flow across the NCA boundaries.

England is divided into 159 distinct natural areas or NCAs. Boundaries of NCA's follow natural lines in the landscape and importantly for biodiversity recovery, not administrative boundaries. The South Yorkshire region comprises six NCAs, as set out below in table 3 and shown in figure 2:

Table 3 National Character Areas - proportion within South Yorkshire

National Character Area	Area within South Yorkshire (km^2)	Percentage of South Yorkshire (%)
Dark Peak (NCA 51)	177	11.42
Yorkshire Southern Pennine Fringe (NCA 37)	178	11.47
Nottinghamshire, Derbyshire and Yorkshire Coalfield (NCA 38)	519	33.42
Southern Magnesian Limestone (NCA 30)	315	20.29
Humberhead Levels (NCA 39)	363	23.41
Sherwood (NCA 49)	Less than 0.01	Less than 1

Figure 2: National Character Areas in South Yorkshire.



The following sections describe the NCAs covering South Yorkshire and identify key habitats and species / species groups for our region. Appendix C provides more detail for each area on the broad habitats present, the proportion of the NCA they cover, and the proportion of the NCA within South Yorkshire which they cover (recognising that all NCAs extend beyond South Yorkshire)[29].

However, this section begins with a focus on the urban and riverine environments which flow across the NCA boundaries.

Urban environment

South Yorkshire is home to around 1.4 million people. Roughly 20% of South Yorkshire comprises urban environment, with two cities, Sheffield and Doncaster, and two large towns, Rotherham and Barnsley, along with a number of other smaller towns and villages

South Yorkshire is heavily influenced by its industrial legacy with the main settlements established around the industries of mining and steel manufacturing. Today's

[29] This information is gathered from the Living England Habitat Map (Phase 4) – an open dataset published by Natural England and derived using satellite-based image classification. Whilst it is understood that there will be some inaccuracy with the data, it provides an estimated overview of the habitats present, with consistent data and methodology used for each NCA section.

landscape has been shaped by these activities, from the modification of rivers to power mills and the development of roads, rail and canals to the spoil heaps and landscape influences of mining. Many of these features remain, though often repurposed or regenerated, providing new opportunities for businesses, homes, recreation and nature.

As well as providing opportunities, the spread of urban and suburban areas and associated infrastructure requirements (such as roads, railways, and utilities) has resulted in habitat loss and fragmentation, with resulting impacts to water quality and quantity, and a loss of biodiversity. Where industry and settlements have concentrated in river corridors, this has led to heavy modification of the rivers and today leads to urban areas being at a higher risk of flooding. Future growth and development will continue to provide both opportunities for our region as well as threats.

Analysis in 2021 highlighted that the demand maps of air quality, noise, local climate regulation, and accessible nature show clearly the importance of ecosystem service delivery to the urban centres of South Yorkshire, with the highest demand in the largest conurbation of Sheffield. Urban areas adjacent to the road network are also hotspots for demand.[30]

Well-planned urban areas with street trees, parks, and gardens can play a key role in nature's recovery. They can support healthy ecosystems by allowing animals to move between habitat or even create full habitats for wildlife, regulate how water flows through the environment, and recycle nutrients back into the soil. They also enable plants to reproduce through pollination and seed dispersal, while helping nature cope with climate change and limit the spread of pests and diseases[31]. Doncaster's Tree Policy and Tree Risk Management Plan[32] and the Sheffield Street Tree Partnership Strategy[33] are examples of how local authorities are seeking to deliver biodiversity and wider environmental benefits in urban areas.

Well-managed urban waterways (canals and rivers) offer great opportunities for biodiversity, creating an extensive linear corridor for species dispersal and movement, whilst increasing public access to nature and enhancing the health and wellbeing of local communities. Other smaller features such as roadside verges, and hedgerows (over 8,000 kilometres estimated in South Yorkshire[34]) can provide similar benefits on a smaller scale, providing green corridors and a food for pollinators; whilst the fenced

[30] https://www.southyorkshire-ca.gov.uk/getmedia/f1530d63-8657-4650-90a0-43c8c04ccfa5/South-Yorkshire-natural-capital-and-biodiversity-mapping.pdf
[31] IUCN (2020) Guidelines for conserving connectivity through ecological networks and corridors. Available at: https://portals.iucn.org/library/node/49061
[32] https://www.doncaster.gov.uk/services/environmental/trees-for-doncaster
[33] https://www.sheffield.gov.uk/sites/default/files/docs/roads-and-pavements/managing-trees/sheffield-street-tree-strategy-2021.pdf
[34] https://www.southyorkshire-ca.gov.uk/getmedia/f1530d63-8657-4650-90a0-43c8c04ccfa5/South-Yorkshire-natural-capital-and-biodiversity-mapping.pdf

nature of railway corridors (major routes run right across the area) means that extensive buffers of scrub, woodland and grassland habitat are free from human disturbance and support a wealth of wildlife, notably reptiles which benefit from sloped banks and ballast to bask on. The Sheffield Wetland Corridor project[35] (Froglife and Sheffield City Council) worked with Network Rail and National Grid to improve habitats for reptiles and amphibians along infrastructure corridors – including creating a number of ponds to complement additional ponds on Council-owned land.

Urban greenspaces including parks, churchyards, residential gardens, green walls, and green roofs, provide stepping stones which can support a range of mobile wildlife species and their passage through the urban environment, and for this reason are highlighted within Local Biodiversity Action Plans for Barnsley and Doncaster. Some urban parks in South Yorkshire are already managed as nature reserves, including Waterloo Kiln and Pottery Ponds, in Rotherham[36]. Whilst an increasing number of residential gardens across the UK are becoming paved or covered with other impermeable surfaces, in particular to provide parking space[37], when managed sympathetically for wildlife, residential gardens in Sheffield have been shown to support a high diversity of wildlife as part of the University of Sheffield Bugs project[38] (2001). All Saints Ecclesall is a great example of a churchyard that has seen biodiversity improvements through changes in management too, including the presence of orchids, and a 70% uptake of newly installed bird boxes.[39]

Brownfield sites (previously developed land that is not currently in use), and former industrial sites such as colliery pit stacks and quarries, typically comprise a mixture of bare ground, lower plants, standing water and scrub habitats. They can often support species that can tolerate extremes in environmental conditions, such as moisture or Ph and as a result, have locally unique species assemblages. If the resulting habitat develops to meet the criteria of 'open mosaic habitats on previously developed land' (OMH), the site will have a high nature value and be regarded as a 'priority habitat'. These sites can support many different plant species, often similar to those found in naturally low-nutrient habitats. This is because the ground conditions — such as mixed materials, low nutrient levels, and little organic matter — create a more open, less fertile environment where a variety of wild plants can thrive. The mosaic of vegetation types and bare open ground also makes these sites a hotspot for notable invertebrates, which often require a mix of habitats for basking, burrowing and for larval food plants. Reptiles also thrive in these habitats, again utilising bare ground for basking and benefiting from the invertebrate abundance. Prioritising development on these sites

[35] https://www.froglife.org/2020/04/30/river-of-life-spring-has-sprung-as-new-sheffield-wetland-corridor-already-sees-results/

[36] https://www.rotherhamparks.co.uk/directory-record/75/waterlook-kiln-and-pottery-ponds

[37] https://www.sciencedirect.com/science/article/abs/pii/S0048969714003659

[38] https://wlgf.org/bugs_project.html

[39] https://www.wildsheffield.com/wp-content/uploads/2022/08/220715-All-Saints-Ecclesall.pdf

may, therefore, not always be of benefit to biodiversity and a 'biodiversity first' approach to development, where sites of low value for wildlife, whether brownfield or greenfield, are prioritised for development should be taken[40].

When managed correctly, brownfield and post-industrial sites also have the potential to be transformed into wildlife havens. The Dearne Valley Wetlands SSSI is a prime example. Following closure of the industrial and mineral extraction activities which previously occupied the area it has been transformed into wetland habitat, designated for nationally important bird species, including bittern, lapwing, and redshank (see case study).

CASE STUDY: Dearne Valley Wetlands

The designation of the Dearne Valley Wetlands as a Site of Special Scientific Interest (SSSI) represents one of South Yorkshire's most significant nature recovery achievements. Once one of the most environmentally degraded landscapes in Europe due to extensive coal and glass industrial activity, the valley has been transformed over two decades into a nationally important haven for wetland species. The SSSI notification by Natural England recognises not just isolated reserves, but a connected landscape-scale network restored through long-term collaboration and community action.

The initiative addresses critical issues of habitat loss, biodiversity decline and climate vulnerability. Former industrial land has been re-engineered into rich wetland habitats supporting thousands of wading birds, waterfowl and priority species. Bitterns now breed in reedbeds created on ex railway yards, and avocets, lapwings and oystercatchers feed and nest on newly formed wetlands. These ecological gains demonstrate how nature can recover even in heavily altered post-industrial landscapes.

This transformation was the result of the long standing Dearne Valley Green Heart Partnership, formed in 2006. Partners include Barnsley, Rotherham and Doncaster Councils, Natural England, the Environment Agency, Yorkshire Wildlife Trust, RSPB, the Garganey Trust, Barnsley Biodiversity Trust, Yorkshire Water, local farmers and numerous community groups. The area also benefitted from national investment as one of Defra's first Nature Improvement Areas (2012) and through a major National Lottery Heritage Fund Landscape Partnership.

Old Moor is a site within this network, taken over by the Royal Society for the Protection of Birds (RSPB) in 2003 and designated as a SSSI in 2022. It is recognised not only as a habitat for priority species but also providing access to nature in a socially and economically deprived area. Active management is crucial for this important and diverse habitat however, an ongoing challenge is ensuring sites are maintained to remain as open mosaic habitat rather than being left to colonise completely with dense scrub.

The restored wetlands provide substantial benefits for climate resilience (including natural flood management), public wellbeing, tourism, and local pride. With nature recovery networks expanding and community involvement growing, the Dearne Valley Wetlands SSSI stands as a national exemplar of how restored landscapes can support wildlife, people and place-based regeneration.

[40] https://www.buglife.org.uk/resources/habitat-hub/brownfield-hub/

While urban development has fragmented habitat over time, there remain numerous key sites for nature which are, or have the potential to be, protected and managed for nature and biodiversity. Potteric Carr, one of Yorkshire Wildlife Trusts flagship sites, is a wetland reserve on the southern edge of Doncaster, bisected by a series of railway lines and bounded by the M18 Motorway, but consists of a vast network of wetland and woodland habitat, supporting important assemblages of birds.

Many species of conservation concern are associated with buildings including peregrine falcon (found in St George's in Sheffield[41] and the Town Hall in Barnsley), swift, swallow, house martin, sand martin, house sparrow and a range of bat species, including pipistrelles, Daubenton's bat and Leisler's bat. Gardens and parks support hedgehog and a diversity of bird species, small woodlands in Sheffield support badger, while urban waterways can support species such as otter and Atlantic salmon which have been recorded on the River Don in urban Sheffield and Rotherham, breeding in the Don for the first time in 2025 for 200 years[42][43].

Designing buildings to include nature-friendly features such as bat and bird boxes, green roofs, native and pollinator-friendly landscaping, and ponds, all help nature's recovery in urban environments. Sustainable Drainage Systems (SuDs) can be designed into new developments and infrastructure projects and if designed and managed sensitively they can help mitigate issues from flooding to biodiversity loss. Sheffield's Grey to Green[44] is a groundbreaking environmental and economic development strategy developed by Sheffield City Council, The University of Sheffield and managed by Green Estate Community Interest Company. The scheme helps protect against heavy rain and flooding by slowing down and absorbing surface water. Its mix of native and non-native plants is chosen to create colourful, long-lasting meadows that support wildlife in many different ways.[45]

Key habitats and species for South Yorkshire's urban environments are shown below.

Urban environment: key habitats and species for South Yorkshire
Key habitats: open mosaic habitats on previously developed land, canals and rivers, wetlands, grass verges, street trees and woodlands.
Key species: bats, otter, swift, house martin, common toad, great crested newt, grass snake, pollinators, brown trout, Atlantic salmon

[41] https://peregrine.sites.sheffield.ac.uk/
[42] https://www.wildsheffield.com/wp-content/uploads/2018/05/sheffield_state_of_nature_2018_summary_report.pdf
[43] https://www.bbc.co.uk/news/articles/cly7gqx2zw0o
[44] https://www.greytogreen.org.uk/
[45] https://greenestate.org.uk/pictorial-meadows-and-the-greening-of-sheffield-a-grey-to-green-suds-success-story/

Rivers and catchments

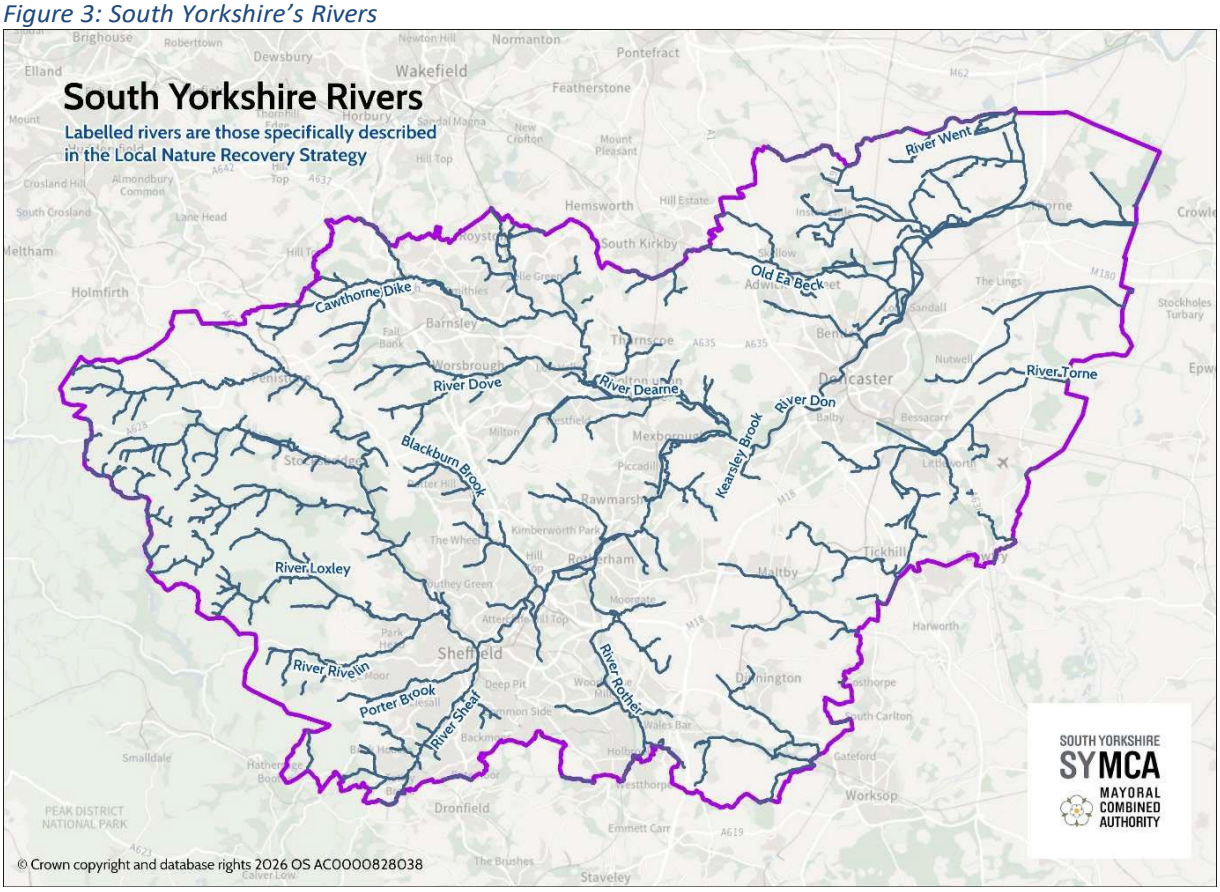
Vital to nature in South Yorkshire being 'more, bigger, better, and joined' (following the Lawton Report[46]) are the extensive networks of rivers, streams and canals that flow through the region. Critical to early industrialisation, these valuable habitat networks support biodiversity and provide nature corridors and 'stepping stones' across the strategy area. South Yorkshire covers largely the same geographical area as the catchment of the River Don and is within the Humber river basin. The Idle and Torne catchment also covers a significant part of the south east of Doncaster and a small part of Rotherham.

> The uplands of the river Porter, Rivelin, Loxley in Sheffield, and in the river Dearne in Barnsley, give us beautiful moorland landscapes. These uplands lead into wetland nature reserves along the Dearne and rother in Barnsley and Rotherham, and on to nationally significant lowland peat bogs around the lower Don in Doncaster."
> **Connected by Water Action Plan, 2023**

The main rivers in South Yorkshire are described below and shown in figure 3:

46 https://webarchive.nationalarchives.gov.uk/ukgwa/20130402170324/http:/archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf

Figure 3: South Yorkshire's Rivers



(i) **River Don**: The Don is a large river flowing for approximately 70 miles from its headwaters in Dunford Bridge in the Peak District to Goole where it joins the River Ouse. In the upper catchment the river Don rises in the Peak District and is joined by Little Don, Loxley, Rivelin, Porter Brook, and Sheaf Rivers on its journey down to Sheffield city. This part of the catchment has large areas of moorland, upland farms and rural estates.

In its middle section the Don is joined by the Rother and Dearne Rivers. It supports farmland, as well as mature reserves and urban areas.

Along its lower section the Don travels to Doncaster, giving its name to the city, and is eventually met by the River Went. This is an area of predominantly low-lying land with a complex and interconnected system of engineered flood defences such as embankments, walls and storage reservoirs that manage flood risk from the Don, its tributaries and the tidal influence of the Humber estuary.

The lower catchment contains national significant lowland peat bogs as well as drained farmland.

(ii) **River Rother**: This river, which gives its name to the town of Rotherham, rises in Pilsley in North East Derbyshire. It flows northwards to feed the

Chesterfield Canal, and on through several districts of Sheffield before joining the River Don near Templeborough in Rotherham.

(iii) **River Dearne**: The Dearne flows eastwards from its source in Denby Dale for over 30 miles through Darton and Barnsley until it meets the River Don at Denaby Main, a village between Mexborough and Conisbrough near Doncaster.

(iv) **River Sheaf**: This finds its source amongst the Pennines and flows northwards past Dore, eventually flowing under the centre of Sheffield before joining the River Don. Sheffield takes its name from the River Sheaf.

(v) **Porter Brook**: The Porter Brook also flows through Sheffield, descending 300 metres from its source in Burbage Moor to its mouth where it meets the River Sheaf.

(vi) **Loxley**: The river's source starts 16km north west of Sheffield on Bradford moors, flowing through Bradford Dale and join Stoors Brook and the River Rivelin before meeting the River Don at Owlerton.

(vii) **River Rivelin**: Sourced in the Hallam moors the river is fast flowing and runs through the Rivelin valley, characterised by wooded steep slopes. The river joins the River Loxley at Malin Bridge.

(viii) **River Dove**: Flows through the Low Valley in Barnsley, from Worsbrough Reservoir to eventually join the River Dearne.

(ix) **Torne**: Rises in Maltby, Rotherham, before flowing through Doncaster and eventually empties into the River Trent at Keadby pumping station in Lincolnshire. Much of the river channel is engineered.

(x) **Went**: Rises near Featherstone in West Yorkshire and joins the River Don in the north of Doncaster.

(xi) **Blackburn Brook**: Rises in High Green, Sheffield and flows through the Blackburn valley before joining the River Don, close to Meadowhall Shopping Centre.

(xii) **Cawthorne Dyke**: Flows from north-west of the village of Cawthorne to join the River Dearne.

(xiii) **Kearsley Brook**: Rises to the south of Conisbrough, Doncaster, flowing through rural and urban locations, including culvert structures, before discharging into the River Don.

(xiv) **Ea Beck**: From its source in South Emsall, West Yorkshire, the Ea Brook flows eastward, before joining the River Don at Thorpe in Balne, Doncaster.

(xv) **Maltby Dike:** To the south of Maltby, flowing from Roche Abbey until it joins Hellaby Brook and Newhall Dike.

(xvi) **Hellaby Brook:** To the west of Maltby, running north-west to Ravenfield.

Several canals are also found within South Yorkshire, including:

- The Sheffield and South Yorkshire Navigation Canal, comprising the Sheffield & Tinsley and the Stainforth & Keadby Canals. This connects Sheffield, Rotherham, and Doncaster with the River Trent at Keadby (Lincolnshire) and the Aire and Calder Navigation.
- Barnsley Canal. The historic route of this canal runs from the boundary with Wakefield District north of Royston via Barnsley to Barnby Basin.
- Dearne and Dove Canal The historic route of this canal runs from the junction with the Barnsley canal near Hoyle Mill to the boundary with Rotherham Borough west of Wombwell, with two spurs running to Worsbrough and Elsecar.
- Chesterfield Canal which links Nottinghamshire, South Yorkshire and Derbyshire.

River catchments – the areas of land where rain falls and is collected – are complex and can be vast. Impacts in one part of a catchment can have wide-reaching impacts across the remainder of the catchment and the habitats and species it supports. This also moves beyond South Yorkshire, and these arteries are vital cross-boundary points for working with neighbouring regions. For example, the Idle river is on the Doncaster Boundary with Nottinghamshire, where there is a significant network of wetland SSSIs.

Regional partnerships are taking action through a Catchment Based Approach, with key plans including the Don, Dearne and Rother Catchment Plan[47] and the River Torne Catchment[48]. The River Don catchment covers 13 Local Authorities, of which those in South Yorkshire along with Chesterfield and North East Derbyshire cover the greatest area.

Connected by Water[49] is a South Yorkshire alliance working together to build flood resilience and respond to the climate emergency (see case study below).

CASE STUDY: Connected by Water
Connected by Water is a major South Yorkshire partnership created to help communities, landscapes and nature become more resilient to flooding and climate change. The initiative brings together seven key organisations: SYMCA, Barnsley, Doncaster, Rotherham and Sheffield Councils, Yorkshire Water and the Environment Agency. The partnership formed in

[47] https://dondearnerother.org/wp-content/uploads/2020/12/Catchment-Plan-2020-FINAL.pdf
[48] https://catchmentbasedapproach.org/get-involved/torne/
[49] https://connectedbywater.co.uk/

response to severe flooding in 2019, which caused serious damage to homes, businesses and infrastructure across the region.

The project addresses the growing challenge of heavy rainfall, rising river levels and climate change. South Yorkshire's mix of uplands, lowlands and major river systems means many communities are at high risk of flooding. Connected by Water recognises that tackling this risk requires joined up action across whole river catchments, rather than isolated projects.

Alongside major engineering schemes, the partnership is delivering a wide range of nature-based solutions that support both flood resilience and nature recovery. These include creating wetlands, reconnecting rivers with their natural floodplains, restoring peatlands, planting trees and hedgerows, and creating ponds and scrapes to slow and store water. These measures reduce flood risk while also improving habitats for wildlife, enhancing carbon storage and creating more green spaces for people to enjoy.

The partnership also works closely with communities, landowners, farmers, businesses and schools to build awareness of flood risk and support practical action before, during and after flood events. Engagement activities include community workshops, flood warden training, school sessions and tools to help residents check their local flood risk and prepare for future events.

Connected by Water aims to better protect 25,000 homes, businesses and key infrastructure across South Yorkshire. By combining engineering, nature-based solutions and strong community involvement, the partnership is creating a more resilient, nature rich region and demonstrating how climate adaptation and nature recovery can go hand in hand.

The Humber River Management Plan, as required by the Water Framework Directive, describes the framework used to protect and improve the quality of waters in each river basin district. The Plan's purpose is to enhance nature and the natural water assets that are the foundation of everyone's wealth, health and wellbeing, and the things people value, including culture and wildlife.[50]

The quality and status of rivers and watercourses are assessed in a different manner to their terrestrial counterparts. The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 are a critical mechanism for assessing and managing the water environment in the UK, with the aim of preventing deterioration and improving their quality.

The overall ecological status of waterbodies is assessed and reported on by the Environment Agency in England. River and watercourse management is split by their catchments, and the main river catchments in South Yorkshire are the Don and Rother catchment and Idle and Torne catchment.

As table 5 shows, the majority of waterbodies in these catchments are in moderate condition (44 of 52 in the Don catchment and 3 of 4 in the Idle and Torn catchment) and only 3 are of good/high quality (in the Don catchment).

[50] River basin management plans, updated 2022: introduction - GOV.UK

Due to changes to methods and evidence base in 2019, the Environment Agency indicate that all water bodies now fail chemical status.

Table 5 Waterbody ecological status summary

Waterbody condition	Ecological status (number of surface waterbodies)	
	River Don Catchment	Idle and Torne Catchment
Bad/Poor	5	1
Moderate	44	3
Good/High	3	0
Total	52	4
(Environment Agency, 2019 Cycle 3 data)		

Key habitats and species for South Yorkshire's rivers and catchments are shown below.

Rivers and catchments: key habitats and species for South Yorkshire
Key habitats: rivers, becks, oxbows, brooks, canals, associated wetlands and headwaters.
Key species: otter, water vole, white-clawed crayfish, brown trout, Atlantic salmon, European eel, bullhead, river lamprey, dipper, mayflies sand frogbit.

National Character Areas

Sherwood (NCA 49)

The Sherwood NCA is a long band of gently rolling hills located to the north of Nottingham. Only 0.13 hectares of South Yorkshire extends into the Sherwood NCA. This small area comprises land under agricultural and horticultural use. Due to the small area of this NCA in South Yorkshire, a full description of the character area and its environmental opportunities and challenges will not be covered in this section.

Dark Peak (NCA 51)

The Dark Peak is renowned for its dramatic moorland landscapes, rugged terrain and rich biodiversity. Its geology is millstone grit, a coarse sandstone which contributes to the acidic soils and peat formation. The peaty soils dominate the upland areas while the valleys comprise fertile alluvial soils.

Extensive heather moorland is characteristic of the area, with blanket bog and acid grasslands comprising heather, bilberry and cotton grass. 84% of this area lies within the Peak District National Park and approximately 57% of the area has been designated as a Special Protection Area / Special Area of Conservation. 46% of the NCA has also been designated as the South Pennines Moors SSSI. The South Pennines Moors Special Protection Area / Special Area of Conservation/SSSI is designated for its range of important habitats including European dry heaths, blanket bogs, and ancient sessile

oak woods with holly and hard-ferns. Other important habitats include Northern Atlantic wet heaths with cross-leaved heath, transition mires and quaking bogs. This impressive mosaic of habitats supports internationally important numbers of breeding merlin, golden plover and twite.

The majority of agricultural land use is the grazing of livestock where natural conditions make farming difficult. Most of the farmland in the area consists of holdings larger than 100 hectares, which together make up 78% of the total farmed land. In contrast, the most common farm size is between 5 and 20 hectares, but these smaller farms account for only 4% of the National Character Area. Recently, Sheffield & Rotherham Wildlife Trust purchased Ughill Farm, a 132 hectare farm in the Peak District National Park and at the heart of the Sheffield Lakeland Partnership area, to explore nature-friendly farming practices (see case study below)

CASE STUDY: Sheffield Lakeland Partnership

Sheffield Lakeland Partnership was funded by the Heritage Lottery Fund as part of its national Landscape Partnerships programme and is now in its 'next 10 years' delivery phase. The partnership is managed by Sheffield & Rotherham Wildlife Trust, working with Sheffield City Council, Sheffield Hallam University, Yorkshire Water, Natural England and the Environment Agency, and has support from landowners and local access groups. It offers a unique opportunity to manage the area's heritage, with a common vision, on a landscape-scale and for people to enjoy.

The area is a story of water, from the carving of the valleys, through early settlement and industry to the reservoirs that have led to the term 'Sheffield Lakeland'. Water links everything we wish to achieve when working at a landscape scale. The Partnership's natural flood management project aims to bring together flood protection and nature recovery along with enhancing landscape character.

Image credit: Trevor Bagshaw

The Partnership aims to achieve three broad outcomes: a more resilient landscape; nature recovery and that a diverse community enjoy and look after the area.

The landscape is rich in history, with diverse habitats abundant in wildlife, vibrant communities and strong traditions. But now more than ever, wildlife must be given room to move through the countryside and the Partnership is working to restore, recreate and reconnect habitats on a landscape scale.

Over half of the area falls within the Peak District National Park and the western margin includes areas designated as SSSI, Special Protection Area and Special Area of Conservation. It therefore acts as a valuable buffer between protected habitats and Sheffield's urban fringe.

The Partnership has entered an exciting new phase with nature-friendly farming now a key strand, centered around Sheffield & Rotherham Wildlife Trust's nature-friendly farm at Ughill. The aim is to test and learn nature-friendly farming practices on the current low grade, marginal farmland and in so doing conserve a range of wildlife including curlew and other nationally threatened farmland birds and share sustainable farming techniques with the wider community. The site will be used as an exemplar with the intention of encouraging others to farm in a similar way.

Changes in recent decades in the distribution and extent of habitats have included localised large-scale tree planting of the moorland habitat, extensive restoration work to restore eroded areas of peat, and a reduction in management of land adjacent to the

moorland, leading to the spread of moorland vegetation and rough grassland into previously enclosed agricultural land[51].

The Burbage valley lies in the Dark Peak Nature Improvement Area (NIA). The Dark Peak NIA project (2012-2015) aimed to improve and create areas of high-quality wildlife habitat (blanket bog, upland heathland, native broadleaf woodland and scrub, hay meadows), whilst ensuring good public access (bridleways, byway access, and disabled access on the eastern moors), and visitor engagement.

Burbage and Eastern Moors are managed as a partnership between the RSPB and The National Trust, on behalf of the National Park Authority and Sheffield City Council[52]. Over an area of 3,200 hectares, natural regeneration is being encouraged by reducing the intensity of livestock grazing with low numbers of sheep, cattle and red deer grazing the moors to create a mosaic of habitats. Native tree planting and peat bog restoration works (rewetting and grip blocking), are helping restore this habitat and the natural hydrology of the area.

Key habitats and species for the Dark Peak NCA in South Yorkshire are shown below.

Dark Peak: key habitats and species for South Yorkshire
Key habitats: European dry heaths, blanket bogs, old sessile oak woods with holly and hard-fern, Northern Atlantic wet heaths with cross-leaved heath, and transition mires and quaking bogs.
Key species/species groups:
Adder, common lizard, water vole, curlew, lapwing, round leaved sundew, woodland bird assemblage (including lesser spotted woodpecker, pied flycatcher and wood warbler), upland bird assemblage (including ring ouzel, common sandpiper, dunlin, golden plover and hen harrier).

Yorkshire Southern Pennine Fringe (NCA 37)

The Yorkshire Southern Pennine Fringe NCA is a transitional landscape from the upland areas in the west through to the low-lying land in the east. It extends through the centre of the Peak District National Park.

The area is characterised by rolling hills, steep valleys, and moorland fringes with rivers including the Don, Sheaf, Rivelin and Loxley winding through the valleys. The geology is a mixture of millstone grit and coal measures which influence both the natural vegetation and human land use of the area (for example, the area has been heavily used for industry through quarrying and coal mining). There are small areas of priority habitats dotted across the NCA which support a wide range of wildlife including Red-

[51] https://nationalcharacterareas.co.uk/Dark-Peak/
[52] https://www.visit-eastern-moors.org.uk/

listed birds of conservation concern. These habitats include unimproved neutral grasslands and good quality semi-improved grasslands.

Several SSSIs are found in this area including Little Don Stream Section SSSI, designated based on its geological interest, and Spring Meadows, Alderman's Head and Cow Croft Meadow SSSI, designated based on the species-rich unimproved neutral grassland habitats.

The legacy of the area's industrial past is seen in the abundance of industrial buildings and structures such as factories, chimneys, railways and canals. Many of the rivers have been heavily modified for industry with a large number of weirs limiting fish movement. Parts of Sheffield and Barnsley lie within this NCA and with built-up areas and gardens forms the third largest land use type in this area.

The area around Bradfield and Penistone is characterised by small family farms dominated by livestock farming, including dairy farming. Grasslands are often managed more intensively to increase the amount of grass grown for farming and silage. The most prevalent field boundaries here are dry stone walls with hedgerows featuring on lower ground. The steepest slopes support acid grasslands, with scattered dwarf shrubs and areas of heathland on the highest ground, wet grasslands and marshes where springs emerge between the gritstone and shales, and rare areas of species-rich or semi-improved hay meadows.

The area supports 2,547 hectares of ancient woodland (Ancient Semi-Natural Woodlands and Plantations on Ancient Woodland Sites), sheltering rare species such as wood sorrel, sweet woodruff, and yellow pimpernel. Some of these ancient woodlands include Wharncliffe, Greno, and Ecclesall Woods. Woodlands support other environmental benefits such as sustainable timber production, carbon sequestration and many other recreational opportunities.

The distribution and extent of habitats are under continued pressure for housing in areas outside of the urban city centres, which has put pressure on the more rural areas[53]. Despite this, in recent decades there have been improvements in the quality and extent of green corridors, restoration of wetland habitats along river corridors and a significant increase in woodland cover.

Historically the South Yorkshire Forest, one of twelve Community Forests in the UK, was established to demonstrate the contribution of environmental improvement to economic and social regeneration and covered around nine percent of the NCA. Although the South Yorkshire Forest Partnership no longer exists, this helped to shape management, creation and community engagement which is now continued by South Yorkshire Woodland Partnership (see case study). There are substantive tree planting

[53] https://nationalcharacterareas.co.uk/Yorkshire-Southern-Pennine-Fringe/

programmes across South Yorkshire, including within this NCA area. Netherwood Country Park in Barnsley, is one of several areas for targeted tree planting.

Key habitats and species for the Yorkshire Southern Pennine Fringe NCA in South Yorkshire are shown below.

Yorkshire Southern Pennine Fringe: key habitats and species for South Yorkshire

Key habitats: ancient and semi-natural woodland; Plantations on Ancient Woodland Sites (PAWS); good quality semi-improved grassland; purple moor-grass and rush pasture; and lowland meadow.

Key species/species groups:

Lapwing, curlew, otter, brown hare, water vole, farmland bird assemblages (including, skylark, grey partridge and barn owl), grassland fungi (including pink waxcap, nitrous waxcap and deceptive earthtongue), and freshwater fish (including European eel, Atlantic salmon and bullhead)

CASE STUDY: South Yorkshire Woodland Partnership

The South Yorkshire Woodland Partnership comprises four Local Authorities: Sheffield, Barnsley, Doncaster, and Rotherham; SYMCA; the Woodland Trust; Forestry Commission and Sheffield & Rotherham Wildlife Trust. This provides collaboration and expert guidance to expand, protect and sustainably manage trees and woodlands across the region.

Image credit: Christopher Tomson

Established in 2020, the Partnership has worked to establish resources to support national targets of increased tree and woodland canopy cover and to help address biodiversity decline.

Its vision is to have “a nationally recognised, vibrant and resilient network of trees and woodlands across South Yorkshire that delivers life-changing, sustainable benefits for people, nature, climate and the economy”.

This is being delivered through:

- Collaboration with landowners, local authorities, and community groups to deliver woodland creation and management.
- Identify and prioritise areas suitable for planting and management using environmental mapping.
- Provide technical support including advice and access to grants and funding to support landowners.
- Monitor progress and adapt interventions to maximise ecological, social, and economic benefits.

The long term benefits of this approach will:

- Increase tree canopy and woodland cover to strengthen climate resilience, biodiversity, and natural capital.
- Improve management of existing woodland, particularly ancient semi-natural woodlands, to enhance ecological, social, and economic value.
- Promote trees outside woodland and agroforestry, integrating tree cover into urban, rural, and agricultural landscapes.
- Support public access and community engagement to ensure equitable access to green spaces and tree cover.
- Coordinate with wider environmental initiatives including flood mitigation, pollution reduction, and the Nature Recovery Network.

The Partnership recognises the urgent need to expand and sustainably manage its trees and woodlands. Through coordinated action, ambitious targets, and evidence-based planning, the region commits to creating a resilient, connected, and nature-rich landscape.

Nottinghamshire, Derbyshire and Yorkshire Coalfield (NCA 38)

The Nottinghamshire, Derbyshire and Yorkshire Coalfield NCA is the largest in South Yorkshire, covering approximately a third (33%) of the region.

Several rivers flow into the area from the west, notably the Dearne, Don and Rother, which ultimately drain into the River Humber catchment. The geology of the area is dominated by coal measures, coal interbedded with sandstones, shales, and mudstones. The coal field supports a range of habitats including post-industrial sites, where oak, birch habitats are common with pockets of heather, particularly on reclaimed sites.

There are no active coal mines left in South Yorkshire. Work to restore the old mining sites began in the late 1980s and early 1990s, after the coal industry declined, marking a major move towards cleaning up the land and creating new wildlife habitats. Two community forest partnerships have had a positive impact on woodland cover across areas of the NCA and work continues to increase woodland cover and management. For example, The Conservation Volunteers work in partnership with The Land Trust, to manage South Yorkshire Community Woodlands in Barnsley, Doncaster and Rotherham, such as Dinnington Community Wood (35 hectares of grassland, mixed

woodland, wet meadow and footpaths and cycle paths). There are however some woodlands which have not received significant management since planting, resulting in single age woodland which is likely to pose opportunities for enhancement.

CASE STUDY: The Fleets (Coalfields, Barnsley district)

The Fleets is an area of urban Barnsley, where the Dearne goes through the centre of town. The river at this site previously had steep-sided banks and some embankment to keep the water in the river channel. A project was undertaken in 2025 to re-naturalise the river and its floodplain.

Image credit: Simeon Gurr

Yorkshire Wildlife Trust in partnership with the Environment Agency and Barnsley Metropolitan Borough Council worked to recreate more space for water to spill out onto the area that was previously the floodplain and create a 'wigglier' river channel with more variety in depth and width. Woody debris was anchored into place to change how water flowed through the channel at high flow and create sheltered areas for fish. Several depressions in the floodplain were created for flood water to stay in a little longer, and areas were seeded with native plants.

More natural solutions, rather than hard infrastructure solutions, are not possible everywhere, but are valuable where they are possible. Locations where this kind of work can be done are being added to a pipeline of works, as the combined benefits of doing many interventions will result in more noticeable overall benefits in the future.

The work has created benefits for wildlife in the river and on the floodplain, whilst also helping to tackle potential future flooding issues by creating more space for water in flood conditions, resulting in a lower impact on people and properties.

This area supports mixed farmland including significant areas of arable land. Farming here tends to be more intensive than in other parts of the region due to more productive soils and lower altitudes. Livestock farming has slowed since 2000 with lower stocking

rates and grasslands here are mainly improved for agriculture, or at best, semi-improved. Field boundary hedgerows also feature strongly in this area.

Built-up areas comprise the largest part of this NCA including Barnsley, Rotherham and part of Sheffield. Semi-natural habitats have a scattered distribution and are vulnerable to continued fragmentation due to the expansion of housing and light industry[54]. However, extensive areas previously affected by industry and comprising brownfield sites, spoil heaps and subsidence flashes, have in recent times been restored.

A key focus of nature recovery was developed through the Dearne Valley Green Heart Nature Improvement Area (NIA). The aim for this NIA is to help restore and enhance the ecological networks of the river, its floodplain, and its link to habitats on surrounding slopes and hills, resulting in 1300 hectares of reedbed, wet grassland, wet woodland and woodland, with a 2690 hectare buffer area of farmland, amenity grasslands, and reclaimed industrial areas whose biodiversity value will be enhanced. The aim is to link up core areas and target farmland areas of poor ecological functionality covering 1700 hectares. The Dearne Valley Wetlands SSSI is a series of sites in this NIA, designated in 2022 for its assemblages of breeding birds of damp grasslands and scrub, open waters and their marginal habitats, reedbeds and fen.

The Fleets in Barnsley is a good example of where works to re-naturalise the river Dearne and its floodplain have been undertaken, providing benefits for people and nature (see case study).

Key habitats and species for the Nottinghamshire, Derbyshire and Yorkshire Coalfield NCA in South Yorkshire are shown below.

Nottinghamshire, Derbyshire and Yorkshire Coalfield: key habitats and species for South Yorkshire

Key habitats: lowland meadows, lowland mixed deciduous woodland, standing open water and wetlands, lowland heathland, lowland neutral grassland.

Key species/species groups:

Otter, water vole, common toad, lapwing, bittern, freshwater fish (including European eel, Atlantic salmon and bullhead), bats (including Daubenton's, brown long eared and noctule), and farmland bird assemblages (including grey partridge, corn bunting, and yellow wagtail).

Southern Magnesian Limestone (NCA 30)

The Southern Magnesian Limestone character area is characterised by underlying limestone, predominantly magnesium carbonate, which being less soluble than pure calcium carbonate limestone, leads to different landforms and soil types. The area has numerous active and restored quarries.

[54] https://nationalcharacterareas.co.uk/Nottinghamshire-Derbyshire-and-Yorkshire-Coalfield/

The landforms include rolling hills, escarpments, and valleys and the area supports fertile, intensively farmed arable land, with large fields bounded by hawthorn hedges and some dry stone walls. Arable land use forms by far the largest portion of the NCA covering just over half of the area. Balancing nature conservation targets with agricultural productivity of land is likely to be an important consideration in terms of delivering nature recovery across farmed landscapes at scale. For example, The Limestone Ridge Nature Recovery Group has identified the decline of farmland birds as an area of concern that they can work to help turn around (see case study).

CASE STUDY: Wildlife improvements on arable land, Limestone Ridge Nature Recovery Group (Magnesian limestone, Doncaster district)

The Limestone Ridge Nature Recovery Group is a group of farms on the magnesian limestone area of South Yorkshire that farm arable land, with some other habitats such as woodland also present. The group has identified the decline of farmland birds as an area of concern that they can work to reverse. The species of principal focus are grey partridge, lapwing and corn bunting, all of which were common in the area in the past but are now on the brink of being lost from the area.

By working together within the group, but also with advice and guidance from Yorkshire Wildlife Trust and the Game and Wildlife Conservation Trust, strides are being made to bring South Yorkshire's nature back.

The group are encouraging member farms to put aside up to 10% of their croppable land for the benefit of wildlife, putting in measures that will benefit farmland birds, but also a range of other species like bees, ground beetles and sawflies. The creation of beetle banks, wildflower strips and cultivated margins alongside planting of new hedgerows and better management of existing hedgerows is already seeing some of the species increase in numbers. Red hemp-nettle was recently reintroduced to cultivated margins.

Strategic planting of hedgerows has been undertaken to link woodlands and old hedgerows and is an important way to restore connectivity in the landscape. The group are also looking for ways to fund the creation of new ponds to further add some of the elements that farmland birds use in the landscape, but that will also provide benefits for other types of wildlife.

The soils overlying the magnesian limestone support unique plant communities. The Southern Magnesian lime woods (e.g. Sprotbrough Gorge) are very diverse, and magnesian limestone grassland is a nationally scarce calcareous habitat, supporting notable species such as Yorkshire broomrape, brown argus, duke of burgundy, a range of orchids, milk vetch and spring sedge. Where grasslands have not been managed, they give rise to natural succession of mixed scrub mosaic which in turn provides important habitat and a foraging resource for birds and insects. Maltby Commons in Rotherham is an area where the benefits of grassland management measures can be seen, with a committee of Maltby Town Council, Crags Community Group, Sandbeck estate and Yorkshire Wildlife Trust working to ensure that the area is managed for wildlife and to enable access for local people to enjoy.

The woodlands remain important within the NCA, these include a mix of plantation woodlands, lowland deciduous woodland (with oak, ash and lime dominating the canopy), and with ancient woodlands supporting the rarer large-leaved lime. Woodland cover has increased in recent decades, with many small woodland parcels established throughout the area. Parkland arising from the existence of large estates is also common. These areas have often benefited from stable or traditional management and can include veteran trees, wood pasture and large-scale habitat mosaics. Anston Stones Wood, the majority of which is designated as a SSSI, is a habitat mosaic comprising calcareous grassland, scrub and wetland, and is an important example of limestone woodland in South Yorkshire.

Key habitats and species for the Southern Magnesian Limestone NCA in South Yorkshire are shown below.

Southern Magnesian Limestone: key habitats and species for South Yorkshire
Key habitats of ecological value: Arable field margins, hedgerows, lowland calcareous grassland, lowland meadow, lowland fen, ancient and native woodland, riparian habitats (rivers, wetlands etc.).
Key species/species groups:
Brown hare, white letter hairstreak, latticed heath, turtle dove, lapwing, common toad, farmland bird assemblage (including corn bunting, grey partridge and yellowhammer), calcareous grassland plants (including rare spring sedge, maiden pink and purple milk vetch), and woodland bird assemblage (including tawny owl, greenfinch and woodcock).

Humberhead Levels (NCA 39)

Doncaster is the main urban area within this NCA, which is otherwise characterised by flat agricultural land, criss-crossed with drainage channels, and 'wastes' or moorland, with open vistas and expansive skies, leaving parts of this NCA with a sense of remoteness. Other important features include hedgerows, green lanes and habitats such as irreplaceable lowland fen.

Fertile alluvial and peaty soils support intensive agriculture particularly arable farming. Arable areas represent the largest land use and there is continued pressure to maintain agricultural land productivity, which has limited the expansion of the semi-natural habitat network[55].

The NCA includes intricate networks of dykes, drains and rivers reflecting its history of land reclamation and drainage. Vermuyden's radical drainage schemes of the 1600's completely transformed the landscape of the Humberhead Levels, diverting the River Don and cutting artificial drainage channels which succeeded in draining a wide area of the Levels. This has resulted in the drying of peatland and wetland habitats, although this loss has been countered in more recent times by wetland creation and restoration

[55] https://nationalcharacterareas.co.uk/Humberhead-Levels/

schemes. The wet grassland improvements at Carr Lodge in Doncaster are an example of recent improvements to benefit a range of species (see case study).

Semi-natural habitats have been under considerable pressure from both residential and industrial development in recent years, including warehousing that has developed along the edge of settlements such as Doncaster[56].

CASE STUDY: Wet grassland improvements, Carr Lodge (Humberhead Levels, Doncaster district)

On the south side of Doncaster, a large area of land was earmarked for housing development on what was Carr Lodge farm, and mitigation was needed for wildlife losses. 35 hectares of land was given to the Land Trust and managed by Yorkshire Wildlife Trust to maintain and improve the site for wildlife. Although it already had several small ponds, 18 new small to medium-sized ponds and several shallow wet ditches were created to benefit a range of species, but specifically targeting grass snakes, great crested newts and the variety of insects that are found in ponds.

Alongside this, work to raise the winter water levels, by simply blocking a small ditch, was undertaken to increase the area available for birds. This created winter flooding that often stays until May or June, which is ideal for species such as lapwing and redshank that now breed on site. Changing from very heavily grazed pasture to lower numbers also allowed the vegetation to change, with more tussocky patches, which is good for ground nesting birds to hide their young chicks in.

Image credit: Tim Prosser

[56] https://nationalcharacterareas.co.uk/Southern-Magnesian-Limestone/

Funding was provided through the Natural England agri-environment scheme and the Land Trust, with support from City of Doncaster Council. This work has paid off, with the site becoming a Local Wildlife Site in 2024 mainly for its insect interest, with a large number associated with the ponds and wet features. The location of Carr Lodge, adjacent to Potteric Carr helps to buffer and extend habitat and create a larger, more sustainable area for wildlife to thrive in.

The Humberhead Levels are a special habitat within South Yorkshire, one of the country's rarest habitats and internationally important. They are renowned for their wetland habitats, including fens, marshes, reedbeds and most notably, lowland raised mire, along with dry acid grassland and lichen and bryophyte heaths. The Levels are particularly important for bird species such as nightjar and those that congregate in large numbers, such as wintering and passage waterbirds, including golden plover. Ancient willow pollards are a feature of the former fen land, particularly Fishlake, Doncaster. Wet woodland is also a feature in places such as Shirley Pool SSSI.

Thorne and Hatfield Moors are part of the Humberhead Peatland National Nature Reserve, comprising 31% of the lowland raised peat bogs in the UK making this the largest stronghold for the habitat in England. Thorne and Hatfield Moors are designated as a Special Area of Conservation for their lowland raised mire, and Special Protection Area for their population of breeding nightjars, with additional SSSI features being the assemblage of invertebrates and breeding birds present. There are a range of breeding waders and wintering raptors such as golden plover, hen harrier, merlin, and short-eared owl[57]. Cranes have also been recorded breeding on the moors, and the site is renowned for being home to over 5,000 species of plant and animal, of which over 4,000 are insects[58].

Key habitats and species for the Humberhead Levels NCA in South Yorkshire are shown below.

Humberhead Levels: key habitats and species for South Yorkshire

Key habitats: lowland raised bog; lowland fen, lowland heathland, deciduous woodland, acid/calcareous /neutral grassland, and ditch networks.

Key species/species groups:

Harvest mouse, Eurasian otter, scarce vapourer moth, large heath butterfly, petty whin, pillwort, curlew, bittern, great crested newt, nightjar, wetland bird assemblage (including black headed gull, teal, and great egret), wetland plant assemblage (including lesser water plantain, marsh pea and water violet), reptiles (including adder, grass snake and common lizard) and lowland heath invertebrate assemblage (including pill mire beetle and Thorne pin-palp).

[57] https://thmcf.org/

[58] https://publications.naturalengland.org.uk/file/5296302

Challenges and opportunities for nature recovery

Building on the features, land uses, activities and pressures on our region's varied landscapes, there are a number of key themes emerging which highlight both the challenges and opportunities for nature recovery in South Yorkshire. These include:

- Development and infrastructure pressures, impacts, and opportunities
- Climate change
- Access to nature
- Visitor pressure, misuse and anti-social behaviour
- Habitat management and ecological connectivity for species
- Tree planting, woodland creation and management
- Waterways and water quality
- Natural flood management and nature based solutions
- Homes, gardens and communities
- Agriculture and agroforestry

These challenges and opportunities are explored further below.

Nature recovery challenges

Development pressures and impacts

What you told us:
" We need to build far more homes to grow and succeed economically, while maintaining and improving access to green space."

New development and associated infrastructure bring an increased demand for land for delivery, raw materials through quarrying, increased water requirements and the generation of more waste. It can result in additional pressure on ecosystems which support us, through impacts on habitats, fragmenting natural landscapes, climate, biodiversity, water quality and availability, and pollution (including noise and light).

For example, increased urban pressures are contributing to deterioration in habitat quality in both SSSIs and LWS, impacting on dark skies landscapes (areas where light pollution is minimised).

Development also poses a risk for the loss of existing green spaces and can lead to the loss of connectivity and key stepping stones.

Sites for new development need to be selected with key consideration for nature, particularly when it comes to brownfield sites. These can be a great opportunity to build on sites with low ecological value, but there needs to be awareness of sites that are biodiverse and have the potential to support important species and ecological communities.

Doncaster is currently leading the Yorkshire and Humber region when it comes to growth in transport and storage which brings additional environmental challenges such as significant habitat fragmentation due to the road network and the impact on wildlife (through impacts on movement and loss of animal life to traffic).

Watercourses can be key wildlife corridors however can be impacted by pollution, including from sewerage and storm overflows, wastewater treatment plants, water run-off from roads, from land use (such as, pesticides, sediment, nutrient enrichment) or industrial sources (such as heavy metals, chemicals and 'forever' chemicals). Plastic and microplastic pollution is becoming an increasing issue nationally and globally, which is expected to impact South Yorkshire's waterways too.

Physical modifications to waterbodies (e.g. canalisation, weirs, and bank modifications), as a result of historic industrialisation and to enable new development impact natural flow, reduce the condition of watercourses and negatively impact aquatic connectivity and the presence of key species. Along with the impacts of reservoirs, flood protection measures, wider urbanisation and agriculture, this can contribute to an overall poorer ecological status due to their impact on natural river life.

Our legacy of traditional industries includes a need to address the impact of minewater rebound (where former mine workings flood with water and can lead to discharges of polluted mine waters) on rivers and watercourses and ongoing management of existing schemes. This may provide opportunities for creation of wetland and riparian habitats.

Over abstraction of water from rivers, streams, lakes, ponds, or groundwater sources can impact of the hydrological and ecological status of a variety of habitats across catchments. Yorkshire Water's Water Resource Management Plan 2024 has identified a potential need to reduce abstraction by 11 million litres per day from groundwater sources in North and South Yorkshire by 2035[59].

An increasing demand for renewable energy generation is resulting in more wind turbines and solar farms, and need for biomass growth. Whilst renewable energy is a

[59] https://www.yorkshirewater.com/about-us/our-vision-and-plans/resources/water-resources-management-plan/

key step towards achieving net zero targets, selecting the correct areas to host renewables and correctly mitigating for species that may be impacted is important.

Climate change

Climate change is resulting in more intense weather patterns; with flooding, heatwaves and wildfires becoming more prevalent. Climate change is likely to result in species migration and potential losses of less mobile, or less adaptive species, and a resultant decline in diversity associated with small and/or isolated habitats.

The impact of a rising sea level as a result of climate change will impact South Yorkshire. Marine projections show that sea level rise will continue across the UK under all emissions pathways[60]. This will increase flows on tidal rivers, including the Lower Don. There are increasing incidents of flooding and change in flows in rivers such as the Don, Dove and Dearne with more frequent winter flooding. This often has a knock-on effect on local towns and cities, including the damaging effect of floods on land-based species, impacts on soil health, damage to habitats and impacts on species, including the spread of pollutants. Increased intensity of rainfall and flood land-based result in an increase in sediment loads and nutrient run-off from agricultural land into ditches/drains, canals and rivers, and erosion of peat soils and habitats.

Drier summers and prolonged droughts may lead to the drying of lowland peatlands and low river flows and water shortage in wetlands, further degradation of blanket bog, transition mire and wet heath habitats. They may lead to a loss of soils to desiccation, cause changes to nationally scarce calcareous plant communities, stress on food production, and may alter agricultural practices. Climatic modelling suggests that by 2080 the distribution and occurrence of species including merlin, golden plover, and ring ouzel will be impacted by climate change[61].

The impacts of climate change may affect the survival of tree and scrub species and result in increased instance of tree health issues which may impact our landscapes and the trees, woodland and hedgerows. For example, the result of ash dieback and Phytophthora can be seen in areas such as Greno Woods in Sheffield.

Habitat and species connectivity and management

What you told us:
"We need a mix of wetland, woodland and wildflowers to improve greens spaces for wildlife"

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60 https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/ukcp/ukcp18_headline_findings_v4_aug22.pdf

61 Pearce-Higgins, J.W. (2021) Climate Change and the UK's Birds. British Trust for Ornithology Report, Thetford, Norfolk. Available at: https://www.bto.org/sites/default/files/publications/bto_climate_change_and_uk_birds_-_james_pearce-higgins_bto_web-compressed.pdf

Whilst important habitats for nature can exist within urban environments, connectivity to allow movement and dispersal of species is key, and lack of connectivity can be a key driver in species decline.

Lack of recognition and funding for habitat management (or ability to access to existing funding) is a key risk to the ability of land managers to use appropriate management methods.

Without management, natural succession will result in the loss of high distinctiveness habitats to more ubiquitous scrub and woody species. Whilst these are not low value habitats, the high value of Open Mosaic Habitats on previously developed land should be recognised and maintained, so as not to lose the unique assemblage of species it supports and attracts. Neglect and lack of funding for management is another important factor in trying to maintain the positive conservation management of LWSs.

A lack of working together with landowners, land managers and other stakeholders to meet the needs of a wide range of land uses and activities can be detrimental to protecting biodiversity and supporting nature recovery. For example, in the Dark Peak NCA, the difficulty in managing moorlands appropriately to meet the needs of a wide range of stakeholders and land use including agriculture, livestock production, and game production while protecting the biodiversity, geology and hydrology of the area has been identified. The dominance of purple moor grass predominantly found in upland wet moorland areas, and which has low diversity and conservation value, is a major challenge.

Land management approaches can have detrimental impacts. For example, a key land use and activity steering management of the Dark Peak is driven grouse shooting. Whilst it can be argued that it results in the upkeep and management of heathlands, some of the practices used are intensive, such as large-scale heather burning. There is also an increase in the need for tracks to be created and maintained and a requirement for predator control, which can result in the persecution of birds of prey[62].

Fragmentation, scrub encroachment and nutrient enrichment can present particular threats to the habitats and species supported. In the Yorkshire Southern Pennine Fringe NCA, unimproved neutral grassland habitats are declining as a resource (for example, a 75.5% loss in unimproved grasslands within the Sheffield area was identified between 1980 and 2001[63]. In the Southern Magnesian Limestone NCA a mosaic of scrub patches are important for connectivity, shelter and species that require a range of habitats to

[62] RSPB (2022) Driven Grouse Shooting: Assessing the economic and social impacts of future options for grouse moor management.
[63] https://www.sheffield.gov.uk/sites/default/files/docs/parks-sport-and-recreation/parks-countryside-service/grassland-hap.pdf

survive, over encroachment results in loss of the species rich grasslands and a balance must be struck. Soils north of Sheffield (e.g. the Sheaf) are also identified as having a 'very high' or 'extreme' vulnerability to soil poaching. Sheep and other livestock are also a driver of this and the short sward created increases the occurrence of run off.

Heavily modified rivers with a large number of weirs need addressing to improve fish passage and river condition to improve spawning habitat for salmonids and other species.

The spread of invasive non-native and pests and diseases species pose considerable challenges. For example, Japanese knotweed can colonise and dominate brownfield sites and riparian zones to the detriment of native flora and tree diseases such as ash dieback can affect trees and woods in urban areas. Analysis indicates that since 2009 there has been evidence of crayfish plague in South Yorkshire[64] having spread from non-native, invasive American crayfish to native and vulnerable white-clawed crayfish. American mink have spread to many places in the Don Catchment including the centre of Sheffield. The Yorkshire Invasive Species Forum also lists a range of non-native terrestrial plants such as Himalayan balsam and giant hogweed which can dominate and damage river banks, as well as floating pennywort and New Zealand pygmyweed which dominate waterbodies – all altering and impacting native habitats and species. Japanese knotweed has been identified on the River Don in Rotherham Town Centre.

Access to nature

Access to the outdoors offers many benefits for people, including health and wellbeing. However, there is considerable inequality when it comes to access to nature. Public Health England[65] (2020) found that the groups who most infrequently access green spaces were people who were older; those in poor health; people of lower socioeconomic status; those with a physical disability; ethnic minorities; and people living in deprived areas, among others. While improving equity in access to nature doesn't contribute directly to nature recovery, research shows that people who experience nature frequently are more likely to be motivated to engage in positive actions towards the natural environment[66]. Providing equality of access can be a significant challenge especially for some sections of communities who are less represented in the countryside or could gain the most benefit (e.g. ethnic minorities or those with health issues).

Evidence indicates that interventions in green and blue spaces can deliver significant benefits for human health and wellbeing, notably through improved wellbeing,

[64] https://www.wildsheffield.com/wp-content/uploads/2018/05/Sheffield-State-of-Nature-2018-report-web-version.pdf

[65] https://assets.publishing.service.gov.uk/media/5f202e0de90e071a5a924316/Improving_access_to_greenspace_2020_review.pdf

[66] https://www.sciencedirect.com/science/article/abs/pii/S0006320723005189

increased physical activity, and enhanced social connectedness. Increasing the visibility and access to green and blue spaces would have a measurable impact on the healthy life expectancy of our residents across the life course.

Visitor pressure, misuse and anti-social behaviour

> ***What you told us:***
> *"We have a big green area full of litter and junk/scrap (big job) no one cares for it, has a pond with ducks, waterlogged grass and trees just covered in litter."*

Without careful management increased visitor pressure can lead to increased wildlife disturbance, for example the loss of ground nesting birds. Recreation pressures from walking, mountain biking and domestic dogs, result in erosion, both of existing paths and from illegal off roading, littering and dog fouling and wildlife disturbance. This is an issue for South Yorkshire as, for example, research shows that in the South Pennine Moors 10% of the visitors surveyed came from the Sheffield area[67].

Crime and the misuse of local green spaces and wildlife sites – including designated sites – is an increasing issue, and can sometimes lead to failure of habitat creation or enhancement projects (e.g. vandalism to tree planting), disturbance of wildlife or damage and degradation of existing habitats.

Agriculture and agroforestry

> ***What you told us:***
> *"Agricultural and industrial exploitation of nature leaves it in a poor state in the area. Our rivers and countryside are polluted from current and especially historical dumping (legal and illegal)."*

Agriculture and agroforestry practices can present a number of challenges if not carried out in accordance to best practice or guidance, such as the loss of natural and semi-natural grassland to increase agricultural use with heavy use of glyphosate and other chemicals. The over-use of herbicides and pesticides in agricultural landscapes can be an issue, along with a reduction in of soil quality and quantity leading to increased use of chemical fertilisers.

Productive agriculture can limit the network of semi-natural habitats. For example, a low water table in the Humberhead Levels NCA is primarily due to the land being intensively drained for agriculture, which contributes to the drying out of peat bogs and other water dependent habitats.

[67] Recreation use of the South Pennine Moors and implications for strategic housing growth. Footprint Ecology. March 2024.

Hedgerows are a key habitat used to demarcate field boundaries however across the country their coverage halved in the second half of the 20th century. Across the north areas of farmland contain gappy or defunct hedges, and in some areas they have been completely lost.

Nature recovery opportunities

Development and infrastructure

> ***What you told us:***
> *" Nature should dovetail with housing and business. There should be green spaces available for children to play close to their homes."*

New development, particularly for housing, presents an opportunity for designing green infrastructure and spaces to benefit nature, improve access to nature for people, and achieve other benefits such as reducing the risk of flooding.

A key opportunity will be the effective use of Biodiversity Net Gain, a planning requirement that came into force in 2024, that puts an onus on developments to offset biodiversity loss occurring from their proposals as well as show a net gain in biodiversity. The preference is for the biodiversity to be woven into site proposals, and in the case of residential developments this ensures new residents have close access to a new green space. Biodiversity Net Gain can also support the delivery of larger areas of habitats within development sites by requiring Habitat Management and Monitoring Plans which are overseen by Local Authorities. Where onsite delivery is not possible, large scale offsite habitat creation or biodiversity enhancement can be achieved through 'Habitat Banks' in key strategic locations, here developers can pay for the 'biodiversity units' that are generated from the enhancement. Local councils and organisations within South Yorkshire are currently looking at establishing habitat banks to provide opportunities to create nature-rich areas that could be funded by local developments and will have the funding to be maintained for the benefit of nature and people, for at least the next 30 years.

Nature recovery can be supported by promoting the inclusion of high-quality green infrastructure, including Sustainable Drainage Systems, in new developments and the adoption of standards such as Building with Nature[68] to build with water, wellbeing and wildlife in mind, and the Natural England Urban Greening Factor, a tool developed to increase the level greening in urban environments. There are also opportunities to encourage the retrofitting of appropriately designed and located Sustainable Drainage Systems and other green/blue infrastructure into developments and industrial areas to

[68] https://www.buildingwithnature.org.uk/

reduce flood risk, improve water quality, address health inequalities and enhance wildlife.

Habitat creation, habitat & species connectivity and management

What you told us:
"Rivers and our water carry biodiversity through our region"

There are a range of opportunities for creating new habitats, supporting connectivity for species and increasing habitat and species management including:

- Working with landowners and land managers to support positive management of sites identified as important for nature, including protecting, managing, restoring and enhancing important habitats and species. This includes working to identify and use existing funding streams to allow a greater flexibility in land management. For example, The Uplands Management Group and Moors for the Future Partnership[69] are working with land managers to advise on the best practice management of blanket bog.

- Encouraging the uptake of Pollinator Parks such as at Dalton Park Outlet Shopping Centre and Crystal Peaks Meadow, by other businesses and retail parks across South Yorkshire[70].

- Working with groups such as the Yorkshire Invasive Species Forum[71] to tackle the spread of invasive non-native species both within South Yorkshire and across borders into neighbouring regions to deliver effective results.

- Explore opportunities to deliver multiple environmental benefits such as helping to restore lost habitats and landscape features, store carbon, and provide fuel, shelter and recreational opportunities, for example through increasing the extent of native woodland, scrub and trees and managing existing tree cover. When focussed near waterways in valleys this can also help to reduce flood management by increasing water retention (although not to the extent where dense canopy cover is present over watercourses). A focus on steep sided valleys can also help mitigate a range of impacts associated with climate change such as erosion and run off.

[69] https://www.moorsforthefuture.org.uk/_data/assets/pdf_file/0026/80657/Blanket-bog-land-manager-guidance-FAQs-Report.pdf
[70] https://www.climateactionnortheast.org.uk/pollinator-parks
[71] https://yisf.org.uk/projects/

- Encouraging the creation and expansion of a more ecologically connected network of habitats including looking for opportunities to create and/or enhance corridors which link urban/suburban areas with the surrounding countryside.
- Encouraging a more diverse mosaic of habitats to develop will provide greater climate resilience, stock management and natural flood management to the area and the species it supports. This can be done through pastoral agroforestry and other such measures.
- Encourage local councils to enhance biodiversity through wildlife-friendly management practices, e.g. Barnsley council's approach to 'rewilding' selected grassland areas for wildlife.
- Protect, manage and connect existing fragments of semi-natural and natural habitats by restoring, enhancing, and expanding 'wildlife corridors' such as field margins, road verges, railways and highway green estate, riparian corridors and woodlands to create a functioning ecological network that links the fragmented patches of habitats through urban and sustainably farmed environments, benefiting nature recovery and resilience to climate change.
- Protect existing wetlands from further drainage, pollution. and nutrient or sediment run-off by establishing permanent grass buffer strips (see above), and working with adjacent landowners to ensure grazing and other land management practices are appropriate.
- Restore irreplaceable fen and lowland raised mire wetland habitat and enhance and expand areas of other key wetlands such as raised bogs, grazing marsh, ponds, wet woodland and reedbeds to create resilient ecological networks benefitting biodiversity, regulate water flow and availability, and enhance water quality.
- Rewetting of lowland peatland would also provide a range of co-benefits including biodiversity enhancement and carbon retention.
- In the Humberhead Levels NCA, restoring a more natural hydrology to prevent the drying out of peat land and to enable restoration, and encouraging cultivation practices that will maintain cover on agricultural peat soils and protect underlying palaeo-environmental features (such as microscopic remains of plants, animals and other organic remains).
- Enhance and expand areas of species-rich grassland focusing on areas alongside drains and riparian habitats to buffer run-off from fields. Other corridors for creation and enhancement should include road verges and railway lines.

Tree planting, woodland creation and management

What you told us:
"We need more trees, green lungs."

There are opportunities to plant woodlands and trees outside of existing woodland. This can include providing more trees in urban spaces, providing wider environmental benefits, including creation of new and enhancement of existing green corridors, improved air quality and more urban cooling. There are opportunities for organisations and individuals to get involved with initiatives for planting and caring for trees such as Sheffield Street Tree Wardens[72], Kids Plant Trees[73] (see case study below) and South Yorkshire Mayor's million trees campaign[74].

CASE STUDY: Kids Plant Trees

Kids Plant Trees is a South Yorkshire based not-for-profit social enterprise dedicated to helping children and nature thrive together. The initiative was founded in 2020 by a group of local parents seeking to respond to the climate and biodiversity crises in a practical, community-focused way. The project addresses a growing national concern: children's declining connection with nature, particularly in urban areas, and the wider need to increase tree cover and enhance green spaces to support wildlife, resilience, and wellbeing.

Working closely with Sheffield City Council's community forestry team, schools, community groups, land developers and local businesses, Kids Plant Trees delivers hands on nature engagement and green space improvement projects across South Yorkshire. Their work spans two main programmes: Green Schools, supporting primary schools to create nature-rich outdoor environments, and Green Communities, enabling residents and families to co design and enhance local green spaces through activities such as tree planting, wild play areas, and habitat creation.

Central to the initiative is the principle of involving children from the very start. Young people contribute design ideas, participate in outdoor workshops, and gain practical skills in planting and caring for trees and wildlife habitats. This approach builds environmental stewardship, confidence, and a sense of agency, while improving school grounds and community spaces for nature and people.

To date, Kids Plant Trees has planted over 8,000 trees, worked with 10 schools, and improved seven public spaces, with activity prioritised in areas with higher deprivation and lower access to green space. Their work also supports local climate and biodiversity aims by increasing tree cover, enhancing habitat networks, and promoting community ownership of green spaces.

[72] https://sheffieldstreettreepartnership.org/
[73] https://www.kidsplanttrees.org/
[74] https://www.southyorkshire-ca.gov.uk/million-trees

By combining nature recovery with social impact, education, and community collaboration, Kids Plant Trees offers a powerful model for how small, place-based initiatives can deliver lasting environmental and wellbeing benefits across South Yorkshire.

Planting opportunities include restoration of Plantation on Ancient Woodland Sites to their former habitat, expanding areas of native woodland through planting (riparian woodland, hedgerow planting) or through encouraging natural regeneration of suitable areas.

Enhancing existing woodlands and expanding tree and woodland can contribute to canopy cover in locations where well managed woodland can have multiple benefits for biodiversity, water quality, flood risk, and landscape character.

Working with landowners, land managers and stakeholders such as South Yorkshire Woodland Partnership to fill in gaps in hedgerows using a range of native species, incorporating hedgerow trees to increase diversity in structure and habitat, and managing margins to ensure hedgerow health and provide a buffer that benefits small mammals, herptiles and pollinators.

There are opportunities to apply relevant guidance and principles in the creation of new woodland – such as the Moors for the Future's 'Creation of Clough Woodlands guiding principles'[75], and the 'Decision support framework for peatland protection, the establishment of new woodland and re-establishment of existing woodland on peatland in England July 2023[76].

Protecting and improving sustainable management of all woodland types is also important, taking account of the need for restructuring existing woodland as a result of tree health issues and for the need to be resilient to climate change impacts such as drought and increase resilience to pests and disease. This includes management and protection of veteran trees, and restoration of ancient woodlands which have been planted with conifers.

Increasing the area of woodland under sustainable management (i.e. UK Forestry Standard) and in productive use can ensure that multiple purposes are provided including the provision of timber and biomass for local use, and to enhance both wildlife and recreational opportunities. Ancient semi-natural woodland and Plantation on Ancient Woodland Sites should be targeted as a priority with a focus on bringing them into positive management. Connectivity and buffering should be developed around and between existing woodlands to improve opportunities for wildlife to commute and to protect wildlife that utilise the woodlands. This could include

[75] https://www.moorsforthefuture.org.uk/our-resources/file-preview?id=88904

[76] 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

supporting landowners through expert advice, training and support in applying for grants.

Waterways and water quality

What you told us:
""Our water systems need reeds, woodland, a variety of water side areas for biodiversity"

Across our region there are opportunities to manage and enhance the watercourses and catchments to benefit nature conservation, recreation, public enjoyment, water supply, water quality and flood management. This includes protecting, enhancing – and where appropriate, modifying – waterways in cities, towns and villages and ensuring a well-connected network of green infrastructure throughout urban settlements improve fish passage and wildlife dispersal, reduce flood risk, enhance health and wellbeing and increase nature connection opportunities. This may include managing drains at higher water levels, or pre-emptive water level management to accommodate water storage ahead of heavy rainfall.

Engagement and interpretation can be used where possible to improve connection with people and reduce pollution from littering and vandalism. All Hands on the Don is a good example of community-focused recovery along the River Don (see case study below).

CASE STUDY: All Hands on the Don

All Hands on the Don is a community-focused nature recovery initiative led by the Don Catchment Rivers Trust (DCRT), supporting the long-term restoration of the River Don and its wider catchment. The project responds to well-documented environmental pressures affecting the Don system including habitat degradation, water pollution, invasive species, fragmentation caused by historic industrialisation, and limited public connection to rivers and their wildlife. These challenges directly impact ecosystem health, climate resilience, and the wellbeing of local communities across South Yorkshire.

Building on DCRT's long history of river restoration and community engagement, All Hands on the Don delivers a wide programme of activity centred on volunteering, habitat improvement, access enhancement, and environmental education. The initiative brings together volunteers, schools, community groups, landowners and local organisations to provide hands-on opportunities in practical conservation, citizen science, ecological surveys, and heritage-focused events. Through this, it fosters stronger connections between people and the river, while improving understanding of river ecology and the pressures affecting it.

A key element of the programme is its targeted habitat work, including natural flood management interventions, removal of invasive non-native species, and improvements to riparian habitats that support fish passage, biodiversity recovery, and improved water

quality. These actions directly contribute to nature recovery goals such as restoring ecological networks and improving the condition of freshwater and wetland habitats.
The project also operates a Community Grant Scheme, enabling local groups to deliver their own river-focused initiatives from habitat creation and pollution mitigation to heritage restoration and improving riverside access. This strengthens community ownership and broadens participation, especially among people who may not traditionally engage with nature.
Collectively, All Hands on the Don delivers significant social and environmental benefits: enhanced biodiversity, revitalised river environments, improved public access, increased community cohesion, and greater skills, confidence and wellbeing among participants. It exemplifies how collaborative, community-led action can support the long-term recovery and stewardship of South Yorkshire's river landscapes.

Managing, enhancing and extending wetland habitats associated with the rivers flowing through our region (including wet woodland and scrub) and their tributaries can help increase the landscape's ability to naturally and sustainably manage flooding, improve water quality and increase the resilience of these habitats, the riverine landscape and associated species to climate change.

The river corridors through the Nottinghamshire, Derbyshire and Yorkshire Coalfield NCA area have been heavily modified for urbanisation, industry and flood defence. Mitigating these impacts and restoring natural processes provide a great opportunity for improving biodiversity, reducing flood risk and providing access to nature.

Other nature recovery opportunities, include the use of buffer strips along watercourses and actions aimed at addressing diffuse pollution, improving water quality through improvements to sewerage and sewerage treatment infrastructure, and introducing more fish passes which enhance movement and migration opportunities for fishes, and removal or modification of barriers to fish passage.

Natural flood management & nature-based solutions

What you told us:
"More ponds and leaky dams help protect against floods and offers water and homes for wildlife in a natural way."

Nature-based solutions offer opportunities to mitigate the impacts of climate change and many of the other environmental challenges detailed above, particularly if a catchment-based approach[77] is undertaken e.g. re-naturalising rivers, creating and extending riparian corridors and wetlands, and considering reintroduction of key species (recognising that this can also bring its own challenges) would have great benefit for wildlife, and could be linked to other benefits like slowing the flow and

[77] https://yorksandhumberclimate.org.uk/nature-based-catchment-solutions

reducing flood risk and enhancement of water quality. See Nature-based Solutions case study below for more on how we are addressing this in South Yorkshire.

CASE STUDY: Nature-based Solutions: Source to Sea Programme

South Yorkshire's Source to Sea Nature-based Solutions Programme is a catchment-scale initiative aiming to 'slow the flow' across South Yorkshire and create more space for water. Restoring and developing more natural landscapes will help to slow and store water, help nature recover, and provide wildlife-rich environments for people to thrive in. This will reduce flood risk and mitigate climate change by storing carbon and restore nature by protecting the environment.

The Source to Sea project is split into three areas important for their changing characteristics and influences on nature recovery:

- the Upper Don (Peak District National Park and Sheffield),
- the Middle Don (North East Derbyshire, Rotherham and Barnsley) and
- the Lower Don (Doncaster).

The Upper Don project is the first of the three to be developed, primarily focusing on slowing the flow and storing water in Sheffield's hills, looking at nature-based solutions including creating ponds and wetlands, restoring upland peatlands and managing soils.

Catchments, where rain falls and is collected, are complex, with natural and built features, drainage, and other factors affecting how water moves. Connected by Water[78] provides more detail on the types of flooding experienced in South Yorkshire, and projects that can help improve our resilience to these risks. Nature-based solutions are one such response and can include natural flood management initiatives in the headwaters within the river channel and on riparian habitat, which are already being implemented across South Yorkshire.

As such, South Yorkshire's rivers are key environmental assets and become important for specific examples of nature-based solutions. Rivers have the potential to support a high diversity of aquatic and terrestrial wildlife, along with providing connectivity, linking habitats throughout the region and being critical components of flood risk management.

The Limb Brook Project[79] is a demonstrator showcase of the positive benefits of natural flood management, where leaky dams, attenuation ponds and swales were created or installed, along with hedgerows and meadow creation. These habitats now not only support a range of wildlife including a variety of amphibians and insects, but data is showing that the interventions are slowing the flow into the brook by 2%. Furthermore, during modest storms 100% of rainfall can now be captured rather than causing unwanted and potentially damaging flooding.

Recognising rivers and canals as important landscape features and ecological networks, including habitats, connectivity and their cultural significance, improving their ecological condition will consist of diversifying riparian habitats, such as either thinning to encourage more light or tree planting where canopy cover is completely lacking. Naturalisation and de-culverting or 'daylighting' of watercourses will also

[78] https://connectedbywater.co.uk/

[79] https://www.wildsheffield.com/discover/nature-based-solutions/limb-brook/

increase the diversity of the composition of the river bed, creating more niches and habitats for fish and invertebrate species.

Access to nature

What you told us:
"For the LNRS to work it takes people and community engagement and co-design with local communities, ensuring good space within short walk for all including most vulnerable groups"

Increasing opportunities for access to the natural environment and encouraging 'access for all' for the large and diverse urban populations in the area could be achieved by working with a range of stakeholders to identify issues preventing people from accessing and enjoying the countryside and looking for opportunities to improve access. Key existing work includes the 'South Yorkshire Countryside Directory for People with Disabilities'[80]; and 'A Handbook and Guide for Agencies Working with Black and Minority Ethnic Communities in South Yorkshire' produced by the Tourism and Environmental Change Research Unit at Sheffield Hallam University[81].

Opportunities include improving access to and through our landscapes (footpaths, cycle paths, bridleways), and within urban environments through the use of well-designed and well managed green infrastructure, and Sustainable Drainage Systems, and creating recreational and educational engagement. Examples include the 3:30:300 rule to improve and expand the local urban forest, and promote health, wellbeing, and resilience (IUCN, 2021)[82]. It is based on people being able see a minimum of 3 trees from their home, a minimum of 30% canopy cover in an area, and people being no more than 300 metres from the nearest park or greenspace. Another example may be the Accessible Greenspace Standards from Natural England[83]. A range of sites for visitor access to experience nature should be balanced with quieter sites and areas with managed access to protect sensitive habitats and wildlife.

Visitor pressure, misuse and anti-social behaviour

Whilst addressing the impacts of visitor pressures and misuse of sites is a wider issue that cannot be fully tackled through development of the LNRS, understanding the drivers for these issues and engaging communities will allow this to be factored into nature recovery proposals and designs for habitat creation and the enhancement of sites.

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[80] https://www.opencountry.org.uk/wp-content/uploads/2024/11/South-Yorkshire-Directory-2024.pdf

[81] https://www.semcharity.org.uk/wp-content/uploads/2019/09/Maxwell_Handbook_Vol1.pdf

[82] https://iucnurbanalliance.org/promoting-health-and-wellbeing-through-urban-forests-introducing-the-3-30-300-rule/

[83] https://designatedsites.naturalengland.org.uk/GreenInfrastructure/downloads/Green%20Infrastructure%20Standards%20for%20England%20Summary%20v1.1.pdf

Homes, gardens and communities

What you told us:
"I have created a wildlife garden with multiple ponds. Local children helped me release froglets back into my wildlife garden once they had all four legs. Not only did I get to know lots of neighbours, a number have now added container ponds and bog areas to there own gardens."

Promote the enhancement of greenspaces for nature and encourage local authorities, businesses, schools, local organisations and residents to undertake nature-friendly practices and wildlife-friendly gardening. This can include cost effective measures, such as reduced mowing regimes and reducing/eliminating use of chemical herbicides and pesticides in selected areas. For example, Barnsley council has introduced a new approach to grass-cutting for more than 75 hectares of grassland, leaving longer between cuts to increase the abundance of native wildlife in some areas of public green spaces and road verges.

Wildlife-friendly gardening and related measures can enhance large areas of urban and suburban privately owned greenspace for wildlife, such as through hedgehog highways (gaps in fences,), leaving a wilder area of lawn/reduced mowing regime, provision bat roosting boxes and bird boxes targeting Red-listed species of conservation concern such as swift and house sparrow, and not using chemical herbicides and pesticides. Individuals can be encouraged to join initiatives such as Nature Recovery Sheffield[84] and Rotherham[85]. Sheffield & Rotherham Wildlife Trust's Nature Recovery Community Toolkit has lots of information and ideas to support schools, businesses and people at home to deliver activity and projects for nature's recovery[86].

These opportunities will need engagement, but the practice has the potential to save funds and resource that can be used elsewhere. Where funding opportunities can be harnessed, this can be used to facilitate the establishment of species-rich grasslands and hedgerows, planting native trees and shrubs appropriate to the local area, planting for pollinators and climate resilience, and delivering other measures highlighted above.

Agriculture and agroforestry

What you told us:
"A farmed landscape - continuing to grow some food for our densely populated island, but using farming practices which allow wildlife to thrive and soil health to be the main priority. This will require a more holistic mindset."

[84] https://www.wildsheffield.com/getinvolved/naturesheffield/
[85] https://www.wildsheffield.com/getinvolved/nature-recovery-rotherham/
[86] https://www.wildsheffield.com/nr-toolkit/

Areas of arable and pastoral farmland can be managed to improve their contribution to biodiversity, food provision and landscape character, to improve soil and water quality, and reduce soil erosion.

Whilst no longer operating, the Dearne Valley Farmers cluster group was an example of landowners working to improve the farmed area and deliver bigger, better and more joined up landscape-scale nature recovery. The project was run as a partnership with partners Tyers Hall Farm, the Yorkshire Farming and Wildlife Partnership and the Don Catchment Rivers Trust.

Regenerative farming offers numerous benefits for landowners, farmers and consumers including carbon drawdown, flood protection, restored biodiversity, food security and higher animal welfare standards. A group of local farmers on the magnesian limestone area are working together to improve the farmed area and deliver bigger, better and more joined up landscape-scale nature recovery.

There are opportunities to encourage agroforestry practices which integrate trees into farming systems, which can improve farm productivity as well as delivering wider environmental benefits such as carbon sequestration, improved soil health and improved habitat diversity.

4. Priorities and Measures

A key output for each Local Nature Recovery Strategy is to 'agree priorities and identify potential measures'. This is perhaps the most important significant step, requiring thorough engagement with a range of regional stakeholders to develop the 'the priorities, in terms of habitats and species, for recovering or enhancing biodiversity' (paragraph 48 of the Statutory Guidance).

Defra uses specific terminology to structure this:

- '**Priorities**' describe the end results or outcomes that the Strategy is seeking to achieve. They explain *what* outcomes are sought and *why* they are beneficial.
- '**Measures**' describe the specific practical actions to achieve those priorities. They explain *how* a Priority can be met by taking specific action, and if possible, *where* such actions will be most efective.

For a given 'Priority' there are one or more 'Measures' which links an action to a given outcome. We have divided our Priorities and Measures into two categories.

- '**Overarching'** – this includes outcomes and interventions which apply across a range of diferent habitats.

- '**Habitat-based**' – these are specific to certain habitats and form the majority of our 'Priorities' and 'Measures'. We have split this further into broad habitat groupings, which include:
    - Watercourses, waterbodies and wetlands
    - Grasslands and heathlands
    - Woodlands and trees
    - Urban nature

The Priorities and Measures have been developed and reviewed throughout production of the LNRS. They have been shaped through:

- Discussions across the Working Group, Steering Group, and Advisory Panel (our whole LNRS governance model), representing all Supporting Authorities and a wide range of professional expertise and perspectives.
- Building on the 'Area Description' as above, which identifies the challenges and opportunities for nature recovery in South Yorkshire.
- Learning from wider perspectives, gained from engagement activities including farmer events, public activities across the region, and an online map-based survey.

- Contributions from key stakeholders and potential delivery partners through in-person, habitat-specific workshops held during August 2025 – see more information below.

Habitat-based Priorities & Measures workshops (August 2025)

Supported by an external facilitator, SYMCA delivered four half-day workshops providing an opportunity for wider organisations to engage with the development of 'priorities' and 'measures' for the broad habitat groups (waterbodies, grassland and heathland, woodland and trees, and urban nature), with separate engagement undertaken in relation to priorities across farmed landscapes and across multiple habitats.

The workshop structure enabled the collection of comments on the scope and content of emerging priorities and measures, including consistency, wording, alignment with other strategies, identification of potential gaps and additional data sources. It also collected views on potential delivery partners which will support approaches to delivering South Yorkshire's Local Nature Recovery Strategy.

Key outcomes of the workshops included:

- Substantive additions and rewording to the Priorities and Measures.
- Emphasising conceptual issues such as framing around the Lawton principles.
- Creating a category of 'enabling' measures / actions to underpin wider action.
- Need for consistent wording between priorities, and for language to be accessible for non-specialists.
- Ensuring that definitions are provided where appropriate for technical or other terms. The need for measures to be clearly worded and understandable for non-specialists.

The workshop also built on earlier engagement in exploring issues for delivering upon the strategy. These include:

- Need to ensure that delivery of LNRS dovetails with existing schemes and organisations relevant to farming, and that funding streams are sustained to provide incentives over the medium and long term.
- Concern over the time horizons built into existing schemes such as Biodiversity Net Gain and Landscape Recovery being incompatible in the context of tenure (e.g. tenanted farms) and business outlook (i.e. given climate, market, and policy drivers).
- Need to consider how, where funding for delivery is competitive, landowners and farmers will be incentivised to draft or design a scheme with only a limited chance of success.
- Concern over the deliverability of interventions such as 'conservation grazing' given the recent/future context of extreme weather.

- Concern over how increasing areas of 'scrub' would impact on farmland.
- Interest in landowners cooperating to achieve joined up areas for nature.
- Urge to include public education as part of the strategy, emphasising the importance of behaviours from dog walking disrupting ground nesting birds to informed stewardship of other land, including gardens.

Table 4 below breaks down the number of Priorities and Measures in each category.

Table 4 – all Priorities and Measures

	'Overarching'	'Habitat-based'				Total
		Grassland and heathland	Urban nature	Woodland and trees	Watercourses, waterbodies and wetlands	
Priorities	8	4	4	3	5	**24**
Measures (*of which mapped*)	28 (*0*)	23 (*8*)	26 (*3*)	24 (*7*)	29 (*14*)	**130 (32)**

'Overarching' Priorities and Measures

As detailed above, the 'Overarching' grouping of Priorities and Measures for nature recovery in South Yorkshire includes actions which apply widely across the region. This may mean that they are actions that could either:

- Be relevant across a wide geographical area within South Yorkshire – for example '**Install features to mitigate the impact on species dispersal of infrastructure such as roads and railways, for example underpasses and green bridges at specific locations**' is applicable widely across the region
- Will enable or unlock other habitat-specific Measures – for example '**Active management of invasive non-native species (INNS)**' may be essential for the success of nature recovery action in and around waterways

As such, they are not candidates for mapping as nature recovery opportunities – see more on this in Section 5. The content in this section has been developed through engagement across a range of stakeholder voices and stages – through discussions with

partners in our Governance Model, external workshops, surveys and events. In many instances, the Priorities in this section began as proposals specific to certain habitats, and through further discussion it became clear that these apply across a range of diferent habitats. For example:

Table 5 below provides a complete list of Overarching 'Priorities' or outcomes we are seeking to achieve, and their respective 'Measures' or actions required to achieve them.

Table 5 – Overarching Priorities and Measures

Overarching Priority	Overarching Measure
1. Deepen people's relationships with nature, bringing it closer to where people live, especially where it is needed most	Manage green and blue spaces and infrastructure for accessibility and safety by improving lighting, access, amenities, security, and reducing pollution and unauthorised vehicle use.
	Improve people's connections with nature through initiatives involving education, arts, culture, philosophy, religion and spirituality.
	Use data on access to nature and deprivation to focus interventions in areas where nature is in short supply, achieving more equitable access to nature across the region and improving health and wellbeing of residents.
	Support visual and physical interaction with nature for all – improving accessibility for those with additional needs, mobility challenges or limited transport options.
2. Build collaborations to drive nature recovery	Continue working in partnership as a model for stakeholders to coalesce around interventions for nature recovery, based on natural rather than administrative boundaries.
	Support existing and new farmer clusters as proven models to share best practice of stewarding farmed landscapes to support nature recovery.
	Develop an advisory and coordinating role to support farmers and landowners to access funding and to deliver the LNRS Priorities and Measures.
	Promote open and inclusive data to inform ongoing interventions, working closely with our Local Environmental Records Centres (LERCs).
3. Provide opportunities to engage people in nature recovery activity	Enable and empower people and communities to engage with nature and support nature recovery in their homes, workplaces and local areas, such as through 'friends of' groups, volunteering, community tree planting, 'clean up' events, community wildlife gardens and allotments.
	Improve 'green skills' through creating and increasing opportunities for training and development, including through apprenticeships, placements, and taught courses, covering

	land management, land use planning, ecological surveying and other nature-based skills.
	Support 'green job' employment opportunities in the public, private and third sectors to oversee, design, deliver and manage nature recovery interventions.
	Create opportunities for children and young people to participate in nature recovery projects and to engage with the natural environment.
	Promote citizen science contributions to enhance our knowledge, data and understanding, such as using riverfly monitoring, habitat monitoring, real time sensing and other technologies.
4. Active management of invasive non-native species (INNS)	Work with regional partners to support and implement an approach across organisations and projects to coordinate action, monitoring and reporting, develop communications and engagement, and share best practice to manage INNS.
5. Ensure management of existing public spaces and development of new sites supporting nature	Increase and improve sustainable management of public spaces for nature.
	Maximise biodiversity benefits through the planning system arising from strategic development sites and supporting infrastructure through policy, advice, and implementation of Biodiversity Net Gain.
	Encourage the use of 'nature-based solutions' in new infrastructure developments to improve resilience against climate change pressures (example rising urban temperatures, wildfires, more intense rainfall events, prolonged flooding and summer droughts).
	Communicate action for nature on new development to the public, addressing a strong negative perception of the impact of new development on nature.
	Install features to mitigate the impact on species dispersal of infrastructure such as roads and railways, for example underpasses and green bridges at specific locations.
6. Improve public understanding of natural habitats and species to reduce recreational pressure	Through partnership working, minimise the pressure on sensitive habitats and species from recreation and tourism, for example by identification of sensitive sites in need management plans, footpath and public rights of way improvements and promote responsible recreation.
	Use education, community engagement and co-design to facilitate public understanding and appreciation of biodiversity and environmental issues to ensure appropriate use of sites and habitats and reduce levels of recreational pressure where evidence suggests negative impacts are likely.

	Tackle environmental crime by working with partners such as the Police and Fire and Rescue services to ensure robust reporting, monitoring and planning for remedial action.
7. Future-proof action to ensure climate resilience of natural habitats	Improve understanding of, and proactively plan for, changing capacity of habitats to thrive due to climate impacts, for example by ensuring the selection of resilient tree species as part of woodland management.
	Support species threatened by climate change by enhancing ecological connectivity between sites and habitats and across landscapes (including urban green and blue infrastructure in), enabling movement of species and wildfire planning to maintain and strengthen these ecological networks.
8. Safeguard, expand and ensure the good condition of a well-connected network of habitats	Support landowners to achieve and sustain the positive conservation management of Local Wildlife Sites, through restoration and enhancement measures targeting their 'reasons for designation'.
	Work with stakeholders and landowners to identify external pressures impacting the condition of protected sites, and pursue opportunities to address them through coordinated action, for example developing site management plans to complement, not duplicate or conflict with, statutory requirements.
	Review the operation of Local Sites Partnerships and processes to ensure they efectively identify and designate Local Wildlife Sites.
	Support development of habitat banks in strategic locations to deliver Biodiversity Net Gain by working with stakeholders and landowners.

'Habitat-based' Priorities and Measures

There is a total of 102 'Habitat-based' Measures. Each one of these has been considered a candidate for mapping where within the region the action would be most strategic and efective for nature recovery. Through discussions with the Working Group and mapping consultants Natural Capital Solutions, with further input from wider partners in workshops, we have been able to map opportunity areas for 32 of the 102 Measures.

Measures which are mapped are not more or less important than non-mapped Measures. However, in certain contexts there are important distinctions between mapped and non-mapped Measures. Specifically in the application of Biodiversity Net Gain (BNG), only mapped Measures will be considered in scope of 'Strategic Significance'. **For each of the 32 mapped Measures, we have produced**

supplementary guidance (Annex D) explaining the habitat distinctiveness and condition target requirements for achieving a 'high' Strategic Significance multiplier.

Many Measures interact with and amplify each other, and all are important for wider nature recovery across South Yorkshire. The order in which they appear below does not imply any hierarchy. While most Measures are intended as place-based interventions, for example to '*Reinstate or reconnect meanders, backwaters, and natural in-channel features (…)*', several are enabling or supporting activities, for example '*Support landowners and managers with advice and incentives (…).*'

The following sections, and corresponding tables, provide a full list of all Habitat-based Priorities and Measures into the four previously defined broad categories. These categories are intended to provide structure to the Strategy, but inevitably do overlap and interact with one another.

Watercourses, waterbodies and wetlands

Our region's extensive network of rivers, streams, canals as well as other wetlands and water features (such as reservoirs and ponds) are vital for nature, both in providing habitats for a diverse range of plants and animals and connectivity to allow the movement of species.

However, climate impacts, the ecological quality of water environments, the impacts of invasive species, and the modification of watercourses through urbanisation highlight some of the challenges and opportunities for nature restoration in these areas.

The importance of water and wetland areas was recognised in feedback from the public and stakeholders in developing the LNRS, who identified these as habitats with a strong preference for prioritisation, and noted a desire for the reintroduction of species such as beaver and water vole.

The priorities and measures set out below identify how we can support nature restoration in these locations through, for example, restoring natural processes, improving resilience, expanding habitats and enhancing their quality, supporting species populations, and better management practices.

Priority Species assemblages supported:

Aquatic invertebrates – e.g. Beetle, Mayfly, Stonefly

Freshwater fish – e.g. Atlantic Salmon, River Lamprey, European Eel

Stonewort / aquatic plants – e.g. Bristly Stonewort, Delicate Stonewort

Wetland and wet grassland plants – e.g. Marsh Pea, Lesser Water-plantain

Wetland birds – e.g. Crane, Little Egret, Marsh Harrier

See the full Species Priority list in Annex A

Priority RI-01
Restore natural processes to reconnect rivers and streams with their floodplains and provide nature-based climate resilience for biodiversity and local communities.

Measures

Code	Description	Mapped?
RI-01-01	Reinstate or reconnect meanders, backwaters, and natural in-channel features where possible to restore diverse and resilient ecosystems, providing wider benefits including natural flood management and improved water quality.	

RI-01-02	Create and maintain native, species-rich and structurally diverse habitats along watercourse margins by up to 8m to enhance and connect biodiversity, provide shade, intercept pollutants (urban, transport and industrial), and capture run-of.	Yes
RI-01-03	Remove or realign artificial and engineered flood banks, barriers and modifications where feasible to allow re-establishment of natural river processes. Include control and mitigation measures for potential migration of INNS following removal of barriers.	
RI-01-04	Create and manage new floodplain grazing marsh, where appropriate to reconnect rivers with floodplains, and by expanding existing habitats.	Yes
RI-01-05	Restore headwater streams to enhance spawning habitat such as river gravels for salmonids, instream water weeds and substrates for coarse fish egg laying.	

Priority RI-02
Improve and restore in-channel and riparian habitats, and work with natural processes across the wider catchment to enhance habitats, remove barriers, improve water quality, slow run-of and regulate water temperature so that more watercourses and waterbodies are in good condition and support sustainable populations of native freshwater species.

Measures

Code	Description	Mapped?
RI-02-01	Protect existing good, and create new, in-channel habitats and features such as marginal vegetation, rifles, reefs, islands, gravel beds and pools for fish spawning and other aquatic fauna and flora.	
RI-02-02	Remove or modify artificial barriers such as culverts and weirs to support the movement and dispersal of migratory fish and promote diverse and resilient aquatic populations and communities. Include control and mitigation measures for potential migration of INNS following removal of barriers.	Yes
RI-02-03	Enhance the biodiversity of man-made and artificially impacted waterbodies (including mill ponds, recreational lakes and reservoirs) by installing habitat features such as vegetated margins, floating islands, and by planting reedbed and fen.	Yes
RI-02-04	Deploy natural flood management methods across catchments to protect and enhance the quality of river waters and habitats to slow the flow. This includes catchment-wide sustainable land management and habitat creation to intercept overland flows and prevent pollutants and soils entering rivers.	

RI-02-05	Enhance the water quality and biodiversity value of canals, through sensitive in-channel vegetation management practices, eradication of invasive non-native species, creating and managing bufering bankside habitats by up to 10m from the top of the bank, catchment management, remediation and removal of sediment, and removing blockages at goits, unless demonstrated as unfeasible.	Yes
RI-02-06	Enhance the water quality and biodiversity value of drains through sensitive in-channel vegetation management practices, eradication of invasive non-native species, creating and managing bufering bankside habitats, catchment management, remediation and removal of sediment, and removing blockages at goits.	Yes
RI-02-07	Work with farmers to manage and reduce poaching by livestock along rivers, to help reduce nutrient load into rivers and improve riparian habitat.	
RI-02-08	Protect water courses from further encroachment by ensuring new development is set back from water courses where possible.	
RI-02-09	Expertly manage ancient and veteran white willows in the former fenlands of the Humberhead Levels. Identify and record to prevent further loss of the trees and the rare and specialist species that live with them.	Yes
RI-02-10	Increase riparian woodland, scrub and mosaic habitats in suitable cloughs of upper catchments to increase biodiversity, provide natural flood management, improve water quality and cooling/shading.	Yes

Priority WE-01
A catchment-wide network of 'Good' condition wetland habitats, including lowland fen, wet woodland, reedbed, floodplain grazing marsh, reservoirs and ponds to support species recovery and resilience to climate change for local communities and wildlife.

Measures		
Code	Description	Mapped?
WE-01-01	Create and manage mosaics of fen, marsh, swamp and open water habitats through hydrological and vegetation management, for example through the introduction of suitable plant species to increase diversity and ecological connectivity.	Yes
WE-01-02	Restore and manage mosaics of fen, marsh, swamp and open water habitats through hydrological and vegetation management, for example introduction of suitable plant species to increase diversity and ecological connectivity.	Yes

WE-01-03	Create dynamic wetland mosaics through the restoration of natural processes, through the reintroduction of Eurasian Beaver where appropriate.	
WE-01-04	Restore and manage existing floodplain grazing marshes through early summer hay cuts, 'aftermath' interventions such as extensive grazing regimes and water level management.	Yes
WE-01-05	Restore and manage ponds for biodiversity by reducing over-shading, controlling non-native species, and reintroducing native aquatic plants where appropriate.	
WE-01-06	Create networks of ponds and associated habitats for wildlife in both urban and rural areas to enhance ecological connectivity.	
WE-01-07	Manage and protect key areas for breeding ground nesting and wintering bird populations including floodplain meadows and wet grasslands.	

Priority BO-01 Lowland raised bog is in 'Favourable' condition with internationally important sites protected, to ensure active peat formation and no loss of peat, protected distinctive habitat and species assemblages, carbon storage, and preservation of culturally significant remains.		
Measures		
Code	Description	Mapped?
BO-01-01	Restore and enhance existing lowland raised bog by managing water levels to promote peat forming vegetation, including through planting sphagnum species, preventing scrub succession and the control of invasive and non-native species.	Yes
BO-01-02	Manage water levels to promote the establishment of a wildlife-rich, 'lagg fen' zone around Thorne and Hatfield Moors, expanding wetland habitats and providing the Humberhead Peatlands with greater resilience to climate and environmental pressures.	
BO-01-03	Provide practical and financial advice and support on the rewetting of farmed and warped peats to enhance habitats and explore productive uses (including paludiculture) for ecosystem service benefits (such as reduction of flood risk and carbon capture).	
BO-01-04	Restore and manage mire habitats (flushes, valley mires, seepages) outside of lowland raised bog (flushes, valley mires, seepages) to enhance biodiversity and provide ecosystem service benefits such as soil and water management.	

BO-01-05	Manage vegetation and water levels on lowland agricultural peat to re-wet ground conditions and habitats, reduce carbon emissions and reduce soil loss by wind erosion.	Yes

Priority BO-02 Blanket bog and mire habitats are in 'Favourable' condition with internationally important sites protected, ensuring ongoing peat accumulation and no loss of peat, safeguarding the distinctive upland habitat and species assemblages, carbon storage, and preservation of culturally significant remains.		
Measures		
Code	Description	Mapped?
BO-02-01	Restore and manage mire habitats (flushes, valley mires, seepages) outside of blanket bog to enhance biodiversity and provide ecosystem service benefits such as soil and water management.	
BO-02-02	Restore and enhance blanket bog, for example through blocking grips and gullies, planting sphagnum mosses, and increasing vegetation cover in line with the 'Decision support framework for peatland protection'.	Yes

Grassland, heathland and farmed landscapes

Good-quality grasslands and heathlands are vital for nature recovery because they support rich, specialised communities of plants and animals that are increasingly rare in the wider landscape. Together they form core habitat networks and habitat mosaics, enabling the movement and survival of species with restricted distributions (e.g., acid, neutral and calcareous grassland specialists, dwarf-shrub and bryophyte heath communities).

These habitats also provide multiple ecosystem services, including improved soil health, carbon sequestration, hydrological regulation, and natural flood management. Their restoration and enhancement – such as through conservation grazing, hydrological repair, and species-rich meadow creation – directly expands ecological connectivity, improves habitat condition, and strengthens the ecological functions needed for long-term species recovery.

The diverse farmed landscapes in South Yorkshire are crucial to nature recovery, comprising over 40% of the land use. They hold significant potential to reverse biodiversity decline while continuing to produce food. When managed sensitively, arable and pastoral farmland can support a rich mix of habitats such as species-rich grasslands, hedgerows, wetlands and agroforestry systems that provide connectivity between existing wildlife sites and enable nature to recover at a landscape scale. Nature-friendly and regenerative farming practices can improve soil health, water quality and carbon storage, while also supporting pollinators, farmland birds and other priority species, helping to align food production with wider climate, flood resilience and ecosystem service benefits. Because farmers and land managers are long-term stewards of the land, farmed landscapes are uniquely placed to deliver sustained, joined-up nature recovery that benefits both wildlife and rural livelihoods.

Priority Species assemblages supported:

Arable plants – e.g. Field Garlic, Cornflower, Greater Butterfly-orchid

Bats – e.g. Whiskered bat, Noctule Bat

Calcareous grassland plants – e.g. Basil Thyme, Meadow Safron, Henbane

Farmland birds – e.g. Linnet, Skylark, Reed Bunting

Grassland invertebrates – e.g Dark Spinach, Grass Rivulet

Grasslands Fungi – e.g. Pink Waxcap, Green Earthtongue

Lowland heathland birds– e.g. Nightjar, Tree Pipit, Woodlark

Lowland heathland invertebrates – e.g. Mire Pill Beetle, Thorne Pin-palp

Tall Sward and Scrub invertebrates – e.g. Diptera ('true flies')

Upland birds – e.g. Golden Plover, Hen Harrier, Common Sandpiper

Wetland and wet grassland plants – e.g. Marsh Pea, Lesser Water-plantain

Wetland birds – e.g. Crane, Little Egret, Marsh Harrier

See the full Species Priority list in Annex A

Priority GR-01
More grasslands in 'Good' condition, managed as part of a resilient network of ecologically connected sites, supporting a diverse and sustainable population grassland species and providing wider benefits such as natural flood management, carbon sequestration and storage, and cooling air temperatures.

Measures		
Code	Description	Mapped?
GR-01-01	Manage and enhance existing grasslands (acid, neutral, calcareous, and wet) of high biodiversity value to maintain and extend the existing ecological network.	Yes
GR-01-02	Restore and enhance degraded or unmanaged semi-natural grassland habitats to bring them into sustainable management, prioritising sites that bufer existing 'Good' grasslands or areas with rare species such as ground nesting birds. For example, through low intensity grazing and/or appropriate cutting regimes.	Yes

GR-01-03	Create new semi-natural grassland habitats of value and secure sustainable management on these sites, prioritising sites that bufer existing 'Good' grasslands.	Yes
GR-01-04	Maximise biodiversity of grassland sites through use of green hay/seed collection from existing local 'Good' condition sites.	
GR-01-05	Create, restore and enhance species-rich hay meadows, prioritising areas with rare species, such as ground-nesting bird species.	
GR-01-06	Enhance the biodiversity value of grasslands in public open spaces, road verges, and other grasslands, through management regime interventions, for example reduced cutting frequency, collection of arisings, and increasing species diversity	
GR-01-07	Introduce small scale features within grassland to promote invertebrate diversity and abundance, for example butterfly banks and small-scale disturbance such as scrapes.	
GR-01-08	Support landowners and managers with advice and incentives to conserve and enhance existing grassland sites.	

Priority HE-01 More and expanded structurally and species-diverse upland moorland mosaics, including upland heath, to provide biodiverse habitats, natural flood and scrub risk management, and carbon sequestration.		
Measures		
Code	Description	Mapped?
HE-01-01	Restore and enhance wet heath and complimentary mosaics of heathland, grassland, wetland, woodland, and scrub habitat, including transitional habitats, for example through an appropriate level of grazing, natural regeneration and using blocking grips and gullies.	Yes
HE-01-02	Create wet heath and complimentary mosaics of heathland, grassland, wetland, and scrub habitat, including transitional habitats, for example through an appropriate level of grazing, natural regeneration and using blocking grips and gullies.	Yes
HE-01-03	Enhance and diversify plant species and age structure of dwarf scrub heath, for example through appropriate grazing and tree and bracken management.	
HE-01-04	Use moorland management techniques that improve biodiversity and wider environmental benefits such as heather cutting in place of burning.	

Priority HE-02

‘Good’ condition lowland heathland managed as part of a resilient network of ecologically connected sites, to protect distinctive habitat and species assemblages of restricted distribution and regional importance.		
Measures		
Code	Description	Mapped?
HE-02-01	Manage and restore heathland to prevent loss of condition and extent, including where present as part of a habitat mosaic.	Yes
HE-02-02	Create and bufer wildlife-rich and structurally diverse heathland habitat mosaics of acid grassland and scrub to improve connectivity for heathland species between new and existing heathland sites, for example in the Humberhead Levels. This could include seed and brash collection from donor sites.	Yes
HE-02-03	Support landowners and managers with advice and incentives to conserve and enhance existing heathland and heathland mosaic sites.	

Priority FA-01 Farmed landscapes provide diverse habitats and species connectivity alongside commercial productivity, making rural landscapes more abundant in wildlife.		
Measures		
Code	Description	Mapped?
FA-01-01	Develop and maintain an extensive network of species-rich arable field margins, headlands and corners, that support a variety of species through the planting of wildflowers and seed-bearing plants, reducing the use of herbicides and pesticides and the implementation of features that support a variety of invertebrates such as beetle banks.	
FA-01-02	Create more space for wildlife by diversifying the habitat in arable cropped areas, for example through installing features like ponds, beetle banks, and skylark plots, or managing for in-field trees, rough grassland, bird cover crops, and conservation headlands.	
FA-01-03	Reduce management intensity of grassland through practices such as lower fertiliser inputs, lower livestock density, and later cutting to improve breeding success of ground nesting birds and reduce run of of soil and fertiliser into water courses.	
FA-01-04	Safeguard, restore and manage existing hedgerows (including trees in hedges to create wildlife corridors to increase the connectivity of habitats.	Yes

FA-01-05	Create new hedgerows as part of an integrated network, emphasising traditional methods such as laying, coppicing and pollarding.	
FA-01-06	Promote opportunities for agroforestry to support productivity, improved animal husbandry, shelter, habitat connectivity, nutrient loss, soil health, and adaptation to climate.	
FA-01-07	Identify areas where agroforestry could support productive farming and connect, bufer, and protect habitats.	
FA-01-08	Identify areas with locally significant and commoner arable plants (a.k.a. arable weeds) and landowners willing to manage parts of their land sympathetically to create and/or maintain populations of these declining arable plants. Sourcing local seed of important arable plants and introducing them to new locations where they can be maintained in part of arable management.	

Woodland and trees

Good-quality woodlands are essential for nature recovery because they provide structurally diverse, species-rich habitats that support a wide range of specialist and generalist wildlife. Woodlands in 'Good' ecological condition with multi-layered canopies, varied age structures, abundant deadwood, and diverse species provenance create resilient ecosystems capable of supporting woodland birds, mammals, invertebrates, fungi, and a diverse understorey.

Sustainable management practices such as coppicing, pollarding, thinning, and targeted pest control further enhance habitat quality, improving ecological resilience to disease, climate change, and wildfire. Well-managed woodlands also perform crucial ecosystem services at scale: they regulate water flow, prevent soil erosion, improve water quality, and contribute significantly to climate mitigation through carbon storage and sequestration.

Woodlands also play a foundational role in creating connected, climate-resilient landscapes that enable species movement and long-term recovery. Expanding and bufering existing woodlands creates a resilient network of ecologically connected sites, ensuring woodland species can disperse, adapt, and thrive as environmental conditions change.

Habitats—such as scrub, hedgerows, wood-pasture, provide important structural diversity and ecological niches to further strengthen connectivity between woodland and grassland ecosystems, providing corridors and stepping-stones for wildlife movement. Beyond biodiversity gains, high-quality woodlands deliver wider societal benefits, including flood protection, sustainable woodland products, climate regulation, improved urban cooling, and contributions to healthier, more liveable communities. Together, these functions make good-quality woodlands indispensable components of any landscape-scale nature recovery strategy.

Priority Species assemblages supported:

Reptiles – e.g. Adder, Common Lizard, Grass Snake, Slow-worm

Urban birds – e.g. House Martin, House Sparrow, Starling

Woodland birds – e.g. Marsh Tit, Nightingale, Woodcock, Goshawk

Woodland invertebrates – e.g. Bast Bark Beetle, Wood-Boring Weevil

See the full Species Priority list in Annex A

Priority WO-01 Woodlands are in Active Management and 'Good' ecological condition, part of a resilient network of ecologically connected sites, providing favourable habitat for recovery in woodland species and wider environmental and societal benefits.		
Measures		
Code	Description	Mapped?
WO-01-01	Promote traditional tree and woodland management such as pollarding, coppicing and thinning where appropriate in line with the UK Forestry Standard.	
WO-01-02	Diversify tree species age and height for structural diversity in all woodlands, emphasising multi-layered vegetation from canopy to ground layer (including standing deadwood) to provide quality habitat for generalist and specialist species and increase resilience.	
WO-01-03	Promote climate- and disease-resilience in new and existing woodland through diversifying tree species provenance, including native broadleaf of local prevenance and naturalised species from southern provenances, in line with best practice to reflect a range of climatic conditions.	
WO-01-04	Create new woodlands to bufer and connect existing woodlands to enable habitat connectivity between fragmented woodlands and increase the overall tree and woodland cover by incorporating natural colonisation and regeneration.	Yes
WO-01-05	Enhance existing woodlands and wet woodlands by working with land managers to bring more woodland into sustainable management, including water level management, for nature recovery and wider environmental benefits.	Yes
WO-01-06	Create and manage new wet and riparian woodland where it will support the presence of priority species, and where it will provide wider ecological connectivity and ecosystem benefits including flood alleviation.	Yes
WO-01-07	Support woodland habitat condition through targeted, sensitive wildlife management where appropriate, for example by ensuring deer and grey squirrel populations are in balance with sustainable tree and woodland habitats.	
WO-01-08	Create and enlarge existing species-diverse mosaics as transitional habitats between new grassland and woodland sites, incorporating scrub, hedgerows, wood pasture, ancient and veteran trees.	Yes
WO-01-09	Increase the transitional zone within woodland and around woodland edges, for example between grassland or heathland. This can include planting and ride management of woodland with appropriate trees and shrubs, promoting scrub as appropriate.	

WO-01-10	Introduce locally appropriate climate-resilient ground flora into new planting schemes.	
WO-01-11	Manage productive (commercial) forestry and woodland sites to support species diversity, for example through continuous cover forestry and introduction of ground flora.	
WO-01-12	Establish and maintain clough woodlands, prioritising from areas where they have been lost, if supported following application of open habitats policy, wader guidance, and the 'Decision support framework for peatland protection'. Incorporate an appropriate mix of native tree species and shrubs to re-establish clough woodlands. Ecological assessment will confirm any conflicts with other habitat types and ensure suitability of species, and natural capital assessment will show the ecosystem services likely to be delivered.	Yes

Priority WO-02 All ancient woodlands are in sustainable management to safeguard for future generations as environmentally, culturally and socially valued and irreplaceable assets.		
Measures		
Code	Description	Mapped?
WO-02-01	Restore all ancient woodlands into positive management, in accordance with current government guidance and standards.	Yes
WO-02-02	Connect and bufer existing ancient woodland with woody habitat corridors using appropriate blend of conventional planting with natural colonisation and natural regeneration.	Yes
WO-02-03	Improve knowledge of ancient and veteran trees by promoting use of the Ancient Tree Inventory and improving the quality of records in South Yorkshire.	
WO-02-04	Create veteran trees of the future (veteranisation) to support sustainable populations of veteran tree habitats, focussing on known appropriate locations, for example by planting species which veteranise quickly.	
WO-02-05	Trial soil translocations in new and existing woodlands within close proximity to ancient woodland, using evidence-based approaches to restore woodland soil biodiversity, including mycorrhizal communities, by good biosecurity to limit the potential movement of harmful soil pathogens.	
WO-02-06	Encourage sustainable management of Plantations on Ancient Woodland Sites with site-appropriate species to regenerate characteristics of ancient woodland such as soil and ground flora.	

WO-02-07	Celebrate the cultural heritage and social importance of ancient and veteran trees with local communities in South Yorkshire.	

Priority WO-03 Local communities engage with wooded landscapes to support biodiversity in populated areas and for wider societal benefits.		
Measures		
Code	Description	Mapped?
WO-03-01	Support management of existing traditional orchards as biodiverse areas.	
WO-03-02	Create new orchards as biodiverse areas providing mental and physical health benefits across local urban and peri-urban communities.	
WO-03-03	Build upon existing opportunities to promote and educate members of the general public on tree health, for example use of Tree Alert and Tree Warden schemes.	
WO-03-04	Improve and maintain public access through wooded green space, focussing on areas with greatest need.	
WO-03-05	Create new and promote public access through wooded green space, focussing on areas with greatest need.	

Urban nature

Urban nature recovery activity is essential for creating a more connected, resilient, and biodiverse urban landscape that enables wildlife to move through towns and cities, while strengthening the ability of communities to adapt to climate change. Measures such as expanding and linking green and blue infrastructure, including parks, rivers, ponds, street trees, hedgerows and sustainable urban drainage systems—help bufer existing habitats, increase permeability for native species, and reduce fragmentation across the built environment. These interventions support species movement, improve water management, reduce flood risk, and enhance air quality, while also contributing to urban cooling and climate resilience.

Equally important is the role of urban nature recovery in improving people's access to, connection with, and understanding of nature. Creating and enhancing resilient blue and green spaces near homes, schools, hospitals, and community hubs provides opportunities for recreation, learning, and wellbeing while helping reduce pressure on sensitive habitats elsewhere. Increasing equitable access to quality blue and green spaces supports community health and fosters a culture of stewardship, empowering people to participate in nature recovery through activities in gardens, allotments, and local blue and green spaces. Ensuring that urban landscapes are inclusive—through, signage and interpretation, benches, and accessible routes—helps more people benefit

from nature. Taken together, these measures make urban areas richer in biodiversity, more resilient to environmental pressures, and better places for both wildlife and people.

Priority Species assemblages supported:

Open mosaic/brownfield invertebrate – e.g. Grizzled Skipper, Dingy Skipper

Reptiles – e.g. Adder, Common Lizard, Grass Snake, Slow-worm

Individual species – e.g. West European Hedgehog, Common Toad, Swift

See the full Species Priority list in Annex A

Priority UR-01
Make urban green and blue nature networks bigger, better, and more joined up across our villages, towns, and cities to increase connectivity and allow movement of species through the landscape, and help mitigate the impacts of climate change while providing other environmental and health benefits.

Measures

Code	Description	Mapped?
UR-01-01	Protect and manage existing habitats at Local Wildlife Sites to strengthen the ecological network.	
UR-01-02	Create, enhance and manage green and blue infrastructure to connect parks, community green spaces, hedgerows, rivers and ponds managed through recognised standards, good practice and biodiversity objectives.	
UR-01-03	Create, enhance and manage urban trees, providing habitat connectivity, climate resilience and fairer access to trees for people in urban areas.	
UR-01-04	Maintain existing resilient street trees; providing urban resilience, connectivity, tree equity, climate adaptation and access to nature.	
UR-01-05	Integrate into new development aquatic, wetland and water management features such as ponds, rain gardens, green roofs, permeable surfaces, soakaways and sustainable urban drainage systems.	
UR-01-06	Support native species by reducing barriers to their movement and increasing permeability, for example through appropriate, well-maintained interventions such as rail/road crossing points, smaller scale permeability measures and wildlife refuges.	

UR-01-07	Integrate features to support native species such as bat/bird boxes, swift bricks, insect hotels, hedgehog homes and highways, green roofs and foraging habitats into new development.	
UR-01-08	Create or install bird and bat boxes, wildlife ponds, wild patches in gardens, insect hotels, and hedgehog highways to existing homes and gardens to provide more space for nature.	
UR-01-09	Take opportunities to retrofit bird and bat provision and other features for wildlife into existing buildings, for example when repairs and upgrades are taking place.	
UR-01-10	Nature-based solutions such as wildlife-rich sustainable urban drainage systems and contour planting are used to manage and store water, helping to provide new habitats, improve water quality, and reduce the risk of flooding and impacts of drought.	
UR-01-11	Restore and improve the biodiversity value and functionality of rivers and watercourses through urban areas, address impacts from pollution and drainage, and improve visibility and accessibility to people.	
UR-01-12	Encourage normalisation of urban grazing through shepherding and public education.	
UR-01-13	Create a network of wetland features (such as ponds, swales, ditches) to mitigate against urban difuse pollution, increase biodiversity connectivity, and reduce flood risk.	

Priority UR-02 Ensure biodiverse-rich habitats along existing and new highways, cycleways and other transport infrastructure to provide habitat connectivity, allow species movement through the landscape, and help mitigate the impacts of climate change.		
Measures		
Code	Description	Mapped?
UR-02-01	Create biodiverse rich habitats as part of new linear infrastructure such as transport corridors and energy networks (through more urban trees, scrub, shrubs and hedgerows, nature rich roundabouts, and year-round food and habitats for invertebrates).	
UR-02-02	Restore and enhance the quality of biodiversity rich habitats along existing linear infrastructure, (through more urban trees, scrub, shrubs and hedgerows, nature rich roundabouts, and year-round food and habitats for invertebrates).	
UR-02-03	Use highway verge management approaches which support native wildflowers and improve soil health.	

Priority UR-03 Create, enhance, connect and manage a mosaic of habitats across previously developed sites to reduce habitat fragmentation, increase biodiversity, support specialist species and protect their rich and dynamic biodiversity, structural complexity and unique conditions.		
Measures		
Code	Description	Mapped?
UR-03-01	Create high-quality habitat on existing mineral extractions sites that is suitable for the site's soil type, (for example collieries in the Coalfields, limestone in the Magnesian Limestone area or sand and gravel in the Humberhead Levels area).	Yes
UR-03-02	Create and manage open habitat mosaics on previously developed land to increase the extent of these habitats for biodiversity.	
UR-03-03	Maintain, enhance and manage inland rock habitats to safeguard the condition and extent of their features of special biodiversity interest and the species that depend on them.	Yes
UR-03-04	Identify, safeguard and manage areas that meet the definition of Priority Habitat Open Mosaic Habitats on Previously Developed Land to maintain the extent and features of special biodiversity interest and the species that depend on them.	

Priority UR-04 People have a better understanding of and access to nature, whilst recreational impacts on sensitive sites, habitats and species are minimised.		
Measures		
Code	Description	Mapped?
UR-04-01	Create new nature-rich green infrastructure such as parks, green spaces, and accessible routes close to where people live to increase equity of access to nature in line with best practice (for example the Natural England Green Infrastructure Framework).	
UR-04-02	Enhance and manage existing nature-rich green infrastructure such as parks, green spaces, and accessible routes close to where people live to increase equity of access to nature in line with best practice (for example the Natural England Green Infrastructure Framework).	
UR-04-03	Create new biodiverse green spaces at public buildings, schools and hospitals and other anchor institutions which are well managed, provide more and better habitat sites and provide benefits for people and nature.	

UR-04-04	Enhance and manage existing spaces at public buildings, schools, hospitals and other anchor institutions to provide more blue and green infrastructure for people and nature.	Yes
UR-04-05	Support, educate and empower people to learn about and take action for nature including in gardens, allotments, local communities and schools and businesses so more people understand and want to care for nature and contribute to its recovery.	
UR-04-06	Improve accessibility for all to and within nature-rich public green spaces where appropriate, for example through signage and information, safe and well-maintained benches, paths and cycle routes, and community engagement to support sensitive use of the space.	

Species Prioritisation

An additional, but integrated, output of the LNRS process is to identify priority species which can be supported by nature recovery action. This is set out in the Statutory Guidance (paragraphs 44, 48, 53).

We undertook a process to develop a Priority Species list. This was developed through a process of first developing a 'long list' of species by bringing together available datasets on the conservation status of species in the region. This 'long list' of candidate priority species was then reviewed and refined into a short-list of priority species (Annex A). Given the need for specialist knowledge, external specialists were invited to contribute to the process, and we received feedback from over 16 local and national specialists to review and refine the Priority List. This work was undertaken initially Shefield and Rotherham Wildlife Trust, developed further by RSK Environmental Ltd., and subsequently reviewed and revised by Natural England.

The 'Priority Species' on this list are from a wide range of taxonomic groups – including:

- **70 birds** – including Nightjar, Hen Harrier, Bittern, and Osprey
- **56 flowering plants** – including Cornflower, Meadow Safron, and Marsh Pea
- **55 insects** – including White-letter Hairstreak, Goat Moth, and Dingy Skipper
- **15 mammals** – including Eurasian Otter, Red Squirrel and Whiskered bat
- **4 reptiles** – including Adder, Grass Snake, and Common Lizard

The Priority Species list is mainly comprised of scarce and declining species which meet criteria set out below. In addition to species which have populations in South Yorkshire, we have also identified species which are candidates for reintroduction. Species in scope of being shortlisted here have been lost within the region and have potential to regain sustainable population levels through deliberate, human-assisted release back into their former natural habitat. There are 11 species which are considered in scope of this through our species prioritisation process. This includes:

- **3 mammals** – Eurasian Beaver, Pine Marten and Hazel Dormouse
- **3 flowering plants** – Oblong-leaved Sundew, Coral-necklace and Pennyroyal
- **1 mollusc** – Freshwater Pearl Mussel

'Priority Species' selection criteria

Defra's guidance requires species to be assigned to specific categories which relate to the kind of intervention or action considered efective to support the population and recovery of a given species. Within the full list of scarce and declining species in South Yorkshire, only those species which can be supported within the scope of the LNRS are to be included. A summary of the methodology followed is set out in Annex C and the

full Species Priority list is provided in Annex A. In summary the species Priority List is comprised of species which:

- **Need targeted habitat management** (e.g. require specific configurations or complexes of connected or nearby habitat/s, either at site level or across large areas / multiple sites).
- **Need improvements in environmental quality** (e.g. are limited by one or more pressures beyond site level that can be mitigated at LNRS scale).
- **Need bespoke conservation action/s** (e.g. require additional, tailored measures which can be spatially indicated on the local habitat map).

Species for which any of the following applies are **not included** in the Priority Species list:

- **Need more / bigger / better-connected habitat** (e.g. high recovery potential that do not require specific or targeted recovery measures).
- **Needs better evidence base / on-the-ground action is not a priority** (e.g. insuficient evidence or understanding regarding drivers of decline, required recovery actions, and range / population levels).
- **Needs action outside England** (e.g. have low recovery potential due to factors constraining recovery beyond English borders).
- **Vagrants / occasional visitors** (e.g. no extant population in the strategy area).

Development of the Priority Species list has brought together the best species evidence available at the South Yorkshire scale and benefited from regional expert perspectives to refine and triangulate the data. The list will be used by delivery organisations to inform which species are considered to be priority for recovery action in South Yorkshire, and what specific actions can be taken to support their recovery.

The Priority Species list groups together prioritised species into 'assemblages' where relevant. Species 'assemblages' are collections of diferent species that co-occur in a specific habitat, area, or at a particular time. For each Habitat-based group of Priorities above, species assemblages which will benefit from those actions are provided alongside examples of Priority Species included.

A full list of Priority Species, including species not included in assemblages and candidate species for reintroduction, is provided in Annex A.

Natural England's review of the Priority List identified several actions below which can support all the species included in the list.

- Undertake further survey work - monitoring and other research is needed to understand population and distribution trends and the drivers of decline.
- Share data as appropriate to focus eforts in order to have the greatest impact on species recovery.

- Provide opportunities for citizen science to contribute to knowledge and understanding, including monitoring population and distribution trends. This could include highlighting existing opportunities such as the Big Butterfly Count and Big Garden Bird Count.
- Promote education and raise awareness about species' needs.
- Provide volunteer opportunities to learn more about species and become the experts of the future.
- Provide support and funding for landowners and land managers to maximise impact on species recovery.

Action taken in Shefield to address declining swift populations is an example of the community action which can be taken to support nature recovery (see case study below).

CASE STUDY: Shefield Swift City

Swifts migrate to the UK from Africa in early May for around three months of the year to breed before returning. However, due to habitat loss, modern construction practices, and the scarcity of nesting sites swift numbers are under threat, and as of 2021 were 'Red-listed' as a bird of conservation concern.

To address the decline in swift populations the Shefield & Rotherham Wildlife Trust named Shefield a 'Swift City' in 2023. Working with the Shefield Swift Network (a collaboration of local groups) the ambition is to protect our swifts and work together for their conservation across the city.

Actions include:

- Installation of swift boxes and bricks that mimic the nooks and crannies of traditional buildings. By incorporating these nesting opportunities into our urban landscape, we can help our swifts to rebuild their populations.
- Monitoring nest sites.
- Awareness raising and engaging the community.
- Development of the Shefield Swift Map - a tool for local swift conservation. highlighting the conservation eforts of local swift groups and opportunities where swift breeding activity might be increased.

More information and access to the Shefield Swift Map can be found at: https://www.wildshefield.com/swift-city/

5. Mapping nature recovery opportunities

A key requirement of the Local Nature Recovery Strategy is to map, wherever possible and appropriate, where potential Measures could have the greatest impact on nature recovery. The mapping of potential Measures is described as “the final, most important stage of the strategy”, and the output is a regional map of all areas which have been mapped as nature recovery opportunities. This is referred to as 'Areas that Could Become of Particular Importance’ for biodiversity, or ‘ACB’.

A prior step is required before mapping potential areas for nature recovery (i.e. ‘mapped Measures’), and this is to map ‘Areas of Particular Importance for Biodiversity’ within the region, referred to as ‘APIB’. The scope of the APIB is clearly defined by Defra, and includes:

- National conservation sites: Special Areas of Conservation (SAC), Special Protection Areas (SPA), National Nature Reserves (NNR), and Sites of Special Scientific Interest (SSSI).
- Local Nature Reserves (LNR).
- Local Wildlife Sites (LWS).
- Areas of ‘Irreplaceable Habitat’: Ancient woodland, Ancient and veteran trees, Blanket bog, Limestone pavements, Coastal sand dunes, Spartina saltmarsh swards, Mediterranean saltmarsh scrub, Lowland fens.

The purpose of producing the APIB is to identify best remaining wildlife sites across the region which are already recognised for their importance for biodiversity. This approach will establish a nationally consistent baseline map and has been used to inform where action for nature recovery should take place in South Yorkshire. In particular this underpins Principle 1 outlined above to improve the quality and extent of habitats through activity to enhance existing nature-rich habitats and to develop a network of bigger, better, and more connected sites for nature.

In line with the Statutory Guidance (para 73-38) we have mapped areas that we believe ‘could become of particular importance for biodiversity’ or ‘where the recovery or enhancement of biodiversity could make a particular contribution to other environmental benefits’. The outputs of this process are contained in our interactive ‘Habitat Viewer’ available at this link.

Methodology

This section summarises the approach taken to mapping potential Measures. For further methodological detail please refer to Annex C.

SYMCA produced the APIB using open source data supplemented by Local Sites data managed by the Local Authorities. Natural Capital Solutions (NCS) was commissioned

by SYMCA to produce the 'ACB' through a process of gathering relevant spatial datasets, developing a method for each mapped Measure, and iteratively refining the output through close engagement with the Working Group and an external workshop process with key regional stakeholders.

Through discussion in the Working Group, measures were separated into 'enhance' and 'create' measures:

- 'Enhance' measures are closely linked with the APIB map and focused on the restoration and enhancement of habitats that currently exist within South Yorkshire.
- 'Create' measures build on the APIB map and are aimed at bufering, connecting and creating new habitats.

A mapping method was established for each of the measures that were mappable, and further data was requested from the Working Group where required. A series of Working Group meetings were then used to refine a methodology for each of the mapped Measures, using the established methodology. Measures which met all of the following criteria were mapped as opportunity areas:

- The relevant area is suficiently concentrated, often through applying further criteria (e.g. wider environmental benefits) to prioritise areas. This avoids 'indiscriminate or widespread' mapping of areas (as per para 77 of the Statutory Guidance).
- Spatial data required to inform mapping is of suficient quality, trustworthy, up to date, with consistent coverage across South Yorkshire, and readily available, whether from open source, national datasets or provided by partners.
- A robust methodology, drawing upon relevant datasets, can be developed and accepted by the Working Group to undertake mapping

A wider stakeholder process followed in which four workshops were held in January and February 2026, each focussing on a specific broad habitat category (wetland, rivers and bogs; grassland; heathland; woodland and urban), with participants contributing local expertise and knowledge. The workshops provided an opportunity to:

- Review and sense-check draft spatial mapping of Measures which are 'Areas that Could Become of particular importance' for biodiversity.
- Enhance mapping with more on-the-ground knowledge, allowing specialists and those who know the strategy area well to review the methodologies used to map Measures for their specialist habitat in greater detail.
- Help to ensure that sites currently mapped for nature recovery opportunities are correct, and that sites are not incorrectly mapped.

- Help to prioritise instances where diferent mapped opportunities for nature recovery activity overlap.

For the 102 habitat-based Measures, we used simple criteria to consider how and whether to map each as opportunity areas for nature recovery. However, for the majority of habitat-based Measures, we took the decision not to map these as opportunity areas – with a resulting 32 mapped Measures and 70 non-mapped Measures.

Across all mapped Measures, a prioritisation process was followed in order to:

a. reduce the overall extent/coverage of mapped Measures across the region (to within 30-50% geographic coverage across South Yorkshire)
b. reduce the extent that mapped Measures overlap with one another (in order to be more strategic about which Measure is recommended)

Operationally, (a) was achieved through applying further prioritisation criteria to certain mapped Measures, and (b) was achieved through using a hierarchy which prioritises opportunities for scarcer[87] habitats.

This prioritisation process has reduced the extent, but not eliminated, instances of mapped Measures overlapping. In other words, some sites are considered to be opportunities for more than one Measure. This retains some flexibility for the delivery of the most appropriate habitat at a site, or as is likely to occur and be more desirable, a mix of habitats.

How to use the mapped Measures

The mapped Measures neither direct nor preclude other land uses or management for any given site. Instead, they provide additional insight to those making decisions about land use (such as plan-making, development proposals, agricultural land, private estates, business sites, private gardens). This means that developers and other end-users can ensure that land use in South Yorkshire contributes positively to environmental outcomes, with decisions based on the best available evidence. A mapped measure does not automatically mean permission for habitat creation or enhancement is granted by the landowner. Measures are mapped using available information and should be undertaken only following site assessment by relevant experts. Any actions to create or enhance habitat should be taken in consultation with landowners, relevant authorities and ecological experts.

Mapped Measures do have a specific role in the context of meeting Strategic Significance requirements within Biodiversity Net Gain policy – this is set out in more in Section 6 below.

While the mapping is at a high-resolution indicating level opportunities at the field scale, and is based where possible on regional level data, it is also based on landscape scale assumptions, rather than on the ground observations. Therefore, ground truthing at the delivery stage is necessary to ensure the measure opportunities are deliverable at

[87] This ranking, in descending order of scarcity, is: mire, wetland, heathland, grassland and woodland.

a specific location. This should be assessed in terms of ecological appropriateness and feasibility, whether a mix of habitats should be delivered at a particular site if it is an opportunity for more than one measure, if the landowner will agree to delivery and whether there is funding available for the intervention.

For the 'Create' measures, the maps are indicating the field in which an opportunity exists. It is not necessarily suggesting that the whole field parcel is an opportunity.

How to view the mapped Measures

The Local Habitat Map contains multiple layers of high-resolution spatial data, and as such it is best viewed using our interactive mapping portal – the link to this is below.

South Yorkshire Habitat Viewer

The portal contains guidance on how to best use the resource in order to fully explore this output. Overleaf is a snapshot (Image 1) of some mapping layers made visible. In this example, all of the measures relating to 'Woodland and trees' and 'Heathland' are switched on to give a sense of the spread of opportunities of these two habitat categories across the region.

6. How we will deliver this Strategy together

No one organisation is responsible for delivering our Strategy – it will need all of us working together to achieve our ambitions. We have set out below some of the ways diferent groups and organisations can use the LNRS to help deliver our collective goals.

SYMCA

Defra is currently developing guidance for Responsible Authorities to clarify their role in delivery. This will focus on four key functions:

1. Lead and convene a delivery partnership to plan and prioritise delivery
2. Embed LNRS into local decision making
3. Identify priority strategic projects and facilitate project development
4. Monitor and report on delivery of nature recovery activities in the LNRS area

SYMCA will begin development of a Spatial Development Strategy (SDS) as required under the Planning and Infrastructure Act 2025. The SDS will outline a strategic framework for land use, housing, and infrastructure within South Yorkshire. By integrating the LNRS into the SDS, SYMCA will seek to secure delivery against the nature recovery priorities set out in this Strategy when planning decisions are made at regional and local levels.

Opportunities for SYMCA and other delivery organisations include:

- Developing a Nature Recovery Delivery Plan with stakeholders, collaborating with wider regional initiatives underway.
- Targeting funding for nature recovery projects, including private finance investments in nature and carbon markets.
- Ensuring that wider plans and strategies embrace opportunities to support nature recovery, such as in the development of Spatial Development Strategies, Local Growth Plans, public health, and climate resilience and adaptation plans.
- Providing a framework for supporting local communities and stakeholders to take action in their localities .

EXAMPLE: Local Investment in Natural Capital (LINC)

This DEFRA-initiated programme, led by the Environment Agency and delivered through Local Authorities aims to develop a pipeline of investment-ready natural capital projects and associated finance mechanisms that will generate revenue and returns for investors, while also directing investment to local priorities for protecting and enhancing the domestic natural environment.
There are opportunities to explore how mechanisms and approaches developed through this programme could be applied to help delivery in South Yorkshire.

Local Planning Authorities

Across South Yorkshire there is a need to provide over 56,000 net new homes over the next decade. Local Planning Authorities are required to consider the priorities set out in the LNRS when determining how their local plan should contribute to and enhance the local and natural environment.[88] Most development sites are in scope of Biodiversity Net Gain (BNG) requirements, providing opportunities to secure habitat enhancement and creation 'on-site' (situated within the boundary of a given development) or 'of-site' (whereby developers discharge their BNG duty through habitat enhancement at other sites).

Beyond BNG requirements, which came into efect in early 2024, other aspects of the Environment Act 2021 will support Local Planning Authorities to deliver on this Strategy. This includes incorporating the Strategy into the preparation of Local Plans, such as drawing upon the mapped opportunities for nature recovery, informing master planning and the design of development sites. Local Nature Recovery Strategies may be a material consideration in planning decision making.

More broadly, all public authorities must conserve and enhance biodiversity, and they are legally required to embed nature recovery into their policies, decisions and land management. This 'Biodiversity Duty' – strengthened by the Environment Act 2021 – means that authorities must actively plan, act and report on how they support biodiversity. Specifically, public authorities must take account of national and local biodiversity strategies including the LNRS when considering how to act on the duty. Therefore, all public authorities in South Yorkshire can refer to the principles, Priorities and Measures, including mapped opportunities for intervention when, for example, developing a corporate strategy or reviewing how to meet its Biodiversity Duty.

At a more localised scale, 'Neighbourhood Plans' – community-led documents prepared at Parish or neighbourhood level – can include policies which promote the designation and protection of local green space and other areas important for nature and influence proposals for new development. There are currently 15 neighbourhood plans in place across South Yorkshire.

The interaction between the LNRS and Development

Through mapping potential Measures, the LNRS identifies areas where development could have the biggest impact on nature and where habitat creation, restoration or enhancement facilitated through development proposals would be most beneficial for nature recovery. The LNRS does not protect land outside of designated areas/sites or

[88] National Planning Policy Framework - 15. Conserving and enhancing the natural environment - Guidance - GOV.UK

compel landowners to deliver the works identified in the strategy. However, some land/sites in the LNRS are already designated for nature conservation at diferent levels and benefit from existing protections.

New development has a positive opportunity to support nature recovery by incorporating sustainable design and delivering long term gains for biodiversity within their schemes. Where mapped Measures, identified in the LNRS, interact with development sites, including sites allocated in Local Plans, developers can use the LNRS as a tool to help them identify strategic priorities and guide the interventions to help deliver nature recovery.

We have produced a document clarifying how planning applications which are subject to Biodiversity Net Gain (BNG) may qualify for 'Strategic Significance' according to the multiplier used within the Statutory Biodiversity Metric (SBM). For each of the 43 mapped Measures, Annex D describes the habitat condition required to meet 'Strategic Significance'. As indicated in 'The Statutory Biodiversity Metric User Guide'[89] (Table 7), a 'High' score can be achieved when both of the following apply:

- The location of the habitat parcel has been mapped in the Local Habitat Map4 as an area where a potential measure has been proposed to help deliver the priorities of that LNRS; and
- The proposed intervention is consistent5 with the mapped potential measure in the LNRS for the habitat parcel

Farmers, landowners and land managers can use the LNRS to:

- Determine appropriate, viable nature recovery uses for land they own or manage
- Explore nature recovery opportunities with adjacent landowners and farmers
- Identify opportunities for Landscape Recovery projects, including Environmental Land Management (ELM) schemes for large-scale, long-term habitat restoration and land-use change

CASE STUDY: Doncaster and Humberhead Levels UNESCO Biosphere Proposal

Doncaster is developing a proposal to become a UNESCO Biosphere Reserve, a global recognition given to places that protect nature while supporting healthy, sustainable communities. Biospheres are areas where people test new ideas for looking after the environment, tackling climate change and creating good places to live and work. They drive investment, sustainable development, research, and facilitate a symbiotic relationship between people and nature. They involve collaboration between local landowners, land managers and farmers.

[89] The Statutory Biodiversity Metric

Currently there are seven designated Biosphere Reserves in the UK, but none yet in the North of England.

The proposed Biosphere area includes some of Doncaster's most important natural places, especially its wetlands and limestone landscapes. These areas support rare plants and wildlife and play an important role in storing carbon and reducing flood risk. Becoming a Biosphere would help bring more attention, funding and expert support to protect and restore these landscapes. The designation wouldn't introduce any new rules or restrictions. Instead, it would create opportunities for investment, green jobs, research, tourism and skills development.

The Doncaster and Humberhead Levels Biosphere has now been awarded Candidate status by the UK Man and Biosphere Committee. Formal designation of a UNESCO Biosphere accelerates the delivery of multiple projects, including but not limited to, nature recovery, biodiversity, carbon reduction and climate mitigation/adaptation, flood risk reduction, economic development and employment.

Community workshops are already taking place so residents can shape the proposal and have their voices heard. Overall, Biosphere status would help Doncaster boost nature recovery, strengthen its local economy and show leadership on sustainability across South Yorkshire.

Businesses and anchor institutions can use the LNRS to:

- Decide how to make corporate donations
- Adopt a more civic approach, improving their corporate, social and environmental responsibilities
- Guide investment in natural processes (such as the carbon cycle, water purification and soil fertility) that produce e.g. clean water, shade and food.
- Improve reputation and increase business

Environmental organisations, conservation bodies, partnerships, health partners, community groups and members of the public can use the LNRS to:

- Develop targeted solutions for implementing nature recovery locally
- Bring communities together to deliver improvements at scale for the benefits of local people
- Successfully secure funding and investment in the locality

Bringing Yorkshire's Nature Back – Yorkshire Wildlife Trust

Bringing Yorkshire's Nature Back is Yorkshire Wildlife Trust's new blueprint for nature recovery across the region. It builds directly on the State of Yorkshire's Nature report[90] (2024), which showed that many of Yorkshire's much-loved species and habitats are

[90] https://www.ywt.org.uk/StateofNature

declining, and that urgent, coordinated action is needed to reverse this trend. The blueprint sets out how Yorkshire can meet the global "30 by 30" target (protecting and efectively managing at least 30% of land and water for nature by 2030) through practical, joined-up work across sectors.

The initiative responds to major challenges facing the region: falling wildlife populations, fragmented habitats, climate pressures, and the UK's slow progress toward international biodiversity targets. It highlights where action is most needed, where nature is under the greatest pressure, and where opportunities exist to restore healthy and connected landscapes. Yorkshire Wildlife Trust has mapped these opportunities using the best available data and shared them in an accessible, evidence-based plan.

A key part of Bringing Yorkshire's Nature Back is partnership. The Trust is calling on councils, landowners, community groups, environmental organisations, businesses and farmers to join a new coalition for nature recovery. This coalition will work collaboratively to remove barriers, share resources, design joint projects and increase the visibility and impact of the region's eforts. It will also complement the four Local Nature Recovery Strategies (LNRS) being developed across Yorkshire, ensuring that local plans contribute to a wider, connected nature network.

The blueprint aims to inspire collective ambition across Yorkshire and demonstrate that large-scale nature recovery is achievable with shared action. By focusing on the 30 by 30 target, it ofers a hopeful, practical vision for restoring wildlife, improving resilience to climate change and creating a healthier, more vibrant region for communities and nature alike.

Government may use the LNRS to:

- Assess funding and investment applications
- Inform the work of arm's lengths bodies (Environment Agency, the Forestry Commission and Natural England
- Identify priority areas that could contribute to its 30-by-30 commitment
- Develop required criteria in future nature recovery funding schemes.
- Support the development and delivery of monitoring programmes

National Parks may use the LNRS to:

- Shape their Protected Landscape management plans
- Inform their nature recovery plans, policies and targets

Universities and educational institutions may use the LNRS:

- As a teaching and research resource, providing a real-world, place-based evidence base for courses in ecology, planning, geography, environmental management and sustainability
- Align campus land management and estates strategies with LNRS Priorities
- Support skills development and green jobs, using LNRS priorities to shape curricula, apprenticeships and professional training
- Contribute data, expertise and innovation, helping to improve the evidence base, monitoring and evaluation of nature recovery
- Act as delivery and convening partners, supporting collaboration between local authorities, communities, businesses and land managers

All public, private, and voluntary bodies therefore have a role to play, along with local communities, in delivering the LNRS Mission and Vision, and success will be reliant on adopting the Strategy's seven Principles of partnership working and a shared endeavour.

Glossary

Term	Definition
Ancient and Veteran trees	Ancient and veteran trees can consist of individual trees or groups of trees within wood pastures, historic parkland, hedgerows, orchards, parks or other areas. They are often found outside ancient woodlands and are regarded as irreplaceable habitats. Ancient trees are those which are exceptionally valuable due to attributes which can include their: great age, size, condition, cultural and heritage value, as well as the biodiversity value of the decaying wood habitats they provide. A veteran tree may not be very old, but they also have significant decay features, such as branch death and hollowing. These features contribute to their exceptional biodiversity, as well as their cultural and heritage value. All ancient trees are veteran trees, but not all veteran trees are ancient. The age at which a tree becomes ancient or veteran will vary by species because each species ages at a diferent rate[91]
Ancient Woodland	Ancient woodland: Any area that's been wooded continuously since at least 1600 AD. This includes ancient semi-natural woodland mainly made up of trees and shrubs native to the site, usually arising from natural regeneration, as well as plantations on ancient woodland sites. Plantations on ancient woodland sites are those replanted with conifer or broadleaved trees that retain ancient woodland features, such as undisturbed soil, ground flora and fungi. These have equal protection in the National Planning Policy Framework. Some ancient wood pastures and historic parklands are also regarded as distinct forms of ancient woodland, and they have recently been added to the Ancient Woodland Inventory in recognition of their importance.
Coppicing	Coppicing is an ancient woodland management technique involving cutting trees or shrubs (typically hazel, ash, or oak) close to the ground, known as the "stool," during the winter dormant season. This stimulates rapid, sustainable regrowth of new stems, creating a multi-stemmed tree. It is a sustainable method for producing timber, enhancing biodiversity, and encouraging woodland floor flowers.
Clough	Clough woodlands are native broadleaf woodlands situated in steep-sided, narrow valleys (cloughs) on the edge of open moorland, particularly in Northern England. These habitats follow stream routes, connecting moorlands to lowlands, helping to stabilize slopes, reduce flood risks, and enhance biodiversity by providing vital shelter in exposed landscapes.
Ecosystem services	The direct and indirect contributions ecosystems provide for human wellbeing and quality of life. This can be in a practical sense, such as the provision of food and water, climate regulation and flood protection, as well as cultural aspects such as reducing stress and anxiety.
Green and blue infrastructure	A general term to describe the network of natural and semi-natural features within and between our villages, towns and cities. These

[91] [1] https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions [Accessed 29/10/24].

Term	Definition
	features range in scale, from street trees, green roofs and private gardens through to parks, rivers and woodlands.
Invasive Non-Native Species	Invasive non-native species (INNS), or invasive alien species, are those that are introduced, intentionally or unintentionally, outside of their natural geographic range, causing environmental, social and/or economic impacts. INNS can drive losses of native species through impacts such as predation, competition, introducing diseases and altering habitats.
Irreplaceable habitats	Habitats that are very dificult (or take a very long time) to restore, create or replace once they have been destroyed. This may be due to the age, uniqueness, species diversity or rarity of the habitat. Irreplaceable habitat includes some of England's most ecologically valuable terrestrial and intertidal habitat, including areas of ancient woodland, ancient and veteran trees, blanket bog, lowland fens and coastal sand dunes. Irreplaceable habitats are protected in England through the National Planning Policy Framework for their importance.
National Character Areas	National Character Areas divide England into 159 distinct areas. Each is defined by a unique combination of: landscape, biodiversity, geodiversity, history and cultural and economic activity. The respective boundaries follow natural lines in the landscape, not county or district boundaries.
Nature recovery	The process of actively restoring, creating, and connecting wildlife-rich habitats to reverse biodiversity loss.
Nature-based solutions	The European Commission defines nature-based solutions as "Solutions that are inspired and supported by nature, which are cost-efective, simultaneously provide environmental, social and economic benefits and help build resilience". This typically includes actions such as wetland restoration, river/floodplain restoration, agroforestry, and soil protection. These actions can in turn help to deliver services such as erosion control, drought and flood prevention, carbon sequestration, cooling, and wildfire prevention[92].
Nature Improvement Area	Nature Improvement Areas are large (in the region of 10,000-50,000 hectares), discrete areas that were announced in the Natural Environment White Paper – Natural choice – securing the value of nature. They were established to create joined up and resilient ecological networks at a landscape scale. Each is run by a partnership of local authorities, local communities and landowners, the private sector and conservation organisations with funding provided by Defra and Natural England[93]
Open mosaic habitat	A biodiversity-rich mix of diferent 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.

[92]https://climate-adapt.eea.europa.eu/en/eu-adaptation-policy/key-eu-actions/NbS [Accessed 09/02/26].

[93]https://www.gov.uk/government/publications/nature-improvement-areas-improved-ecological-networks/nature-improvement-areas-about-the-programme [Accessed 10/02/26].

Term	Definition
Open Mosaic Habitat on Previously Developed Land	Open Mosaic Habitat on Previously Developed Land (OMHPDL) is a UK Biodiversity Action Plan (BAP) priority habitat, often called high-value brownfield land.
Paludiculture	Paludiculture is the agricultural cultivation of crops on wet or rewetted peatlands, designed to keep the soil saturated while remaining economically productive. This "wet farming" approach prevents peat degradation and subsidence, significantly reducing greenhouse gas emissions compared to traditional drained agriculture.
Pollarding	Pollarding is a long-standing method of pruning that involves cutting the upper branches of a tree back to a main framework (or "knuckle") at regular intervals, usually every 1-5 years. It limits a tree's overall height and width, encourages dense foliage growth, and is commonly used in urban areas to prevent trees from outgrowing their space or conflicting with overhead infrastructure.
Priority habitats	Habitats that are recognised as of Principal Importance (HPI) across the UK and listed under Section 41 of the Natural Environment and Rural Communities Act.
Priority species	Species that are recognised as of Principal Importance (SPI) across the UK and listed under Section 41 of the Natural Environment and Rural Communities Act.
Rides	A woodland ride is a linear, open trackway or path within a forest, primarily designed to provide access for management, walking, or riding. These sunlit corridors, which are often bordered by wildflowers and shrubs, act as vital wildlife corridors, biodiversity hotspots, and vital structural elements.
Riparian	A riparian zone is the transitional interface between land and a river, stream, lake, or wetland. These crucial ecosystems act as natural bufers, characterized by moist soils and distinct, water-loving vegetation that stabilize banks, filter pollutants from runof, and provide vital habitats for biodiversity.
Soil poaching	Soil poaching is the physical degradation of soil structure caused by livestock trampling, particularly on wet or waterlogged grassland. It causes the soil to become heavily compacted, broken, and muddy, leaving bare patches that reduce grass yield, inhibit water infiltration, and increase surface run-off

Term	Definition
SSSI Status definitions	**Favourable condition:** The designated feature is being adequately conserved and the results from monitoring demonstrate that the feature is meeting all the mandatory site-specific monitoring targets set out in the monitoring specification. There may be scope for the further (voluntary) enhancement of the feature. **Destroyed condition:** Lasting damage has occurred to an entire designated feature such that the feature has been irretrievably lost. No amount of management will bring this feature back. This feature will never recover. For example, a finite mineralogical feature has been totally removed from its surroundings without consent and is lost forever. **Part destroyed condition:** Lasting damage has occurred to part of a designated feature, such that it has been irretrievably lost and will never recover. No amount of management will allow the feature to ever reach favourable condition. **Unfavourable declining condition:** The feature is not being conserved and will not reach favourable condition unless there are changes to management or external pressures. The feature condition is becoming progressively worse. This is reflected in the results of monitoring over time and the longer the feature remains in this poor condition, the more dificult it will be, in general, to achieve recovery. **Unfavourable no change condition:** The feature is not being conserved. It will not reach favourable condition unless there are changes to the management or external pressures. If the feature is unfavourable, it should be recorded as unfavourable – no change, if the necessary actions to achieve favourable condition have: not been identified and recorded, none of the actions are underway, or at least one action is behind schedule. **Unfavourable recovering condition**: Often known simply as 'recovering'. The feature is not yet fully conserved but the necessary actions to achieve favourable condition have: been identified and recorded, at least one action is underway, and there are no actions behind schedule. Provided that the recovery work is sustained, the feature will reach favourable condition in time, but at least one of the designated feature's mandatory attributes is not currently meeting their targets.
Sustainable Drainage Schemes	Sustainable drainage systems refer to a range of environmentally friendly rainwater management techniques, such as soakaways, to reduce water run-of entering sewers and to prevent flooding. They manage surface water in a way that mimics natural processes, providing benefits that traditional drainage methods do not[94].

[94] https://researchbriefings.files.parliament.uk/documents/CBP-10483/CBP-10483.pdf [Accessed 10/02/26].

Term	Definition
UK Forestry Standard	The UK Forestry Standard defines the government requirements for forestry in the UK. It provides a basis for regulation and monitoring, including national and international reporting.

Abbreviations

Term	Definition
ACB	Areas that Could Become of Importance to biodiversity
BAP	Biodiversity Action Plan
BNG	Biodiversity Net Gain
DCRT	Don Catchment Rivers Trust
Defra	Department for Environment, Food and Rural Afairs
HPI	Habitats of Principal Importance
LNR	Local Nature Reserve
LNRS	Local Nature Recovery Strategy
LWS	Local Wildlife Site
NbS	Nature based Solutions
NCA	National Character Area
NFM	Natural Flood Management
NIA	Nature Improvement Area
NNR	National Nature Reserve
OMH	Open Mosaic Habitat
PAWS	Plantation on Ancient Woodland Site
RA	Responsible Authority
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SuDs	Sustainable Drainage Systems
SYMCA	South Yorkshire Mayoral Combined Authority

Term	Definition
UNESCO	United Nations Educational, Scientific and Cultural Organization

Appendix A – International, national, regional and local policy context

International

'30by30'

Agreed at Biodiversity COP 15 in Montreal by almost 200 nations, including the UK, '30by30' is a commitment to reverse biodiversity loss and protect at least 30 per cent of land and sea area by 2030. The UK's commitment to this international target is enshrined within the 2023 Environmental Improvement Plan and is a legally binding target. The '30%' is a scientifically informed target required to reverse nature's decline.

Progress towards meeting this target requires urgent and significant action given that, to date, no published Government data puts the percentage of UK land in good condition for wildlife at higher than 7% nationally.

An important and ambitious initiative is underway in Yorkshire coordinated by Yorkshire Wildlife Trust to identify opportunities to reach the '30%' target within Yorkshire.

Paris Agreement on Climate Change (2015)

A treaty which commits to holding global warming to well below two degrees Celsius above pre-industrial levels, and endeavouring for increases of no more than 1.5 degrees.

National

Environment Act (2021)

Establishes legally binding targets for restoring and enhancing nature across England, including air and water quality, waste, recycling and species decline, and targets for increasing tree and woodland cover. Local Nature Recovery Strategies are central to this.

Environmental Improvement Plan (EIP) (2025)

The UK government's Environmental Improvement Plan (EIP) 2025, replacing the Environment Improvement Plan (2023), provides a roadmap for meeting environmental commitments and Environment Act targets, recognising the need to work in partnership with local government, communities, landowners, businesses, farmers, environmental organisations, and others.

It includes key commitments and goals around which actions are framed.

Goal 1: Restored nature	We will create a network of bigger, better and more resilient habitats to help nature thrive.

Goal 2: Air	We will achieve clean air.
Goal 3: Water	We will ensure English waters are clean, resilient and plentiful.
Goal 4: Chemicals and pesticides	We will minimise environmental risks from chemicals and pesticides.
Goal 5: Waste	We will minimise waste by designing it out of the system, reusing and recycling materials wherever possible.
Goal 6: Resources	We will ensure that natural resources are produced, managed and consumed sustainably.
Goal 7: Climate change	We will reduce greenhouse gas emissions to accelerate to net zero and work to prepare the natural environment for the efects of climate change.
Goal 8: Reducing environmental hazards	We will reduce the risk of harm to people, the environment and the economy from natural hazards.
Goal 9: Biosecurity	We will enhance biosecurity to protect our natural environment and boost the health and resilience of plants, animals, ecosystems and people.
Goal 10: Access to nature	We will ensure inclusive access to nature and protect nature's beauty and heritage (reafirms the commitment that everyone in England should live within a 15-minute walk (approx. 1,200m) of green or blue space).

Blueprint for Halting and Reversing Biodiversity Loss.

The UK's national biodiversity strategy and action plan which sets out how England, Wales, Scotland and Northern Ireland will work together to address biodiversity loss.

National Environmental Objectives (NEOs)

The UK government provided LNRS Responsible Authorities with guidance for how LNRSs can contribute towards 'National Environmental Objectives' (NEOs). These NEOs are drawn from the Environmental Improvement Plan (2023). The guidance should be used when developing priorities as part of strategy development and provides quantified targets for habitat creation and species recovery, as well as wider societal benefits. The Priorities and Measures developed as part of the South Yorkshire LNRS contribute directly or indirectly to almost all of these targets.

The Planning and Infrastructure Act 2025

The Planning and Infrastructure Act introduces strategic planning at a sub-regional level, with a duty for SYMCA to prepare a Spatial Development Strategy (SDS) ofering opportunities to facilitate efective cross-boundary working.

The Act also strengthens the role of Natural England, including new duties to prepare Environmental Delivery Plans and operate a Nature Restoration Fund aimed at avoiding harming protected sites and species, and addressing any impacts from development. As such Natural England will remain a key partner in supporting nature recovery and environmental improvement in South Yorkshire, and delivery of our LNRS.

National Planning Policy

Proposed changes to the National Planning Policy Framework (December 2025) would further embed delivery of Local Nature Recovery Strategies through the planning system. Development plans (which set out planning policies taken into account when determining planning applications) will need to take account of Local Nature Recovery Strategies.

As well as identifying opportunities for the conservation, enhancement and recovery of landscapes, sensitive waterbodies, habitats and species of principal importance, development plans will need to ensure that areas which could become of particular importance for nature identified in Local Nature Recovery Strategies are taken into account as opportunities to integrate development with nature's restoration.

Drawing on measures proposed by Local Nature Recovery Strategies, development proposals should make suitable opportunities to connect to and strengthen ecological networks that extend beyond development sites.

The Protected Landscapes Duty became law at the end of 2023 and requires public bodies and utility companies to take an active role in the environmental stewardship of National Landscapes and National Parks. In practice this can mean taking steps to ensure their actions don't harm or pollute and that planning and development decisions properly consider the impact on the landscape.

Regional

South Yorkshire Strategy

The South Yorkshire Strategy has been developed through a collaborative process that brings together key stakeholders, including local authorities and representatives from the health, education, business and voluntary sectors. Its purpose is to create a shared vision and clear priorities for tackling the region's biggest challenges and unlocking its potential. The strategy builds on existing local area and South Yorkshire plans and aims

to enhance collective impact through alignment under key ambitions, shared learning, and strategic coordination.

South Yorkshire faces big, connected challenges – improving health, tackling crime and safety concerns, creating good jobs as the economy changes, restoring pride in our towns and communities, and taking urgent action on climate.

Three overarching Ambitions have been identified to provide a focus and clear priorities that everyone can rally around. This includes the Ambition that 'Every community is connected and proud of its place.' Investing in a more sustainable South Yorkshire involving flood resilience and water management, green urban regeneration and development, and enhancing natural habitats and species will be essential to deliver this ambition to create safer and more vibrant, cohesive, resilient communities in which people have pride to look after themselves, each other and their local environment and where everyone is welcome and belongs.

South Yorkshire Local Growth Plan

Our South Yorkshire Growth Plan sets out how we will grow the region's economy over the next 10-years, with a Vision to create 'A bigger better economy by 2035' and there are four Missions to achieve this Vision:

1. A stronger diverse business base
2. Connected vibrant places
3. Pathways to stay near and go far
4. A resilient South Yorkshire

One of the two Strategic Objectives under Mission 4 is to achieve a status where 'our nature is more diverse' though focussing on actions and outcomes to enhance natural habitats and species; create beautiful green urban regeneration and development; and improve flood resilience and water management.

The South Yorkshire Local Nature Recovery Strategy is cited as a key Strategy to help inform and provide a framework for achieving the Local Growth Plan's Vision for a more sustainable and resilient South Yorkshire.

Connected by Water

Connected by Water is a major South Yorkshire partnership created to help communities, landscapes and nature become more resilient to flooding and climate change. The initiative brings together seven key organisations: the South Yorkshire Mayoral Combined Authority, Barnsley, Doncaster, Rotherham and Shefield Councils, Yorkshire Water and the Environment Agency. The partnership formed in response to severe flooding in 2019, which caused serious damage to homes, businesses and infrastructure across the region.

Alongside major engineering schemes, the partnership is delivering a wide range of nature-based solutions that support both flood resilience and nature recovery. These include creating wetlands, reconnecting rivers with their natural floodplains, restoring peatlands, planting trees and hedgerows, and creating ponds and scrapes to slow and store water. These measures reduce flood risk while also improving habitats for wildlife, enhancing carbon storage and creating more green spaces for people to enjoy.

Connected by Water aims to better protect 25,000 homes, businesses and key infrastructure across South Yorkshire. By combining engineering, nature-based solutions and strong community involvement, the partnership is creating a more resilient, nature rich region and demonstrating how climate adaptation and nature recovery can go hand in hand.

South Yorkshire Woodland Partnership

South Yorkshire Woodland Partnership is committed to creating a nationally recognised, vibrant and resilient network of trees and woodlands across South Yorkshire that delivers life-changing, sustainable benefits for people, nature, climate and the economy, through collaboration with local woodland stakeholders in South Yorkshire.

Yorkshire Wildlife Trust State of Yorkshire's Nature report

Provides data and analysis into how nature is fairing and crucially where action is needed to create healthier, resilient and more abundant landscapes.

Peak District National Park and State of Nature report and Nature Recovery Plan.

All Local Authorities have a duty to 'further the purposes' of Protected Landscapes and ensure that the measures align with the purpose and help to deliver its targets and objectives. The State of Nature report highlights the habitats and some of the species regarded as of high value and importance within the Peak District and how they contribute to the overall network and to supporting various ecosystem services.

The Peak District Nature Recovery Plan aims to contribute to the goals and targets set out in the Environmental Improvement Plan 2023 and contribute to the national Nature Recovery Network. The vision set out is: *The Peak District brimming with wildlife: at the heart of the country and the heart of the nature recovery network. A place for wildlife and people, where nature works with people, and anyone can connect with a resilient, wildlife-rich natural environment.*

Neighbouring LNRS

The South Yorkshire LNRS shares its border with the following Local Nature Recovery Strategy areas:

- North Yorkshire and York

- West Yorkshire
- Hull and East Yorkshire
- Derbyshire
- Nottinghamshire and Nottingham
- Greater Lincolnshire

Local

South Yorkshire consists of four Local Authorities (Barnsley, Doncaster, Rotherham, and Shefield) with part of the region also falling within the Peak District National Park managed by the Peak District National Park Authority.

Each authority has various local plans, climate/environment plans and health and wellbeing plans which set out ambitions, targets and policies of relevance to nature recovery in South Yorkshire.

Environmental groups, as well as local neighbourhoods and parishes often also have locally relevant climate, environment or nature plans.

Appendix B – Broad Habitat Registers

consider how to improve the layout of this table

Asset register for South Yorkshire and its four metropolitan boroughs containing the area and percentage cover of broad habitat types. Source: South Yorkshire natural capital and biodiversity mapping, 2021. Natural Capital Solutions Ltd.

	South Yorkshire		Sheffield		Rotherham		Doncaster		Barnsley	
	Hectares	*% area*	*Hectares*	*% area*	*Hectares*	*% area*	*Hectares*	*% area*	*Hectares*	*% area*
Artificial exposure / waste	610	0.4	34	0.1	90	0.3	457	0.8	30	0.1
Bare sand	2	0.0	-	0.0	0	0.0	2	0.0	-	0.0
Boundaries	796	0.5	144	0.4	195	0.7	307	0.5	148	0.5
Built up areas	11,468	7.4	,568	9.7	2,424	8.5	3,340	5.9	2,136	6.5
Cultivated / disturbed land	40,232	25.9	496	1.3	10,629	37.1	23,290	41.0	5,813	17.7
Felled woodland	715	0.5	197	0.5	23	0.1	455	0.8	40	0.1
Garden	11,440	7.4	,728	10.1	2,432	8.5	3,035	5.3	2,245	6.8
Grassland, amenity	6,044	3.9	1,563	4.2	1,200	4.2	2,101	3.7	1,180	3.6
Grassland, improved	21,180	13.6	2,497	6.8	3,812	13.3	6,525	11.5	8,329	25.3
Grassland, marshy	217	0.1	8	0.0	3	0.0	151	0.3	55	0.2
Grassland, semi-natural	11,061	7.1	5,878	16.0	757	2.6	2,137	3.8	2,289	7.0
Grassland, unknown	416	0.3	82	0.2	103	0.4	173	0.3	59	0.2
Heathland	7,120	4.6	5,514	15.0	127	0.4	210	0.4	1,268	3.9
Intertidal	9	0.0	-	0.0	-	0.0	9	0.0	-	0.0
Mire	6,173	4.0	2,762	7.5	7	0.0	1,717	3.0	1,660	5.0
Mixed habitats	1	0.0	-	0.0	-	0.0	1	0.0	-	0.0
Natural rock	2	0.0	1	0.0	-	0.0	1	0.0	1	0.0
Other	493	0.3	101	0.3	147	0.5	127	0.2	118	0.4
Path	566	0.4	221	0.6	116	0.4	125	0.2	105	0.3
Pavement	1,714	1.1	626	1.7	349	1.2	418	0.7	320	1.0
Railway	438	0.3	96	0.3	95	0.3	205	0.4	43	0.1
Roads	5,424	3.5	1,586	4.3	1,094	3.8	1,641	2.9	1,102	3.3
Saltmarsh	0	0.0	-	0.0	-	0.0	-	0.0	0	0.0
Scrub	468	0.3	91	0.2	98	0.3	218	0.4	61	0.2
Swamp and marginal	2,881	1.9	432	1.2	22	0.1	2,302	4.1	125	0.4
Trees / Parkland	6,251	4.0	1,778	4.8	1,093	3.8	1,992	3.5	1,387	4.2
Uncertain agriculture (impr	918	0.6	157	0.4	181	0.6	355	0.6	225	0.7
Unclassified	529	0.3	50	0.1	111	0.4	279	0.5	89	0.3
Water, brackish	43	0.0	543	1.5	-	0.0	43	0.1	-	0.0
Water, fresh	2,231	1.4	543	1.5	353	1.2	922	1.6	414	1.3
Woodland, broadleaved	12,846	8.3	,586	9.7	2,935	10.2	3,485	6.1	2,839	8.6
Woodland, coniferous	1,826	1.2	727	2.0	63	0.2	436	0.8	599	1.8
Woodland, mixed	1,116	0.7	326	0.9	197	0.7	358	0.6	234	0.7
	155,230	**100.0**	**37,335**	**101.3**	**28,654**	**99.8**	**56,816**	**100.0**	**32,915**	**100.2**

Appendix C – Environmental Site Designations

Appendix C(i): Sites of Special Scientific Interest (SSSI) in South Yorkshire

*Sites of Special Scientific Interest found in South Yorkshire, including the area each site covers within South Yorkshire, their current condition status, and the year of the most recent condition assessment. * are sites designated for geological interest.*

NAME	AREA (HECTARES) IN SOUTH YORKSHIRE	TOTAL PERCENTAGE AREA IN FAVOURABLE CONDITION
Anston Stones Wood	34.2	94.67
Ashfield Brick Pits*	0.6	0.00
Bilham Sand Pits*	0.2	0.00
Bradgate Brickworks*	1.1	18.15
Cadeby Quarry*	96.4	100.00
Canyards Hills	65.6	100.00
Carlton Main Brickworks*	15.7	100.00
Dark Peak	8128.6	7.99
Dearne Valley Wetlands	650.0	100.00
Denaby Ings	25.2	0.00
Dyscarr Wood	3.4	19.76
Eastern Peak District Moors	2890.5	32.18
Edlington Wood	100.9	100.00
Ginny Spring, Whitwell Wood	0.7	0.00
Hatfield Moors	1423.6	1.27
Lindrick Golf Course	37.2	0.00
Little Don Stream Section*	1.0	100.00
Maltby Low Common	6.1	100.00
Moss Valley Meadows	>0.0	80.64
Moss Valley	10.5	0.00
Neepsend Brickworks*	4.2	100.00
Neepsend Railway Cutting*	1.5	0.00
New Edlington Brickpit*	0.2	0.00
Owston Hay Meadows	5.5	100.00
Potteric Carr	117.5	52.34
Pye Flatts Meadows	2.3	100.00
River Idle Washlands	43.6	0.00
Roche Abbey Woodlands	63.0	100.00
Sandall Beat	66.3	0.00
Shirley Pool	16.1	60.00
Spring Meadows, Alderman's Head & Cow Croft Meadows	16.8	81.25
Sprotbrough Gorge	81.4	32.98
Stairfoot Brickworks*	0.1	0.00
Stannington Ruffs*	2.7	100.00

NAME	AREA (HECTARES) IN SOUTH YORKSHIRE	TOTAL PERCENTAGE AREA IN FAVOURABLE CONDITION
Thorne, Crowle and Goole Moors	1250.6	5.92
Totley Wood	15.1	0.00
Wadsley Fossil Forest*	0.2	100.00
Went Ings Meadows	6.5	93.22
Wharncliffe Crags*	15.5	100.00
Wood Lee Common*	6.4	0.00

Appendix C(ii): Special Areas of Conservation (SAC) in South Yorkshire

Special Areas of Conservation found within South Yorkshire, alongside the features each site is designated for, and the area they cover

Name	Designated Features	Area within South Yorkshire (Hectares)
Hatfield Moor	• H7120 Degraded raised bogs (still capable of natural regeneration)	1,244.2
South Pennine Moor	• H4010 Northern Atlantic wet heaths with Erica tetralix • H4030 European dry heaths • H7130 Blanket bog • H7140 Transition mires and quaking bogs • H91A0 Old sessile oak woods with Ilex and Blechnum in the UK	10,833.8
Thorne Moor	• H7120 Degraded raised bogs (still capable of natural regeneration)	1,364.4

Appendix C (iii): Special Protection Areas (SPA) in South Yorkshire

Special Protection Areas found within South Yorkshire, alongside the features each site is designated for, and the area they cover.

Name	Designated Features	Area within South Yorkshire (Hectares)
Peak District Moors (South Pennine Moors Phase 1)	• Golden plover, *Pluvialis apricaria* - A140, b • Merlin, *Falco columbarius* - A098, b • Short-eared owl, *Asio flammeus* - A222, b	11,019.1
Thorne & Hatfield Moors	• Nightjar, *Caprimulgus europaeus* - A224, b	1,781.4

Appendix C (iv): National Nature Reserve (NNR) in South Yorkshire

The designated features and area covered by the Humberhead Peatlands National Nature Reserve in South Yorkshire.

Name	Designated Features	Area (Hectares)

Humberhead Peatlands	• Archaeology and Palaeoecology • Breeding nightjar population • Degraded raised mire with potential for restoration • Designated Breeding bird assemblages • Designated Invertebrate assemblages • Fen and Non-SSSI/SAC/SPA Designated Habitats and Species • Natural England Estate, Buildings and Equipment • Value of the NNR for Public Engagement and Access	2,546.3

Appendix C (v): Local Nature Reserves (LNR) in South Yorkshire

Anston Stones Wood	Potter Holes Plantation
Bowden Housteads Wood/Carbrook Ravine	Quarry Park
Buntings Wood	Roe Woods and Crabtree Pond
Carlton Marsh	Salmon Pasture
Catclife Flash	Sandall Beat
Centenary Riverside	Scholes Coppice and Keppel's Field
Dearne Valley Park	Sharrow School Green Roof, Shefield
Ecclesall Woods	Shefield General Cemetery
Elsecar Reservoir	Shire Brook Valley
Firsby Reservoir	Sunnybank
Fox Hagg	Town End Common
Gleadless Valley	Warren Vale
Hatchell Wood	West Haigh Wood
Loxley and Wadsley Common	Wharnclife Heath
Maltby Commons	Wheata Woods
Northclife Quarry	Woodhouse Washlands
Old Denaby Wetland	Woolley Wood
Porter Valley Woodlands	Worsbrough Country Park

Appendix C (vi): Local Wildlife Sites in Positive Management

The number and percentage of Local Wildlife Sites in positive management in South Yorkshire.

Local Authority	Local Wildlife Sites in positive management
Barnsley	34% (19 sites out of 55) as of March 2025
Doncaster	27% (95 sites out of 354) as of March 2025
Rotherham	30% (37 sites out of 120) as of March 2020

Shefield	15% (38 sites out of 253) as of March 2025

Note: Information on positive management is based on the best available data including responses to landowner surveys and assumptions where no site data is available. It is recognised that responses can be subjective and that the above data should be treated with caution.

Appendix D – National Character Areas: Habitat Coverage in South Yorkshire

Dark Peak (NCA 51)

Land use	Area (hectares)	% NCA	% South Yorkshire
Acid, Calcareous, Neutral Grassland	3469.12	19.58%	2.24%
Arable and Horticultural	140.54	0.79%	0.09%
Bare Ground	25.38	0.14%	0.02%
Bog	1912.49	10.79%	1.23%
Bracken	965.46	5.45%	0.62%
Broadleaved, Mixed and Yew Woodland	1159.55	6.54%	0.75%
Built-up Areas and Gardens	27.35	0.15%	0.02%
Coniferous Woodland	689.78	3.89%	0.44%
Dwarf Shrub Heath	8325.18	46.98%	5.36%
Fen, Marsh and Swamp	195.41	1.10%	0.13%
Improved Grassland	441.79	2.49%	0.28%
Water	368.38	2.08%	0.24%

Yorkshire Southern Pennine Fringe (NCA 37)

Land use	Area (hectares)	% NCA	% South Yorkshire
Acid, Calcareous, Neutral Grassland	5417.80	30.44%	3.49%
Arable and Horticultural	683.73	3.84%	0.44%
Bare Ground	5.73	0.03%	0.00%
Bog	104.11	0.58%	0.07%
Bracken	144.96	0.81%	0.09%
Broadleaved, Mixed and Yew Woodland	3770.39	21.18%	2.43%
Built-up Areas and Gardens	3515.73	19.75%	2.27%
Coniferous Woodland	273.53	1.54%	0.18%
Dwarf Shrub Heath	247.56	1.39%	0.16%
Fen, Marsh and Swamp	1270.14	7.14%	0.82%
Improved Grassland	2221.02	12.48%	1.43%
Unclassified	6.80	0.04%	0.00%
Water	137.53	0.77%	0.09%

Nottinghamshire, Derbyshire and Yorkshire Coalfield (NCA 38)

Land use	Area (hectares)	% NCA	% South Yorkshire
Acid, Calcareous, Neutral Grassland	11039.54	21.28%	7.11%
Arable and Horticultural	9593.34	18.49%	6.18%
Bare Ground	13.91	0.03%	0.01%
Bog	0.60	0.00%	0.00%
Bracken	199.00	0.38%	0.13%
Broadleaved, Mixed and Yew Woodland	8500.55	16.39%	5.48%
Built-up Areas and Gardens	12811.79	24.70%	8.25%
Coniferous Woodland	224.72	0.43%	0.14%
Dwarf Shrub Heath	17.84	0.03%	0.01%
Fen, Marsh and Swamp	5259.19	10.14%	3.39%
Improved Grassland	3664.79	7.06%	2.36%
Unclassified	215.83	0.42%	0.14%
Water	332.11	0.64%	0.21%

Southern Magnesian Limestone (NCA 30)

Land use	Area (hectares)	% NCA	% South Yorkshire
Acid, Calcareous, Neutral Grassland	4035.03	12.82%	2.60%
Arable and Horticultural	16772.37	53.27%	10.81%
Bare Ground	49.43	0.16%	0.03%
Bog	2.28	0.01%	0.00%
Bracken	0.02	0.00%	0.00%
Broadleaved, Mixed and Yew Woodland	4506.27	14.31%	2.90%
Built-up Areas and Gardens	2920.06	9.27%	1.88%
Coniferous Woodland	89.72	0.28%	0.06%
Dwarf Shrub Heath	472.20	1.50%	0.30%
Fen, Marsh and Swamp	397.10	1.26%	0.26%
Improved Grassland	1898.44	6.03%	1.22%
Unclassified	218.75	0.69%	0.14%
Water	124.83	0.40%	0.08%

Humberhead Levels (NCA 39)

Land use	Area (hectares)	% NCA	% South Yorkshire
Acid, Calcareous, Neutral Grassland	8385.69	23.08%	5.40%
Arable and Horticultural	12702.73	34.97%	8.18%
Bare Ground	229.41	0.63%	0.15%
Bog	1776.49	4.89%	1.14%
Broadleaved, Mixed and Yew Woodland	4907.66	13.51%	3.16%
Built-up Areas and Gardens	4275.38	11.77%	2.75%
Coniferous Woodland	348.47	0.96%	0.22%
Dwarf Shrub Heath	624.05	1.72%	0.40%
Fen, Marsh and Swamp	197.69	0.54%	0.13%
Improved Grassland	1985.08	5.46%	1.28%
Unclassified	277.76	0.76%	0.18%
Water	616.81	1.7%	0.39%

Sherwood (NCA 49)

Land use	Area (hectares)	% NCA	% South Yorkshire
Arable and Horticultural	0.13	100.00%	0.00%

Appendix E – Nature conservation classifications

Nature conservation classification	Definition
International and European designations[95]	Our best examples of habitats and species of birds that are either threatened or valuable within the European Union are designated as Special Areas of Conservation (SAC) and Special Protection Areas (SPA). These sites make up a network of sites across Europe called Natura 2000, protected under the EU Habitats Directive. The Conservation of Habitats and Species Regulations 2010 (as amended) (the Habitats Regulations) has applied the EU Habitats Directive and Birds Directive to England.
Special Areas of Conservation	These are strictly protected sites designated under the Habitats Regulations. The habitat types and species are those considered to be most in need of conservation at a European level (excluding birds which are covered by Special Protection Areas).
Special Protection Areas	Special Protection Areas (SPAs) are strictly protected sites classified in accordance with the EC Birds Directive. They are classified for rare and vulnerable birds and for regularly occurring migratory species.

[95] https://www.planningaid.co.uk/hc/en-us/articles/203220061-What-are-the-types-of-nature-conservation-designations [Accessed 09/02/26].

Nature conservation classification	Definition
National designations	
Sites of Special Scientific Interest	Sites of Special Scientific Interest (SSSI) represent the country's best wildlife and geological sites. They are legally protected in England and Wales by the Wildlife and Countryside Act 1981, amended by the Countryside and Rights of Way Act 2000. Many SSSIs are internationally important for their wildlife and home to the rarest and most vulnerable habitats and species in Europe. As such, many have additional European designations as described above.
National Nature Reserves	National Nature Reserves were established to protect some of our most important habitats, species and geology, and to provide 'outdoor laboratories' for research. Most NNRs ofer great opportunities to schools, interest groups and the public to experience wildlife first hand and learn more about nature conservation.
Locally protected sites	
Local Nature Reserves	Local Nature Reserves can be created by local authorities, or town and parish councils if the district council have given them power to do this. Sites can be selected for their wildlife, geology, education or enjoyment (without disturbing wildlife).
Local Wildlife Sites	Local Wildlife Sites are identified and selected locally by partnerships of local authorities, nature conservation charities, statutory agencies, ecologists and local experts, and their selection is based on the most important, distinctive and threatened species and habitats, often of regional importance. They are not legally protected in the same way as national and European sites. However, they are safeguarded through local planning policies.
Designated landscape	
National Parks	National Parks are large areas of land that are protected by law for the benefit of the nation. They have the statutory purpose of conserving and enhancing natural beauty, wildlife, and cultural heritage, as well as to promote opportunities for the understanding and enjoyment of the special qualities of National Parks by the public.

Taxonomic Group	Scientific Name	Common Name
Insect - beetle (coleoptera)	Berosus luridus	
Insect - beetle (coleoptera)	Eubria palustris	
Insect - mayfly	Ephemera lineata	Mayflies (Greendrakes)
Insect - mayfly	Baetis niger	Southern Iron Blue
Insect - mayfly	Siphlonurus armatus	
Insect - stonefly	Rhabdiopteryx acuminata	
Flowering plant	Scleranthus annuus	Annual Knawel
Flowering plant	Scleranthus annuus subsp. annuus	Annual Knawel
Flowering plant	Medicago minima	Bur Medick
Flowering plant	Chamaemelum nobile	Chamomile
Flowering plant	Ranunculus arvensis	Corn Buttercup
Flowering plant	Centaurea cyanus	Cornflower
Flowering plant	Allium oleraceum	Field Garlic
Flowering plant	Stachys arvensis	Field Woundwort
Flowering plant	Platanthera chlorantha	Greater Butterfly-orchid
Flowering plant	Galeopsis speciosa	Large-flowered Hemp-nettle
Flowering plant	Galeopsis angustifolia	Red Hemp-nettle
Flowering plant	Onobrychis viciifolia	Sainfoin
Flowering plant	Hypochaeris glabra	Smooth Cat's-ear
Flowering plant	Anthemis cotula	Stinking Chamomile
Flowering plant	Lathyrus aphaca	Yellow Vetchling
Terrestrial mammal	Plecotus auritus	Brown Long-eared Bat
Terrestrial mammal	Nyctalus leisleri	Lesser Noctule
Terrestrial mammal	Pipistrellus nathusii	Nathusius's Pipistrelle
Terrestrial mammal	Nyctalus noctula	Noctule Bat
Terrestrial mammal	Pipistrellus pygmaeus	Soprano Pipistrelle
Terrestrial mammal	Myotis daubentonii	Daubenton's bat
Terrestrial mammal	Myotis brandtii	Brandt's bat
Terrestrial mammal	Myotis mystacinus	Whiskered bat
Terrestrial mammal	Myotis nattereri	Natterer's bat
Flowering plant	Viola canina	Heath Dog-violet
Flowering plant	Hyoscyamus niger	Henbane
Flowering plant	Cynoglossum officinale	Hound's-tongue
Flowering plant	Platanthera bifolia	Lesser Butterfly-orchid
Flowering plant	Dianthus deltoides	Maiden Pink
Flowering plant	Salvia pratensis	Meadow Clary
Flowering plant	Clinopodium acinos	Basil Thyme
Flowering plant	Euphrasia pseudokerneri	Chalk Eyebright
Flowering plant	Minuartia hybrida	Fine-leaved Sandwort
Flowering plant	Sium latifolium	Greater Water-parsnip
Flowering plant	Spiranthes spiralis	Autumn Lady's-tresses
Flowering plant	Colchicum autumnale	Meadow Saffron
Flowering plant	Hypericum montanum	Pale St John's-wort
Flowering plant	Pulsatilla vulgaris	Pasqueflower
Flowering plant	Astragalus danicus	Purple Milk-vetch
Flowering plant	Carex ericetorum	Rare Spring-sedge
Flowering plant	Vicia parviflora	Slender Tare
Flowering plant	Minuartia verna	Spring Sandwort
Flowering plant	Iberis amara	Wild Candytuft
Bird	Emberiza calandra [br]	Corn Bunting
Bird	Perdix perdix [br]	Grey Partridge

Bird	Linaria cannabina [br]	Linnet
Bird	Emberiza schoeniclus [br]	Reed Bunting
Bird	Alauda arvensis [br / nbr]	Skylark
Bird	Passer montanus [br]	Tree Sparrow
Bird	Motacilla flava flavissima	Yellow Wagtail
Bird	Emberiza citrinella [br]	Yellowhammer
Bird	Tyto alba	Barn Owl
Bird	Athene noctua	Little Owl
Bony fish (actinopterygii)	Salmo salar	Atlantic Salmon
Bony fish (actinopterygii)	Salmo trutta	Brown/Sea Trout
Bony fish (actinopterygii)	Anguilla anguilla	European Eel
Jawless fish (agnatha)	Lampetra fluviatilis	River Lamprey
Jawless fish (agnatha)	Petromyzon marinus	Sea Lamprey
Bony fish (actinopterygii)	Cottus gobio	Bullhead
Insect - moth	Pelurga comitata	Dark Spinach
Insect - moth	Perizoma albulata albulata	Grass Rivulet
Fungus	Geoglossum atropurpureum	Dark-Purple Earthtongue
Fungus	Hygrocybe punicea	Crimson waxcap
Fungus	Porpolomopsis calyptriformis	Pink waxcap
Fungus	Neohygrocybe ingrata	Dingy waxcap
Fungus	Hygrocybe nitrata	Nitrous waxcap
Fungus	Microglossum viride	Green Earthtongue
Fungus	Geoglossum difforme	
Fungus	Trichoglossum hirsutum	
Fungus	Hygrocybe splendissima	splendid waxcap
Fungus	Hygrocybe intermedia	fibrous waxcap
Fungus	Geoglossum fallax	Deceptive Earthtongue
Fungus	Microglossum olivaceum agg.	Olive Earthtongue
Fungus	Geoglossum nigritum	
Fungus	Geoglossum cookeanum	
Bird	Caprimulgus europaeus [br]	Nightjar
Bird	Anthus trivialis [br]	Tree Pipit
Bird	Lullula arborea [br]	Woodlark
Insect - true fly (diptera)	Exorista glossatorum	
Insect - beetle (coleoptera)	Philorhizus sigma	
Insect - beetle (coleoptera)	Curimopsis nigrita	Mire Pill Beetle
Insect - beetle (coleoptera)	Bembidion humerale	Thorne Pin-palp
Insect - beetle (coleoptera)	Agabus striolatus	
Insect - beetle (coleoptera)	Hydrochus elongatus	
Insect - butterfly	Pyrgus malvae	Grizzled Skipper
Insect - butterfly	Erynnis tages	Dingy Skipper
Reptile	Vipera berus	Adder
Reptile	Zootoca vivipara	Common Lizard
Reptile	Natrix helvetica	Grass Snake
Reptile	Anguis fragilis	Slow-worm
Stonewort	Chara aculeolata	Hedgehog Stonewort
Stonewort	Chara aspera	Rough Stonewort
Stonewort	Chara contraria	Opposite Stonewort
Stonewort	Chara curta	Lesser Bearded Stonewort
Stonewort	Chara globularis	Fragile Stonewort
Stonewort	Chara hispida	Bristly Stonewort
Stonewort	Chara virgata	Delicate Stonewort
Stonewort	Chara vulgaris	Common Stonewort

Stonewort	Nitella flexilis	
Stonewort	Nitella mucronata	Pointed Stonewort
Stonewort	Nitella opaca	Dark Stonewort
Stonewort	Nitella translucens	Translucent Stonewort
Stonewort	Tolypella glomerata	Clustered Stonewort
Stonewort	Tolypella intricata	Tassel Stonewort
Stonewort	Tolypella prolifera	Great Tassel Stonewort
Insect - true fly (diptera)	Agromyza bicophaga	
Insect - true fly (diptera)	Agromyza erythrocephala	
Insect - true fly (diptera)	Agromyza felleri	
Insect - true fly (diptera)	Agromyza lucida	
Insect - true fly (diptera)	Cerodontha fasciata	
Insect - true fly (diptera)	Cerodontha imbuta	
Insect - true fly (diptera)	Liriomyza occipitalis	
Insect - true fly (diptera)	Liriomyza virgula	
Insect - true fly (diptera)	Ophiomyia senecionina	
Insect - true fly (diptera)	Phytobia cerasiferae	
Insect - true fly (diptera)	Phytomyza cineracea	
Insect - true fly (diptera)	Phytomyza spoliata	
Bird	Actitis hypoleucos [br]	Common Sandpiper
Bird	Cinclus cinclus [br]	Dipper
Bird	Calidris alpina [br]	Dunlin
Bird	Pluvialis apricaria [br / nbr]	Golden Plover
Bird	Circus cyaneus [br]	Hen Harrier
Bird	Falco columbarius [br]	Merlin
Bird	Tringa totanus [br]	Redshank
Bird	Turdus torquatus [br]	Ring Ouzel
Bird	Charadrius hiaticula [br]	Ringed Plover
Bird	Saxicola rubetra [br]	Whinchat
Bird	Oenanthe oenanthe	Wheatear
Bird	Delichon urbicum [br]	House Martin
Bird	Passer domesticus [br]	House Sparrow
Bird	Sturnus vulgaris [br]	Starling
Flowering plant	Blysmus compressus	Flat-sedge
Flowering plant	Potamogeton friesii	Flat-stalked Pondweed
Flowering plant	Hydrocharis morsus-ranae	Frogbit
Flowering plant	Cyperus longus	Galingale
Flowering plant	Baldellia ranunculoides	Lesser Water-plantain
Flowering plant	Lathyrus palustris	Marsh Pea
Flowering plant	Stellaria palustris	Marsh Stitchwort
Flowering plant	Groenlandia densa	Opposite-leaved Pondweed
Flowering plant	Juncus compressus	Round-fruited Rush
Flowering plant	Persicaria minor	Small Water-pepper
Flowering plant	Persicaria mitis	Tasteless Water-pepper
Flowering plant	Carex vulpina	True Fox-sedge
Flowering plant	Oenanthe fistulosa	Tubular Water-dropwort
Flowering plant	Hottonia palustris	Water-violet
Flowering plant	Myriophyllum verticillatum	Whorled Water-milfoil
Bird	Anas crecca [br / nbr]	Teal
Bird	Podiceps nigricollis [br]	Black-necked Grebe
Bird	Chroicocephalus ridibundus [br]	Black-headed Gull
Bird	Charadrius dubius	Little Ringed Plover
Bird	Sterna hirundo [br]	Common Tern

Bird	Grus grus [br]	Crane
Bird	Egretta garzetta [br / nbr]	Little Egret
Bird	Circus aeruginosus [br]	Marsh Harrier
Bird	Ardea alba	Great(White) Egret
Bird	Ardea cinerea [br]	Grey Heron
Bird	Aythya ferina [br]	Pochard
Bird	Gallinago gallinago [br]	Snipe
Bird	Tadorna tadorna [br]	Shelduck
Bird	Platalea leucorodia [br]	Spoonbill
Bird	Bubulcus ibis	Cattle Egret
Bird	Anas clypeata	Shoveler
Bird	Anas querquedula	Garganey
Bird	Aythya fuligula	Tufted Duck
Bird	Accipiter gentilis [br]	Goshawk
Bird	Chloris chloris [br]	Greenfinch
Bird	Coccothraustes coccothraustes [br]	Hawfinch
Bird	Dryobates minor [br]	Lesser Spotted Woodpecker
Bird	Poecile palustris [br]	Marsh Tit
Bird	Luscinia megarhynchos [br]	Nightingale
Bird	Ficedula hypoleuca [br]	Pied Flycatcher
Bird	Muscicapa striata [br]	Spotted Flycatcher
Bird	Strix aluco [br]	Tawny Owl
Bird	Phylloscopus sibilatrix [br]	Wood Warbler
Bird	Scolopax rusticola [br]	Woodcock
Bird	Picus viridis	Green Woodpecker
Bird	Regulus ignicapillus	Firecrest
Insect - true fly (diptera)	Manota unifurcata	
Spider (araneae)	Zora nemoralis	
Insect - true fly (diptera)	Hexomyza simplicoides	
Insect - beetle (coleoptera)	Ptinus lichenum	
Insect - true fly (diptera)	Neoempheria bimaculata	
Insect - true fly (diptera)	Rhipidia ctenophora	
Insect - beetle (coleoptera)	Ptinella denticollis	
Insect - beetle (coleoptera)	Ernoporus tiliae	Bast Bark Beetle
Insect - beetle (coleoptera)	Dryophthorus corticalis	Wood-Boring Weevil
Insect - beetle (coleoptera)	Nemadus colonoides	
Insect - beetle (coleoptera)	Dropephylla gracilicornis	
Insect - beetle (coleoptera)	Anisoxya fuscula	
Amphibian	Bufo bufo	Common Toad
Amphibian	Triturus cristatus	Great Crested Newt
Bird	Recurvirostra avosetta [br / nbr]	Avocet
Bird	Botaurus stellaris [br]	Bittern
Bird	Phoenicurus ochruros [br]	Black Redstart

Bird	Crex crex [br]	Corncrake
Bird	Numenius arquata [br]	Curlew
Bird	Vanellus vanellus [br]	Lapwing
Bird	Pandion haliaetus [br]	Osprey
Bird	Asio flammeus [br]	Short-eared Owl
Bird	Apus apus [br]	Swift
Bird	Streptopelia turtur [br]	Turtle Dove
Bird	Linaria flavirostris [br]	Twite
Bird	Poecile montanus [br]	Willow Tit
Bony fish (actinopterygii)	Cobitis taenia	Spined Loach
Crustacean	Austropotamobius pallipes	White-clawed Crayfish

Fern	Pilularia globulifera	Pillwort
Fern	Osmunda regalis	Royal fern
Fern	Polystichum setiferum	Soft Shield fern
Flowering plant	Ophrys insectifera	Fly Orchid
Flowering plant	Gnaphalium sylvaticum	Heath Cudweed
Flowering plant	Genista anglica	Petty Whin
Flowering plant	Teesdalia nudicaulis	Shepherd's Cress
Flowering plant	Campanula patula	Spreading Bellflower
Flowering plant	Drosera rotundifolia	Round-leaved sundew
Fungus	Mitrula paludosa	Bog beacon
Insect - beetle (coleoptera)	Chrysolina marginata	
Insect - butterfly	Coenonympha tullia	Large Heath
Insect - butterfly	Satyrium w-album	White-letter Hairstreak

Insect - moth	Cirrhia gilvago	Dusky-lemon Sallow
Insect - moth	Diloba caeruleocephala	Figure of Eight
Insect - moth	Arctia caja	Garden Tiger
Insect - moth	Cossus cossus	Goat Moth
Insect - moth	Chiasmia clathrata	Latticed Heath
Insect - moth	Orgyia recens	Scarce Vapourer
Insect - moth	Chesias legatella	Streak
Insect - moth	Macaria wauaria	V-moth
Insect - true fly (diptera)	Aulagromyza trivittata	
Insect - true fly (diptera)	Hexomyza simplex	
Insect - true fly (diptera)	Metopomyza xanthaspis	
Insect - true fly (diptera)	Phytoliriomyza pteridii	
Insect - true fly (diptera)	Thecocarcelia acutangulata	
Lichen	Fuscidea austera	

Lichen	Usnea florida	Witches' Whiskers Lichen
Mollusc	Omphiscola glabra	Mud Pond Snail
Moss	Tortula cernua	Flamingo-moss
Terrestrial mammal	Lepus europaeus	Brown Hare
Terrestrial mammal	Lutra lutra	Eurasian Otter
Terrestrial mammal	Arvicola amphibius	European Water Vole
Terrestrial mammal	Micromys minutus	Harvest Mouse
Terrestrial mammal	Sciurus vulgaris	Red Squirrel
Terrestrial mammal	Erinaceus europaeus	West European Hedgehog

NBN Taxon Version Key	GB Red Data Status	Recovery code	Shortlisted as a Priority Species	Assemblage /individual
NBNSYS0000007739	NT	B	Yes	
NBNSYS0000024201	NT	C	Yes	
NBNSYS0000010898	VU	C	Yes	Aquatic invertebrate
NBNSYS0000010868		C	Yes	
NBNSYS0000010861	EN	C	Yes	
NHMSYS0020316291	VU	C	Yes	
NBNSYS0000004587	EN	B	Yes	
NBNSYS0000004588	EN	B	Yes	
NHMSYS0000460638	VU	B	Yes	
NBNSYS0000004450	VU	B	Yes	
NBNSYS0000002712	CR	B	Yes	
NBNSYS0000004503		B	Yes	
NBNSYS0000002197	VU	B	Yes	
NBNSYS0000004231	NT	D	Yes	Arable plants
NHMSYS0000461774	NT	B	Yes	
NHMSYS0000458954	VU	D	Yes	
NBNSYS0000004249	CR	B	Yes	
NBNSYS0000003279	VU	B	Yes	
NBNSYS0000004519	VU	B	Yes	
NBNSYS0000004448	VU	B	Yes	
NBNSYS0000003298	VU	B	Yes	
NBNSYS0000005102		B	Yes	
NHMSYS0001501165	NT	B	Yes	
NBNSYS0000016957		B	Yes	
NBNSYS0000018385	CR	B	Yes	
NBNSYS0000018385	CR	B	Yes	Bats
NBNSYS0000018385	CR	C	Yes	
NHMSYS0001501165	NT	C	Yes	
NBNSYS0000016957		C	Yes	
NBNSYS0000018385	CR	C	Yes	
NBNSYS0000002934	NT	D	Yes	
NBNSYS0000004035	VU	B	Yes	
NBNSYS0000003980	NT	B	Yes	
NBNSYS0000002313	VU	B	Yes	
NBNSYS0000003013	NT	B	Yes	
NBNSYS0000004220	NT	B	Yes	
NBNSYS0000004216	VU	B	Yes	
NBNSYS0000004158	VU	B	Yes	
NHMSYS0000460730	EN	B	Yes	
NBNSYS0000003685	EN	D	Yes	Calcareous grassland plants
NHMSYS0000463932	NT	B	Yes	
NBNSYS0000002189	NT	B	Yes	
NBNSYS0000002968	NT	B	Yes	
NHMSYS0000462153	VU	D	Yes	
NBNSYS0000003267	EN	B	Yes	
NBNSYS0000002445	VU	B	Yes	
NBNSYS0000003282	VU	B	Yes	
NBNSYS0000003052	NT	B	Yes	
NBNSYS0000002840	VU	B	Yes	
NHMSYS0001688304	NT (Breeding)	B	Yes	
NHMSYS0000530548	VU (Breeding)	B	Yes	

NHMSYS0021004282	NT (Breeding)	B	Yes	Farmland bird assemblage
NHMSYS0000530734		B	Yes	
NHMSYS0000530139		B	Yes	
NHMSYS0000530539	VU (Breeding)	B	Yes	
NBNSYS0000001343	NT (Breeding)	D	Yes	
NHMSYS0000530727		B	yes	
		B	Yes	
		B	Yes	
NBNSYS0000188606		C	Yes	Freshwater fish
NBNSYS0000188607		C	Yes	
NBNSYS0000188599		C	Yes	
NBNSYS0000188584		C	Yes	
NBNSYS0000188586		D	Yes	
NBNSYS0000016957		B	Yes	
NBNSYS0000005829		B	Yes	Grassland invertebrate
NHMSYS0021144060		B	Yes	
NHMSYS0001482868		B	Yes	Grasslands Fungi
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
NHMSYS0000530242		B	Yes	Lowland heathland bird assemblage
NHMSYS0000530162		B	Yes	
NHMSYS0000530459	VU (Breeding)	B	Yes	
NBNSYS0000030194	VU	B	Yes	Lowland heathland invertebrate
NHMSYS0001719555	EN	B	Yes	
NBNSYS0000024198	EN	B	Yes	
NBNSYS0000007242	VU	B	Yes	
NBNSYS0000007600	VU	B	Yes	
NBNSYS0000007652	NT	C	Yes	
NHMSYS0000504013	VU	B	Yes	Open mosaic/brownfield
NHMSYS0000550499	VU	B	Yes	
NBNSYS0000005075		D	Yes	Reptiles
NHMSYS0001706186		B	Yes	
NHMSYS0021178937		B	Yes	
NBNSYS0000005072		B	Yes	
		B	Yes	Stonewort / aquatic plants
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	

		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	Tall Sward and Scrub Invertebrate
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
NHMSYS0021053542	VU (Breeding)	B	Yes	
NHMSYS0000530289	NT (Breeding)	C	Yes	
NBNSYS0000000035	EN (NonBreeding), VU (Breeding)	B	Yes	
NBNSYS0000000029	LC (Breeding), LC (NonBreeding)	B	Yes	
NHMSYS0000530294	VU (Breeding)	D	Yes	
NHMSYS0000530743	EN (Breeding)	B	Yes	Upland bird assemblage
NBNSYS0000000034	NT (NonBreeding), VU (Breeding)	D	Yes	
NHMSYS0000530681	VU (Breeding)	D	Yes	
NBNSYS0000000028	NT (Breeding), VU (NonBreeding)	B	Yes	
NHMSYS0000530590	NT (Breeding)	B	Yes	
		B	Yes	
NHMSYS0000530329	VU (Breeding)	D	Yes	
NHMSYS0000530537		D	Yes	Urban bird assemblage
NHMSYS0000530628	LC (NonBreeding), VU (Breeding)	B	Yes	
NHMSYS0000456532	VU	D	Yes	
NBNSYS0000002136		D	Yes	
NBNSYS0000002109	VU	C	Yes	
NBNSYS0000002403	NT	B	Yes	
NBNSYS0000002099	NT	D	Yes	
NBNSYS0000003306	NT	D	Yes	
NHMSYS0000464012	VU	D	Yes	
NBNSYS0000002147	VU	C	Yes	Wetland and wet grassland plants
NBNSYS0000002213	VU	B	Yes	
NHMSYS0000461606	VU	B	Yes	
NHMSYS0000461607	VU	B	Yes	
NBNSYS0000002468	VU	B	Yes	
NBNSYS0000003689	VU	C	Yes	
NBNSYS0000003932	VU	C	Yes	
NBNSYS0000003607	VU	C	Yes	
NBNSYS0000000131	LC (Breeding), LC (NonBreeding)	B	Yes	
NBNSYS0000000225	EN (NonBreeding), VU (Breeding)	B	Yes	
NHMSYS0020962539	LC (Breeding), VU (NonBreeding)	B	Yes	
		B	Yes	
NBNSYS0000000138	NT (Breeding)	C	Yes	

NHMSYS0000530386	VU (Breeding)	B	Yes	
NHMSYS0000530348	LC (Breeding), LC (NonBreeding)	B	Yes	
NHMSYS0000530293	NT (Breeding)	B	Yes	
		B	Yes	Wetland bird assemblage
NBNSYS0000000006	LC (NonBreeding), NT (Breeding)	B	Yes	
NBNSYS0000000137	EN (Breeding), EN (NonBreeding)	B	Yes	
NBNSYS0000000030	LC (Breeding), NT (NonBreeding)	B	Yes	
NBNSYS0000000008	EN (Breeding), EN (NonBreeding)	D	Yes	
NBNSYS0000000255	EN (NonBreeding)	B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
		B	Yes	
NHMSYS0000530119	NT (Breeding)	D	Yes	
NHMSYS0021002985	EN (Breeding)	D	Yes	
NHMSYS0000530302	EN (Breeding)	B	Yes	
NHMSYS0021271566	EN (Breeding)	B	Yes	
NHMSYS0001688303	VU (Breeding)	B	Yes	
NHMSYS0000530464	VU (Breeding)	D	Yes	
NHMSYS0000530362	VU (Breeding)	B	Yes	Woodland bird assemblage
NHMSYS0000530498		B	Yes	
NHMSYS0000530625	NT (Breeding)	B	Yes	
NHMSYS0000530757	VU (Breeding)	B	Yes	
NBNSYS0000000031	LC (NonBreeding), VU (Breeding)	B	Yes	
		B	Yes	
		B	Yes	
NBNSYS0000011820	NT	D	Yes	
NBNSYS0000018385	VU	D	Yes	Woodland Invertebrate
		B	Yes	
NBNSYS0000024346	EN	B	Yes	
NBNSYS0000011712	NT	D	Yes	
NBNSYS0100005127	VU	B	Yes	
NBNSYS0000016957		B	Yes	Woodland Invertebrate - Ancient woodland
NBNSYS0000025569	EN	B	Yes	
NBNSYS0000025276	EN	B	Yes	
NBNSYS0000018385	CR	B	Yes	
NHMSYS0001501165	NT	B	Yes	
NBNSYS0000018385	CR	B	Yes	
NHMSYS0000080159		B	Yes	Individual
NHMSYS0000080156		B	Yes	Individual
NBNSYS0000000154	LC (Breeding), LC (NonBreeding)	B	Yes	Individual
NHMSYS0000530210	NT (Breeding), VU (NonBreeding)	D	Yes	Individual
NHMSYS0000530744	EN (Breeding), NT (NonBreeding)	D	Yes	Individual

NHMSYS0000530322		D	Yes	Individual
NBNSYS0000000032	EN (Breeding)	D	Yes	Individual
NBNSYS0000000027	EN (Breeding), VU (NonBreeding)	D	Yes	Individual
NBNSYS0000000292	NT (Breeding)	D	Yes	Individual
NHMSYS0000530180	EN (Breeding)	B	Yes	Individual
NHMSYS0000530165	EN (Breeding)	D	Yes	Individual
NHMSYS0000530623	CR (Breeding)	D	Yes	Individual
NHMSYS0021004297		B	Yes	Individual
NHMSYS0020212827	EN (Breeding)	B	Yes	Individual
NHMSYS0000544646		C	Yes	Individual
NBNSYS0000033009		D	Yes	Individual

NBNSYS0000002089	NT	B	Yes	Individual
		B	Yes	Individual
		B	Yes	Individual
NBNSYS0000002318	VU	D	Yes	Individual
NBNSYS0000004408	EN	B	Yes	Individual
NBNSYS0000003207	NT	D	Yes	Individual
NHMSYS0000464359	NT	C	Yes	Individual
NBNSYS0000004289	EN	B	Yes	Individual
		B	Yes	Individual
		D	Yes	Individual
NBNSYS0000011157	NT	D	Yes	Individual
NHMSYS0000519078	VU	D	Yes	Individual
NHMSYS0000504085	EN	D	Yes	Individual

NHMSYS0021144705		B	Yes	Individual
NBNSYS0000006106		B	Yes	Individual
NBNSYS0000006143		D	Yes	Individual
NBNSYS0000005662		C	Yes	Individual
NBNSYS0100002337		B	Yes	Individual
NHMSYS0021144385	VU	B	Yes	Individual
NHMSYS0021144143		B	Yes	Individual
NBNSYS0100003859		B	Yes	Individual
		B	Yes	Individual
		B	Yes	Individual
		B	Yes	Individual
		B	Yes	Individual
NBNSYS0000007865	VU	B	Yes	Individual
NBNSYS0000018485	NT	B	Yes	Individual

NHMSYS0001501165	NT	C	Yes	Individual
NHMSYS0020528236		D	Yes	Individual
NHMSYS0000310777		B	Yes	Individual
NHMSYS0000080218	LC (Europe), NE	B	Yes	Individual
NBNSYS0000016957		B	Yes	Individual
NBNSYS0000016957		D	Yes	Individual
NBNSYS0000018385	CR	D	Yes	Individual
NBNSYS0000018385	CR	C	Yes	Individual
NHMSYS0001501165	NT	D	Yes	Individual

Measures

These species require similar actions for their recovery including:

• Restore hydrology to calcareous fen habitat (Eubria palustris)

• Work with landowners, managers and farmers to reduce diffuse water pollution and improve water quality.

• Create marginal temporary water habitat in suitable locations and create and maintain a stony substrate in upland streams to create habitat to support this species (Siphlonurus armatus)

• Reduce abstraction rates from rivers where these species are known to inhabit to reduce the fragmentation of

These largely arable plant species may benefit from the following specific requirements:

• Work with landowners, managers and farmers to implement appropriate grazing management on grassland sites to prevent development of dense grassland and scrub

• Work with landowners, managers and farmers to carry out sustainable low-input arable management at strategic sites

• Expand available arable habitat around locations that this species is known to inhabit

• Work with landowners, managers and farmers to avoid the use of artificial herbicides, pesticides and fertilisers on arable margins

These species all require similar actions for their recovery including:

• Where there are maternity roosts, protect the maternal roost building and enhance and manage both the immediate (commuting) and further (foraging) landscape to support this species. Encourage landowners, managers and farmers in these landscapes to reduced chemical use to increase the availability of insect prey.

• Enhance and protect woodlands across the catchment area surrounding swarming sites. This is particularly important as swarming sites are also used for hibernation.

• Install and monitor specified bat boxes in known locations in a targeted approach to mitigate and encourage roost sites in strategic areas.

• Increase the use of over and underpasses to cross wide roads/rail, linking otherwise fragmented habitat with

These plant species may benefit from the following specific requirements:

• Work with landowners, managers and farmers to sustainably manage fields for this species through an appropriate grazing regime and to encourage the occasional disturbance of soil and turf creating bare ground to support regrowth of seed

• Encourage landowners, managers and farmers in locations there this species is known to grow to carry out low-input arable management, especially on field margins adjacent to known sites

• Work with landowners, managers and farmers to avoid the use of artificial herbicides, pesticides and fertilisers on grassland sites

These species all require the provision of good quality farmland habitats, with specific requirements including:

• Provision of advice to farmers/landowners on specific Agri-environment options

• Seasonal crop mosaics and mowing regimes to allow all year breeding opportunities
• Availability of winter food e.g. hedgerows/field margins
• Reduction in pesticide and fertiliser usage

These species all require similar actions for their recovery including:
• Reconnect rivers by removing barriers such as weirs, where this is not possible, passage technologies should be employed (e.g. nature like bypasses, lamprey tiles), these may need to be site specific.
• Work with landowners, managers and farmers to limit nutrient run-off, control influx of excess of fine sediments and implement natural flow regulation measures to reduce the prevalence of extreme spate flows.
• Manage and remove invasive crayfish from impacted reaches and work with landowners to reduce the excessive

These species require similar actions for their recovery including:
• Work with landowners, managers and farmers to set aside some land to create open, fallow, weedy habitats in

• Work with landowners, managers and farmers to continue the traditional land management that created the habitat for this species should be continued or resumed, for example short-sward grazing, no fertilisation or ploughing. This should include ensuring that there are short thatch free swards by autumn.
• Work with landowners, managers and farmers to identify appropriate adjacent or nearby sites where the traditional land management that created the habitat for this species could be taken up to expand habitat. (e.g. Short-sward grazing, no fertilisation or ploughing etc).
• Avoid tree planting and meadow creation on existing sites.

These species all require the provision of good quality and open mosaic of lowland heathland/woodland/scrub habitats, with specific requirements including:
• Carry out landscape scale habitat regeneration, expansion and restoration of lowland

These species require similar actions for their recovery including:
• Create and manage riparian and wetland habitat (including reedbeds) in strategic locations to benefit these species.
• Preserve and connect habitats especially rewetting and hydrologically restoring sites where this species is found
• Work with landowners, managers and farmers to improve water quality and reduce abstraction rates from rivers

These species require similar actions for their recovery including:
• Work with landowners, managers and farmers to provide management advice on suitable grazing regimes for

These species all require similar actions for their recovery including:
• Work with landowners, managers and farmers to create and maintain wildlife corridors (Hedgerows, raised banks, set aside land, buffer strips etc.) which are utilised by these species to allow movement and colonisation of new areas throughout the landscape and reduce fragmentation.

These species require similar actions for their recovery including:
• Work with landowners, managers and farmers to reduce water pollution and improve water quality especially around ponds, lakes and wet ditches at strategic sites which will benefit these species.
• Work with landowners, managers and farmers to limit nutrient applications to fields adjacent to ditches at locations where these species are known to be present and in the surrounding areas. When nutrient applications are applied, where possible buffer strips should be left along the ditches.
• Restore and maintain grazing and/or other periodic disturbance to maintain open substrates at pond and ditch margins suitable for this species. This includes poaching by heavy livestock, and periodic cleaning out of ponds.

Poaching disturbance as the ponds are drying out is particularly beneficial with a higher probability of spores being transferred to new locations (Tolypella intricate).

These species all require the creation and maintenance of tall sward and scrub habitats, with specific requirements including:

• Areas set-aside for ragwort on non-grazing sites to provide foodstuff for some of these species.

• Habitat that allows horsetails (Equisetum) to grow where appropriate. This will have to be managed to maintain ecosystem balance

• Revised mowing regimes to ensure plants such as buttercups, Cirsium, Centaurea, spearworts and water crowsfoot are present all year round

• Maintenance of habitats that include young blackthorn growth to help support the larvae growth of some of these species. Removal of plants less than 5 years old should be carefully considered and avoided where possible.

• Habitat that allows meadowgrass (poa sp) and Vicia to flourish where possible to support some of these species

These species all require the provision of good quality upland habitats, with specific requirements including:

• Provision of an open mosaic of upland habitats with a mixture of wet and dry areas good water quality status

• Minimal disturbance at and near to breeding sites from activities (grazing, recreation)

These species all require the provision of good quality and mosaic of urban habitats, with specific requirements including:

• Provide safe nesting habitat and food resources for both summer and winter

These species require creation and management of wetland and wet grassland habitat, with the following specific requirements:

• 1Create and maintain new wetlands and wet grasslands in strategic locations to benefit these species including creating scrapes within wetlands that are cattle grazed. This could include locations where the species has not been recorded in the recent past, but for which there are records from the late 20th century.

• 1Work with landowners, managers and farmers in strategic locations to remove fencing to allow grazing at water margins of ponds, ditches etc to create some poached and bare mud (Persicaria mitis and Persicaria minor).

• 1Restore fluctuating water levels of ponds and lakes including some standing water (Persicaria mitis and Persicaria minor).

• 1Work with landowners, managers and farmers to restore farm ponds at strategic locations to benefit these species.

• 1Work with landowners, managers and farmers to ensure that the current water level regimes are maintained and water pollution is reduced in flood meadows and ditches at strategic sites for these species. This should also include the reduction of the nutrient enrichment in the surrounding areas.

These species all require the provision of good quality wetland habitats, with specific requirements including:

• 1Manage wetland habitat mosaics optimally, including provision of early successional habitat

• 1Carry out landscape scale wetland habitat regeneration, expansion and restoration

• 1Ensure nest site protection in the breeding season to minimise the impacts of recreational disturbance and predation

• 1Reduce chemical inputs to the wetland system to improve water quality and food sources
• 1Provide new opportunities for breeding through habitat creation

These species all require the provision of good quality and mosaic of woodland habitats, with specific requirements including:
• 1Carry out landscape scale woodland/scrub mosaic habitat regeneration, expansion and restoration
• 1Ensure and promote the provision of species rich, unimproved meadows, lightly grazed pasture and untreated lawns and track or woodland edges/glades
• 1Reduce the intensity of management of woodlands and overgrazing by deer
• 1Provide nestboxes in suitable woods where there are limited natural opportunities
• 1Retain dead wood in woodlands where possible to provide opportunities for nesting

These species require creation and management of semi-natural woodland habitat, with the following specific requirements:
• 1Maintain continuity of semi-natural woodland margins with good understorey shrubs such as Calluna, moss and

These species require similar actions for their recovery including:
• 1Protect ancient woodland and veteran trees and ensure that fallen and felled trees are left on site where possible
• 1Protect old lime stands and ensure that fallen and felled trees are left on site where possible

• Create habitat to connect fragmented habitat and reduce the need for this species to use roads
• Create pond habitats that also include associated terrestrial grassland/fen habitat at strategic sites in both urban and rural areas that will benefit this species. This should also include natural regeneration of woodland opportunities.
• Work with community groups to monitor toad movements and carry out toad patrols.

• Create pond habitats that also include associated terrestrial grassland/fen habitat at strategic sites in both urban and rural areas that will benefit this species. This should also include natural regeneration of woodland opportunities.
• Work with landowners, managers and farmers to create habitat to provide a connected landscape with ponds and suitable terrestrial habitat to benefit this species.

• Carry out landscape scale wetland habitat regeneration, expansion and restoration.

• Create new, and manage existing reedbeds to maintain appropriate water levels and healthy fish populations.

• Promote the uptake (refit and new) of biodiverse and green roofs in known black redstart breeding areas

• Provide non-intensively managed hay meadows (and potentially low intervention spring sown crops) including the planting of early cover and the use of corncrake friendly mowing methods. Instigate appropriate corncrake management in areas with high potential for high recolonisation, and consider re-introduction opportunities.
• Provide optimum nesting and foraging habitat and protection of nests where appropriate.
• Deploy management interventions to improve nest and chick survival, including sward management, stocking levels, wet features, nest protection, lapwing plots in arable fields, growing sowing spring cereals rather than autumn cereals, and delaying or adjusting the timing of mowing, grazing or crop cultivation activities. • Work with partners and stakeholders to ensure that the sensitivity of lapwing is taken into account when developing plans for new woodland creation and forestry planting projects.
• Encourage natural colonisation using strategic placement of nesting platforms and consider translocation opportunities.
• Reduce sheep densities in upland marginal grasslands e.g. by adopting a two-year rotational system, to allow areas of rough grassland (as nest cover and as vole rich habitat), to feature within the landscape annually.
• Provide new Swift nestboxes within the urban environment, and expand coverage through engagement with construction industry, planning system and local community conservation groups. • Manage grazing, mowing, fertiliser, pesticides, slurry, buffers, etc, to address the issue of declining invertebrate abundance.
• Provide sufficient abundance of natural seeds throughout the breeding season, by providing uncropped margin or plots or set-aside, planting buffer strips around arable fields, sowing wild bird seed mixes and restoring or creating semi-natural grassland. • Manage hedgerows to provide nesting opportunities. provide supplementary food to help bolster productivity and help re-establish new breeding territories on farmland with a history of having turtle doves breeding and still with suitable breeding habitat present.
• Co-ordinate management of upland moorland and lowland meadows, ensuring expansion of existing meadows and conversion of some improved grassland near nesting areas. • Continue to provide supplementary food at key sites to fill breeding season food gaps.
This species may benefit from the following specific requirements: • 1Carry out landscape scale habitat creation and enhancement along river corridors e.g. scrub and hedgerows • 1Restore and create wet woodlands with young birch, elder, willow and alder. • 1Retain and create a supply of deadwood within and around wet woodland and scrub. • 1Create structural diversity and promote dense scrub growth near nesting sites through selective felling or the reintroduction of coppicing within damp woodlands • 1Initiate short-rotation willow coppice • 1Carry out landscape scale natural regeneration, expansion and restoration of hillsides, marginal and upland habitat
• Adopt sensitive weed cutting or longer term macrophyte management such as riparian tree planting, targeted dredging activities (intermittent years) and longer time periods between dredging activities. • Work with landowners, managers and farmers to reduce and mitigate water pollution
• Create dark sites at suitable locations • Protect in-situ populations and prioritise their habitat needs by achieving consistent, steady flows of good or very good quality water. • Work with landowners, managers and farmers to promote and adopt check, clean and dry biosecurity measures to all land users. • Any fish passes or weir removal is carefully considered, to avoid creating a passage for non-native crayfish especially where there are known white-clawed crayfish refugia.

• Manage prioritised populations through restoring / creating pool sites through mechanical excavation. • Work with landowners, managers and farmers to maintain or reintroduce appropriate grazing regimes to support this species. • Expand sites and establish linkages between scattered populations. Introduce a diversity of microhabitats into favoured heathland locations, through creation / restoration of pools, hollows, trackways etc - including 'ghost' pools & trackways.
• Re-establish wet heath and mire habitat especially around existing sites, and linking sites
• Work with landowners, managers and farmers to manage woodland to include moist shaded areas especially near water at strategic sites that will benefit this species
• Through technical support and bespoke advice, ensure the species is taken into account in sympathetic management of agricultural and forestry land, with management recommendations based on best current available knowledge.
• Create and manage lowland dry acid grassland habitat to support this species • Manage and, if needed, remove scrub in locations where this species is known to be present especially in woodland rides. • Create sporadic small-scale disturbance (e.g. forestry vehicles) to expose seedbanks and create open conditions for germination.
Work with landowners, managers and farmers to encourage appropriate grazing to create suitable sward and regeneration niches. Create and manage heathland to replace lost and reconnect fragmented habitat. This should include targeted reintroduction of extensive grazing as well as cutting to reduce dominance of Molinia/heather on sites that have become overgrown and Petty Whin has declined. Some sites are likely to need vegetative propagation to re-introduce this species .
• Work with landowners, managers and farmers to reduce the use of herbicide on arable field margins in locations where this species is known to be present
• In areas surrounding and linking known sites for this species, restore woodland coppicing and traditional hedgerow management to reduce shade, reduce competition and allow regeneration from the seedbank. • At core sites on field margins/road verges, introduce cutting regimes to reduce competition and create disturbance to increase flowering and seedset and promote regeneration from the seedbank.
• Work with landowners, managers and farmers to restore and rewet peatlands particularly at sites where this will support this species.
• Work with landowners, managers and farmers to restore and maintain bog habitats especially in locations where this species is known to grow.
• Restore and maintain sandy grassland and heathland habitats to better connect subpopulations. These should include Achillea millefolium to support larvae and adults. • Work with landowners, managers and farmers at sensitive sites to encourage sustainable farming practices on adjacent farmland to reduce the use of fertiliser and pesticide. • Work with landowners, managers and farmers to offer management advice on rotational disturbance, such as cutting or grazing to maintain open conditions.
• Restore existing degraded peatland sites for example through the creation of bunds to restore hydrology, scrub removal and appropriate management regimes. • Ensure habitat restoration includes the planting of Hare's-tail Cottongrass, the species' main foodplant
• Retain existing elm trees and do not fell where possible. • Allow Elm suckers to grow where they appear and avoid cutting edges where new elm suckers appear. • Work with landowners, managers and farmers to connect and manage habitats with hedgerows containing Wych Elm as a hedgerow plant and where there are disease resistant elms as hedgerow trees. • In areas where scrub or woods show evidence of Dutch Elm disease, introduces coppicing of elms on a 10year cycle.

• Restore hedgerow habitat by reducing cutting frequency and allowing elms to develop into hedgerow trees. • Encourage natural regeneration of woodland especially where this includes elm trees • Include elm in planting mix for new woodlands, shelterbelts and hedgerows
• Create and manage scrub habitat in strategic locations to benefit this species. Work with landowners, managers and farmers to maintain this as scrub habitat. • Work with landowners, managers and farmers to reduce flailing of hedgerows to less frequently than annually help support this species and reduce its decline.
• Create rough open habitats by reducing management intensity on agriculturally improved grasslands and by creating open areas within woodlands, in particular in conifer plantations. • Restore heathland and rough grassland sites that are succeeding to woodland in strategic locations to benefit this species. • Work with landowners, managers and farmers to reduce pressures on low-nutrient habitats favoured by this species by reducing fertiliser use.
• Allow tree lines and scattered trees to develop on farmland, especially in wet areas to support populations of this moth. • Work with landowners, managers and farmers to reduce water pollution in wet areas that support populations of this moth.
• Work with landowners, managers and farmers to reintroducing clover leys into agricultural rotations and leaving clovers to flower over the summer months to help restore lost habitat. • Create, restore and manage calcareous herb-rich grassland and other clover species-rich grasslands in strategic locations to benefit these species. • Where possible, don't cut road verges between May and September to allow pollinator species including this one to complete their lifecycle. • Sensitively time woodland ride and glade management to avoid cutting down foodplants between June-September when larvae are feeding on them. • Open mosaic habitat on previously developed land is frequently under threat from development pressures so maintaining and protecting existing strategic sites known to benefit this species should be prioritised.
• At wetland sites create more scrub and protect larval foodplants such as bramble from inappropriate cutting or clearance.
• Restore natural processes on heathland, moorland and woodland ride sites to allow scrub (including Broom) to increase. • Work with landowners, managers and farmers to reduce grazing and ride-side mowing at strategic sites where this species is known to inhabit. • Allow areas of scrub (including Broom) to persist. Raise awareness of the importance of Broom for several declining moths, and ensure it is retained at sites within the moth's known distribution. • Work with local partners to identify measures to reduce the risk of wildfire.
• Manage and enhance woodland with wild currant bushes to support this species. • Work with landowners, managers and farmers to reduce pesticide use on currant and gooseberry bushes at fruit farms and encourage increased planting of these plants to better support this and other declining moth species.
• Work with landowners, managers and farmers to create and maintain habitats which include galium in appropriate locations to support this species.
• Work with farmers to reduce the use of pesticides on crops, especially on plants such as asparagus
• Manage habitats with abundant sedge (Carex) carefully in terms of cutting regimes to support this species.
• At sites where Phytoliriomyza pteridii are known to breed removal of bracken (foodstuff for larvae) should be carried out on a rotational basis.
• Work with landowners, managers and farmers to implement grazing regimes to support this species
• Work with landowners, managers and farmers to ensure levels of grazing maintains continuity of light and humidity and ensure that the species isn't subjected to over-shading from species such as cotoneaster, ivy etc. • Work with local partners to identify measures to reduce the risk of wildfire.

• Work with landowners, managers and farmers to protect and maintain host trees for Witches' Whiskers Lichen. • Encourage landowners, managers and farmers to reduce the use of ammonia based fertilisers and reduce agricultural intensification where this species is known to grow.
• Work with landowners, managers and farmers to encourage a reduction in the dredging of ponds, so that they are limited to 50% of pond every two years. • Avoid trampling and intensive grazing along the watercourse edge. • Work with landowners, managers and farmers to avoiding farmland pollution entering temporary water bodies and seepages
• Work with landowners, managers and farmers on sites where Flamingo-moss occurs to remove vegetation and provide bare calcareous spoil.
• Work with landowners, managers and farmers to create and increase non-farmed habitat features associated with field boundaries. For example, pastural farms should have some woodland, improved grass and arable crops; arable farms should have wheat, beet and fallow land • In locations where this species is known to be present encourage farmers to have a less intensive or mixed grazing regimes. • Work with landowners, managers and farmers to create strips of uncultivated land in arable fields, windbreaks, and increase crop diversity in strategic locations to benefit this species.
• Continue to use mammal ledges (enabling otters to walk upstream through a culvert) and otter fencing (to discourage otters from crossing roads) to reduce road mortality, especially by bridges. • Create and maintain otter breeding sites where natural sites are scarce or absent. • Improve water quality especially relating to levels of chemicals toxic to otters and their prey in fresh water.
• Work with landowners, managers and farmers to control invasive non-native species such as american mink at a landscape scale • Avoid trampling and intensive grazing along the edge of the watercourse, • Create and restore waterbodies, ditches and riverbanks to create sunny shallow water with bankside vegetation while avoiding overshadowing the water completely with trees or scrub. • Manage peatland watercourses to provide habitat that supports water voles. This will require appropriate habitat and ditch maintenance and water level management. • Manage watercourses and rewet areas on upland fringe farmland to provide water vole habitat to support downstream expansion of water voles from existing upland populations.
• Work with landowners, managers and farmers to encourage rough grassland around field boundaries where possible. • Encourage landowners, managers and farmers to create agricultural beetle banks which also provide Harvest Mice with a source of secure nest sites, and food.
• Bolster or reintroduce species populations at sites where the habitat and management are optimal • Prioritise planting species such as pine conifers in areas close to or near known red squirrel populations in line with good practice guidance for woodland management and forestry operations. • Work with landowners, managers and farmers to increase involvement in red squirrel conservation including accessing suitable funding sources such as stewardship options
• Increase hedgerow planting especially in urban areas to help protect hedgehogs from predation. • Create safe routes for hedgehogs to travel along in urban neighbourhoods - for example by creating 'hedgehog highways' by connecting gardens with hedgehog holes. • Create wide, grassy field margins which support more earthworms and ground beetles, to increase the availability of prey for hedgehogs. • Work with local communities to reduce the amount of pestacides used in domestic gardens.

Taxon Group	Scientific Name	Common Name	NBN Taxon Version Key
Flowering plant	Drosera intermedia	Oblong-leaved Sundew	
Flowering plant	Illecebrum verticillatum	Coral-necklace	NBNSYS0000004586
Flowering plant	Mentha pulegium	Pennyroyal	NBNSYS0000004194
Insect - true fly (diptera)	Agromyza marionae		
Insect - true fly (diptera)	Hexomyza cecidogena		
Insect - true fly (diptera)	Liriomyza angulicornis/latipalpis		
Insect - true fly (diptera)	Melanagromyza galegae		
Mollusc	Margaritifera (Margaritifera) margaritifera	Freshwater Pearl Mussel	NHMSYS0001702090
Terrestrial mammal	Martes martes	Pine marten	NBNSYS0000018385
Terrestrial mammal	Muscardinus avellanarius	Hazel Dormouse	NBNSYS0000016957
Terrestrial mammal	Castor fiber	Beaver	NHMSYS0001501165

GB Red Data Status	Recovery code	Assemblage /individual
	D	Reintroduction
EN	D	Reintroduction
EN	D	Reintroduction
	B	Reintroduction
	B	Reintroduction
	B	Reintroduction
	B	Reintroduction
CR	D	Reintroduction
CR	D	Reintroduction
	C	Reintroduction
NT	D	Reintroduction

Measures
• Bolster or reintroduce species populations at sites where the habitat and management are optimal
• Bolster or reintroduce species populations at sites where the habitat and management are optimal
• Bolster or reintroduce species populations at sites where the habitat and management are optimal • Work with landowners, managers and farmers to maintain or restore appropriate livestock grazing to maintain low sward and open ground, or other forms of disturbance(around pools/hollows/gateways), ensuring that some winter poaching / rutting takes place, at native sites where this species has been present or seen since 2000. • Increase habitat connectivity to allow dispersal to suitable winter-wet habitat.
• Bolster or reintroduce species populations at sites where the habitat and management are optimal
• Bolster or reintroduce species populations at sites where the habitat and management are optimal
• Bolster or reintroduce species populations at sites where the habitat and management are optimal
• Bolster or reintroduce species populations at sites where the habitat and management are optimal
• Bolster or reintroduce species populations at sites where the habitat and management are optimal • Work with landowners, managers and farmers to reduce pollution and improve water quality to support this species. • Create and maintain a suitable substrate in rivers to create habitat for this species.
• Bolster or reintroduce species populations at sites where the habitat and management are optimal • Work with landowners, managers and farmers to safeguard older trees with den cavities. • Where required, provide artificial den boxes in woodland where natural cavities are in short supply.
• Bolster or reintroduce species populations at sites where the habitat and management are optimal • Work with landowners, managers and farmers to encourage involvement in hazel dormouse conservation actions. • Increase the creation of habitat corridors leading from known hazel dormouse strongholds including planning of suitable hedgerows and coppicing of trees.
• Work closely with landowners, managers and farmers to investigate the feasibility of establishing non-enclosure populations of Beavers at suitable riverine locations, following all guidance and licencing protocols and the best available evidence. • Raise awareness about the benefits of beaver reintroduction • Restore of river buffer riparian zones, including a mixture of herbaceous plants, shrubs, and trees extending back from the bank for at least 10 metres, preferably more.

Category
A: Needs more / bigger / better-connected habitat
B: Needs targeted habitat management
C: Needs improvements in environmental quality
D: Needs bespoke conservation action/s
E: Needs better evidence base / on-the-ground action is not a priority
F: Needs action outside England
G: Vagrants / occasional visitors

Description
Species likely to markedly benefit from general creation, expansion, and improved connectivity of good quality habitats in the strategy area
- Species with high recovery potential that do not require specific or targeted recovery measures
- Species with specific requirements for habitat quality, structure, conditions, or processes above and beyond category A
- Species may require specific configurations or complexes of connected or nearby habitat/s, either at site level or across large areas / multiple sites. This may include habitat connectivity measures for species needing support to track climate change.
- Causes of decline can be addressed with new or improved management practices
- Species primarily limited by one or more pressures beyond site level that can be mitigated at LNRS scale or wider scales through collaboration with neighbouring RAs
For example, better catchment water quality, improved spatial planning of air pollution sources, mitigation of recreational disturbance
Species requiring additional, tailored measures which can be spatially indicated on the local habitat map
- Species may need multiple coordinated actions to bring about recovery, including combinations of local actions and national actions, where LNRS could address the former
NB. Species requiring bespoke measures which cannot be mapped should be assigned to category E)
- Species for which there is insufficient evidence or understanding regarding drivers of decline, required recovery actions, and range / population levels
- Species for which the current priority is other than on-the-ground action, for example research or ex-situ conservation
- Species with low (or very low) recovery potential due to factors constraining recovery beyond English borders
Evidence shows that action in England is highly unlikely to improve species' prospects
- This category is likely to apply only to migratory species (e.g., Afro-Palearctic migratory birds affected by hunting)
- Species currently outside their normal breeding or wintering range or normal migration route, without an extant population in the strategy area, and which are not suitable for conservation translocation

Benefit from LNRS	Suitable LNRS species priorities
Yes	Probably not – species are likely to benefit from LNRS measures generally and do not need to be singled out for specific LNRS
Yes	Yes
Yes	Yes
Yes	Yes
Unknown	No
No	No
No	No

Annex B – Species prioritisation methodology

To support South Yorkshire Combined Mayoral Authority in conducting a review of the species prioritisation work for South Yorkshire's Local Nature Recovery Strategy (LNRS), Natural England have been reviewing work carried out by RSK to compile a long list and subsequent priority shortlist of species for the LNRS. The work we have completed so far is as follows:

- Collate all the evidence collected by RSK into a single spreadsheet, including comments made by specialists and representatives from the supporting authorities (Natural England and local planning authorities) and other key partners.
- Cross-check the list with newly available evidence in the form of priority species lists for neighbouring LNRS areas.
- Agree criteria for removal or additions to the priority shortlist with the Species Task and Finish Group, which were as follows:
    - Added to list if requested by a specialist
    - Added to list if present on at least two neighbouring LNRS shortlists and represented on the longlist for South Yorkshire
    - Removed from list if requested by a specialist.
- Review the list using the above criteria.
- Share reviewed priority list with Species Task and Finish Group.
- Share RSK's suggested assemblages with Natural England specialists for comment.
- Review comments made by local experts and specialists and make changes as required, including adding species to assemblages as required.
- Assess whether there is adequate representation within the final priority species list across different taxa.
- Populate the priority species list with appropriate actions (measures) to support species recovery.

We would recommend that the following additional overarching measures are included to apply to all short-listed species:

- Further survey work, monitoring and other research is needed to understand population and distribution trends and drivers of decline.
- Sharing of data as appropriate to focus efforts in order to have the greatest impact on species recovery.
- Opportunities for citizen science to contribute to knowledge and understanding, including monitoring population and distribution trends. This could include

highlighting existing opportunities such as the Big Butterfly Count and Big Garden Bird Count.

- Education and awareness raising about species' needs.
- Volunteer opportunities to learn more about species and become the experts of the future.
- Support and funding for landowners and land managers to maximise impact on species recovery.

Summary of actions and changes

- Reviewed between October and December 2025 with a small amount of tweaking in January 2026 for responses received in late December2025.
- Received responses from 16 local and national specialists to feedback on the original priority species list created by RSK and the first draft of the reviewed list
- Initial review of original comments from specialists contacted by RSK as part of their work
    - Added 28 species
    - Removed 35 species
- Following review and advice from local and national specialists
    - Further 41 species were added
    - 15 species removed
- There was no change to 135 of the species originally shortlisted by RSK
- There were also 44 species added onto the list as requested by local specialists,
    - Birds - 11
    - Fungus - 14
    - Stonewort – 15
    - Others - 4
- Longlist – 780
- Shortlist – 248 (73 if counting assemblages as 1, 21 assemblages, 52 individual)
- Reintroduction candidates – 11 species
- Shortlist species coverage
    - Amphibian – 2
    - Bird – 70
    - Bony fish – 5
    - Crustacean – 1
    - Fern – 3
    - Flowering plant – 56
    - Fungus – 15
    - Insect & spider– 56
    - Jawless fish -2
    - Lichen – 2
    - Mollusc – 1
    - Moss – 1
    - Reptile – 4
    - Stonewort – 15
    - Terrestrial mammal - 15

Annex C: Mapping methodology
South Yorkshire Local Nature Recovery Strategy - Step 5: "Map areas that could become of particular importance for biodiversity" project

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Executive Summary

The South Yorkshire Mayoral Combined Authority (SYMCA) commissioned NCS to complete Step 5 of the South Yorkshire Local Nature Recovery Strategy (LNRS) process - mapping the Areas that Could Become of Particular Importance for Biodiversity (ACB). This report presents the rigorous, collaborative, and evidence-based process of updating the South Yorkshire habitat basemap, and developing the first drafts of the mapped measures and ACB map. This work was driven by the collaboration between the mapping team, Working Group and wider stakeholder and expert group, whose feedback and decision-making were instrumental to shaping the maps.

The development and sense-checking of the LNRS maps was completed in a series of stages:

- **1st mapping stage**: Create a habitat basemap, determine which measures are mappable, and develop methodologies for the proposed mappable measures.
- **2nd mapping stage**: Map the measures and conduct a comprehensive, iterative quality assurance review of the mapped measures and habitat basemap.
- **3rd mapping stage**: Sense-check and review all mapped measures by the Working Group and a wider South Yorkshire (SY) stakeholder and expert group. This stage included multiple stakeholder engagement activities, and included determining the prioritisation and constraint strategies, which led to the final pre-public consultation version of the maps.

The feedback from a comprehensive, in-depth Working Group review of the Priorities and Measures was combined with the feedback from the workshop series. From this feedback, mapped measures underwent substantial changes, with 11 mapped measures either combined or becoming unmapped from the first mapping stage, for a new total of 32 mapped measures out of 102 measures total. This included changes to individual mapped measures, which were reviewed and sense-checked by the workshop participants and Working Group, who determined whether mapped opportunities made sense for the particular measure at hand, and could suggest where areas either needed to be added or removed. During the third mapping stage, workshop participants and the Working Group also determined and applied prioritisation and constraint strategies to individual measures, and across measures, this reduced the mapped measures total coverage from 58 percent at the beginning of this mapping stage, to 39 percent. All of the feedback combined has shaped the current versions of the habitat basemap, mapped measures and ACB map. This feedback has developed a pre-public consultation ACB map with a 23 percent coverage of the LNRS area. This coverage exemplifies a systematic, evidence-based, collaborative approach to targeting nature recovery opportunities in the areas that make the most sense, provide wider benefits, and support National Environmental Objectives (NEOs) in South Yorkshire.

Contents

1. The first mapping stage

1.1. Introduction

The South Yorkshire Mayoral Combined Authority (SYMCA) commissioned environmental consultancy Natural Capital Solutions (NCS) to complete **Step 5 of the South Yorkshire Local Nature Recovery Strategy (LNRS) process - mapping the Areas that Could Become of Particular Importance for Biodiversity (ACB)**. Before the first mapping stage began, data from the Supporting Authorities and LNRS partners had already been gathered and documented by SYMCA. In addition, a number of workshops, each focused on a specific broad habitat category, had taken place to identify priorities and measures for the South Yorkshire LNRS. These were given to NCS at the start of the **first mapping stage**, so they were able to work out which measures could be mapped, and which data sets could be used to do so. Following further discussion with the LNRS Working Group a mapping method was established for each of the measures that were mappable. These were the primary steps of the first mapping stage, which was to create a habitat basemap, determine which measures were mappable, and develop methodologies for the proposed mappable measures. Following this, the **second stage** was to create the mapped measures and conduct a comprehensive, iterative quality assurance review of the mapped measures and habitat basemap. The **third and final stage** included further sense-checking and revision of the mapped measures by the Working Group and a wider South Yorkshire (SY) stakeholder and expert group. This stage brought together feedback from the wider stakeholder and expert group and the Working Group to determine how best to prioritise and constrain measures, which led to the final pre-public consultation version of the habitat basemap, mapped measures, and ACB map (see Figure 1).

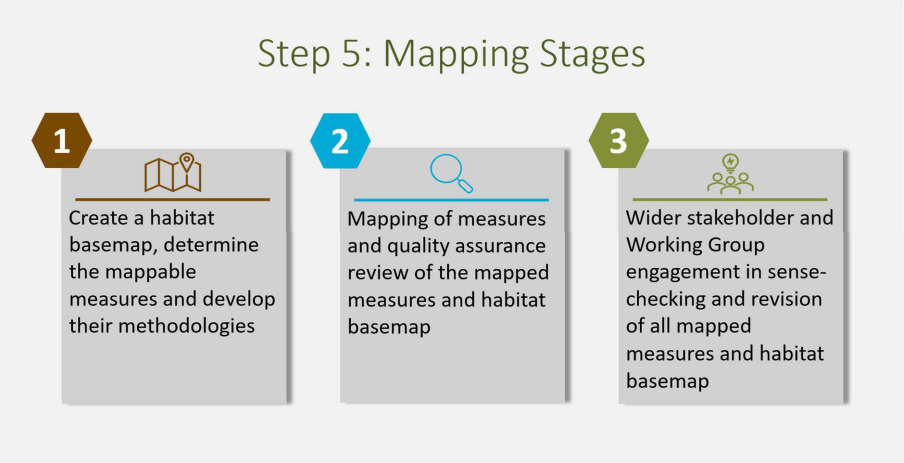


Figure 1. The three mapping stages of Step 5 in the LNRS process, mapping the Areas that Could Become of Particular Importance for Biodiversity.

Here, we detail the methodologies used during each mapping stage, and the prioritisation strategies and constraints that were applied to individual measures and across measures, discuss how the

stakeholder feedback influenced and refined the LNRS maps and present the pre-public consultation version of the mapped measures. Further detail on these methods is outlined in the *Appendices* at the end of the document, and a spreadsheet that documents the spatial data used to create the basemap and each mapped measure accompanies this report.

1.2. Habitat basemap methodology

Approach to mapping habitats

The first step towards mapping 'Areas that Could Become of Particular Importance for Biodiversity' (ACB) for the South Yorkshire LNRS was to produce a **detailed map of the habitats present across South Yorkshire.** A detailed basemap had been created as part of the South Yorkshire natural capital and biodiversity mapping project completed in 2021, and the aim was to update this with habitat data that had since been collected by the LNRS partners and purchased by SYMCA. **A detailed habitat map is an important component of any assessment of natural capital assets** and was required for mapping the 'enhance measures', and to run the mapping of current benefits delivered by the natural capital in South Yorkshire, and the opportunities for enhancement for the 'create' measures (*see Glossary*).

To do this, we used Ordnance Survey Mastermap polygons as the underlying mapping unit, and then a series of different data sets to classify each polygon to a detailed habitat type, and to associate a range of additional data (such as designations, public accessibility, elevation) with each polygon. The data used to classify the habitat in each polygon ranged from UKHab data (provided by the Supporting Authorities and partner organisations of the LNRS), to freely available GIS layers such as the Natural England Priority Habitat Inventory and licensed products such as Bluesky's national tree map (all data used is outlined in Box 1 below, and detailed in an accompanying Excel spreadsheet 'Basemap and mapped measures data.xlsx').

Please note that other data sets were used for the mapped measures (see 'Basemap and mapped measures data.xlsx'). For example, OS Open Rivers was used for a more detailed river network than is present in the basemap, and Sheffield City Council street tree data was used in some of the urban habitat-related measures.

Using these data, the GIS polygons were classified into Phase 1 broad habitat types (e.g. **broadleaved woodland**, **semi-natural grassland**), as well as more detailed habitat groups (e.g. **acid grassland**, **calcareous grassland**). The **habitat basemap consists of approximately 4.3 million polygons**. For further information on the datasets used in the basemap, please see "Basemap and mapped measures data" spreadsheet. Note that the **basemap provides the best approximation of habitat types that can be achieved** based on the data provided by SYMCA and partners, and **although carefully checked manually, some areas have not been ground-truthed and will inevitably contain errors**.

We prioritised certain data sets for the polygon habitat classification process, the most reliable data were considered to be the surveyed habitat data from the Supporting Authority Local Wildlife Sites, habitat banks and other surveyed areas, along with Wildlife Trust reserve and landscape partnership project areas, and Yorkshire Water asset survey data. Initially we had used a habitat basemap from the 2023 update (Nature Recovery Network mapping) of the original 2021 South Yorkshire habitat basemap. However, after checks of the resulting LNRS basemap, by members of the LNRS Working Group, this layer was found to incorrectly classify significant areas of SY as heathland. The **Working Group** was instrumental in developing and sense-checking all of the Step 5 maps, and was comprised of stakeholders and supporting authorities (*see Glossary*):

- **South Yorkshire Mayoral Combined Authority**, *LNRS Responsible Authority*
- **Barnsley Metropolitan Borough Council**, *LNRS Supporting Authority*
- **City of Doncaster Council**, *LNRS Supporting Authority*
- **Natural England**, *LNRS Supporting Authority*
- **Peak District National Park**, *LNRS Supporting Authority*
- **Rotherham Metropolitan Borough Council**, *LNRS Supporting Authority*
- **Sheffield City Council**, *LNRS Supporting Authority*
- **Don Catchment Rivers Trust**
- **Environment Agency**
- **Forestry Commission**
- **Sheffield and Rotherham Wildlife Trust**
- **Yorkshire Wildlife Trust**

The heathland classification error that the Working Group identified in the basemap came from Phase 1 data provided by SYMCA and partners in the 2021 mapping. As a result, this 2023 layer was excluded from the next run of the LNRS basemap. There was the potential to lose a few habitat updates as a result of this exclusion, but on balance we believed that not using it would create a more accurately classified final basemap .

The basemap will be far superior in accuracy to the 2021 and 2023 versions because the polygons in between the supplied surveyed data were classified using the NCS classification process that uses

numerous freely available woodland and priority habitat data sets, as well as the licenced Bluesky national hedgerow and tree data.

Please note that **the Forestry Commissions Trees Outside Woodlands data was not used in the basemap**, because the accuracy of this data set was found to be questionable when using it for such a broad coverage. In addition, the Centre for Ecology and Hydrology hedgerow data appeared to overestimate the number of hedgerows in the SY area, so these data were not used. The Bluesky hedgerow and woodland products were superior and worked well for this location.

A particular challenge, as always with this kind of mapping, was classifying polygons where more than one habitat was present. This was possible where the NCS mapping specialists were supplied surveyed data and OS polygons that had been split to reflect a mosaic of habitats within a boundary. Outside of these areas mixed habitats containing woodland and scrub, or grassland with woodland were classified in detail, but not all combinations of habitats could be accommodated. Other areas, where there was a mismatch between data sources, or land use is changing rapidly, remained a challenge.

1.3. Mapping of measures: Process

One of the **primary objectives** of the "Areas that Could Become of Particular Importance for Biodiversity" or the **ACB map, is to identify areas where** the responsible authority and local partners determine that **effort should be concentrated**, in order **to restore habitat** and **achieve the greatest amount of benefits for biodiversity** and **the wider environment**. This mapping is intended to be strategic and to build on **Lawton's Principles of bigger, better and more joined up** areas for wildlife. It should build on **areas identified in the "Areas of Particular Importance for Biodiversity" (APIB) map whilst incorporating practical actions** (measures) that if delivered, can help **achieve nature recovery priorities** in the area (*see Glossary*).

The first step in creating the ACB map was to determine which measures could practically be mapped in South Yorkshire, that would **join up or expand existing areas of particular importance for biodiversity**, and help accomplish **nature recovery priorities**. The responsible authority had collated a large quantity of data from local stakeholders to aid in the APIB and ACB mapping, and the first step was to review these data and ensure the spatial data were suitable for measures mapping. The following information related to each data layer was recorded in the **'Basemap and mapped measures data.xlsx' spreadsheet**:

- GIS layer title
- Data description (reasonably detailed) and origin
- Relevant to mappable measures? Y/N. If Y including the number/code for each measure it is relevant to. If N include reason why it is not suitable.
- Alterations required to enable suitability? Y/N. If yes, detail.
- Data readily available for LNRS mapping? Y/N
- Licence required for inclusion? Y/N if yes, detail.

- Notes – this is for extra information where data sets may be relevant under certain circumstances.

The datasets that could be used for the ACB mapping were determined by reviewing the data that the responsible authority had sent in against these criteria. **Understanding the available data more fully was essential** for the next step of the process, where the measures themselves were reviewed (*Section 2*).

Each measure from the shortlist of priorities and measures (already categorised by habitat: River, wetland and bog; Grassland and heathland; Woodland; Urban; Farmed landscapes) **was reviewed with a spatial perspective**, and **with the aim of understanding whether there were available data that could be used** to map the measures. If it was determined that there were available data that could be used to map a particular measure, the next step was to determine whether the measure had an "enhance" or "create" focus.

Measures with an "enhance" focus are closely linked with the APIB map and their focus is on **the restoration and enhancement of habitats that currently exist** within South Yorkshire. For these measures, the mapping team used the habitat basemap (*Section 1.2 above*, *Appendix A.1*) to map the areas of existing habitat on which that measure as focused. The **mapping team** consisted of Natural Capital Solutions in close collaboration with SYMCA.

Measures with a "create" focus build on the APIB map and are **aimed at buffering, connecting** and **creating new habitats**. The proposed methods for these measures incorporated NCS opportunity mapping, which identifies where new habitat can be created to buffer and connect up existing habitats for biodiversity, and delivers **wider environmental benefits** (*see the Appendices A.2 and A.3*).

Once measures deemed to be mappable were identified, and proposed mapping methods established, the mapping team then consulted with the Working Group. Working together, the Working Group and mapping team **reviewed all of the Priorities and Measures** in a series of discussions, focusing on the measure wording and proposed mapping methodologies (including proposed data). These discussions **concentrated on one priority at a time**. Although these discussions largely revolved around the proposed mapping methodologies, Working Group members had the **opportunity to comment on any of the changes made** to the Priorities and Measures throughout the process. Through this intensive iterative process, the Working Group and mapping team were able to identify several more datasets that could be used for mapping measures and measure wording was revised for consistency, especially in regards to mappable measures, which were revised to accurately align with the mapping.

Once all of the measures were reviewed for their mapping suitability, with wording and mapping methodologies approved by the Working Group, the next step was to use the available data to map the measures (second mapping stage).

2. The second mapping stage

2.1. Mapping and reviewing the measures

During the first stage, the Priorities and Measures were reviewed in their entirety and measures that could be taken forward for mapping were determined, with draft versions of the measure wording and methodologies approved by the Working Group. The next mapping stage was to **use the available data to map the measures**, and to **review the mapped measures and their methodologies** as they became available with the Working Group.

The measures were mapped using the methodologies initially agreed by the Working Group, the outputs from the NCS mapping *(*outlined in *Section 1.3 above* and in the *Appendices*), and the data presented in the accompanying Excel spreadsheet 'Basemap and mapped measures data.xlsx'. The aim was to **capture the measure wording as accurately as possible**, ensuring that the number of **opportunities identified for each were constrained to** areas that constituted as far as possible **'real' implementable and strategic opportunities**.

The mapped opportunities for each measure were presented at the **field scale**. This means that the maps show the fields in which the identified opportunities lie, rather than showing the slivers of land adjacent to existing habitats, which bear no relationship to existing fields and boundaries. The justification for this was as follows:

- Presenting the mapped measures using the slivers of land/water that are an output from the opportunity modelling would promote a false sense of accuracy[1]. These **areas will require ground-truthing** before determining whether they are in fact suitable opportunities for measure delivery. While mapping the opportunities by parcel can highlight all of a land parcel (field or site) for which only the edges or a small portion may be an actual opportunity, it **allows flexibility as to where in the field the opportunity is delivered once surveyed**, **based on ecological principles, best practice** and **practicalities of delivery**.

- In NCS's experience of mapping for other LNRS, **NE have specified a preference for the opportunities to be mapped at field scales**. In addition, in some LNRS that have already passed through final consultation, much courser mapping units have been used and presented in the maps (e.g. hexagons), which arguably are less practically useful in that they do not reference field boundaries or other habitat feature boundaries.

- **Defra require the mapped measure outputs to be digitally referenced**. This is much easier if the opportunities are presented as parcels.

It is important to note that the **mapped measures are only as good as the data available to map them**. Frequently, no one data set perfectly fitted a measure. Therefore, measures often ended up being **mapped using a combination of available data sets** that were adapted as much as possible to present implementable and strategic opportunities for nature recovery in line with the measure

[1] In addition to this when these slivers are mapped they pixelate when inspected closely in maps.

wording. In a small number of instances, the mapped measure does not perfectly reflect the measure, and where this is the case the **measure wording is prescriptive**. For example, there are a few watercourse margin measures (RI-01-02, RI-02-05) which were mapped using a series of buffers, these buffers try to capture the river bank top and canal banksides respectively, using best averages of these widths across South Yorkshire. However, it is very likely that these watercourse margins will change over time, and there may be a discrepancy between the area of the mapped buffer and where the river bank top and canal bankside (mentioned in the measure descriptions) actually are in the field. It is also important to understand that the final mapped measures needed to be agreed across all the Working Group stakeholders, and consequently **represents a compromise across the varying needs and expertise of the individuals and organisations involved**.

The process for reviewing the mapped measures for quality assurance followed the same, simple process for all mapped measures. First, the **mapping team mapped the measures using the agreed methodology**, and the **best available data and techniques**, and then the **mapping team and Working Group reviewed groups of mapped measures** as they became available. This process was used to sense-check the mapped measures quickly, catch any errors or missed opportunities early-on, streamline the mapped measure revision process, and allow Working Group members to get a sense of the mapped measures as a collective.

Early on in the reviewing process, Working Group members raised concerns regarding the best way to provide feedback, as many of the Working Group members were **representatives for their much larger organisations**, stressing the need for **more input** from their respective groups to be included. The approach agreed upon was to create **a master spreadsheet**, that everyone in the Working Group could access, either by Sharepoint or via emailed attachment, that included the most up-to-date version of the Priorities and Measures, including:

- Version History page (for quality control)
- Mapped measures and their methodologies
- Any outstanding actions
- An organised list of historical iterations of the Priorities and Measures

As the mapped layers became available, the Working Group also gained access to the **South Yorkshire LNRS Habitat Viewer mapping portal**, an online mapping portal. The South Yorkshire Habitat Viewer allowed Working Group members to view the following (as they became available):

- Habitat basemap
- Local Authority District boundary lines
- Areas of Particular Importance for Biodiversity (APIB) map
- Areas marked as urban
- Constraints layer
- Mapped measures
- ACB map

The Priorities and Measures master spreadsheet and South Yorkshire Habitat Viewer allowed Working Group members - and anyone within their associated organisations - to review the Priorities and Measures and the mapping progress in their own time and provide feedback on any aspects as needed. As quality assurance review meetings began taking place, these two resources allowed

Working Group members to review changes before and after the meetings, to provide clarity and organised feedback.

2.2. Quality assurance review of the mapped measures

Quality assurance review method

The quality assurance review of the mapped measures was **a rigorous, collaborative review of all of the draft mapped outputs** by the Working and mapping groups prior to the wider stakeholder engagement events. The mapped measures reviewed were initially grouped by general habitat type, with woodland-related measures reviewed first. These reviews occurred during regularly-scheduled Working Group meetings, with occasional meetings added to provide more time for these reviews. This was done to increase productivity and time management for both the mapping and Working Groups.

During the quality assurance reviews, the mapping team presented the mapped measures, their most current measure description, and the agreed methodology. The Working Group would review the mapped opportunities and query any anomalies (in either the measure description, the methodology or a specific opportunity area). The mapping team and Working Group would discuss any queries together before decisions were reached by the group on whether to implement any changes or not for each measure. Following these review meetings, the mapping team would incorporate any agreed changes to the mapping, before updating the master spreadsheet and Habitat Viewer with the changes so the Working Group could view the changes made, and make any further suggestions if needed.

Quality assurance review: Reflections on changes to the mapped measures

At the beginning of this mapping stage, there were 49 measures designated for mapping out of 113 measures total. When the quality assurance review process began, by **general habitat type** there were:

Water-related: 17 proposed mapped measures **Woodland**: 13 proposed mapped measures **Urban**: 11 proposed mapped measures

Grassland and heathland: 8 proposed mapped measures

Of these, 29 mapped measures were “enhance” focused and 20 were “create” focused. Through the careful sense-checking and intensive review by the Working and mapping groups, by the time the mapped measures were presented to the wider stakeholder group in the stakeholder webinar, there were 43 mapped measures.

From the original 49 mapped measures, there was only one measure that was changed to unmapped relating to the water environment, this was a wetland-related measure, “Manage key areas for breeding and wintering bird populations (e.g. curlew, snipe) including floodplain meadows and wet grassland sites”. This measure was changed to unmapped as there was significant overlap with other water-related measures. The Working Group decided to add wording about the species

that would benefit from nature recovery action to any mapped measures which had substantial overlap with this measure. Additionally, before the stakeholder workshop series, one river-related measure, focused on white willows, was moved to the woodland category.

Only one woodland measure, relating to new traditional orchard creation, was not taken forward. This measure was not taken forward at this time because the local authorities were unsure where the best areas for these would be, or what the best methodology for identifying these areas was. Thus, it was felt this measure would be best as a general, unmapped measure, applicable to all of South Yorkshire, so individuals could determine whether traditional orchard creation was appropriate on their site on a case-by-case basis.

There were four urban habitat-related measures, one relating to urban street tree maintenance, and the other three broadly relating to the creation and enhancement of green infrastructure, which were not taken forward for mapping. These were not taken forward as the wording and / or mapping were too broad and did not have a strong, strategic approach, or it was out of scope of the LNRS.

Of the grassland and heathland-related measures, two heathland measures were combined into the new HE-01-02, "Create wet heath and complimentary mosaics of heathland, grassland, wetland, and scrub habitat, including transitional habitats…" which was mapped.

This review process allowed the Working Group to collaborate with the mapping team and develop **a draft of the mapped measures and ACB that made sense for individual Local Authorities and across South Yorkshire**. Following this iterative review of the mapped measures, the mapping moved into the **third and final stage** before the pre-public consultation version drafts of the maps, a review and sense-checking by a wider stakeholder and expert group from across South Yorkshire.
There was cross-over between when this mapping stage finished and when the third stage began, so not all changes had been agreed on by the Working Group at the time of the workshops (*see Section 3.3.*). However, all first drafts of the mapping had been reviewed by the Working Group, with certain measures reviewed multiple times, as a result of the iterative process outlined above. The conclusion of this mapping stage, and some queries left hanging over certain measures, were only resolved following the Working Group's review of the entirety of the Priorities and Measures, which they completed as the wider stakeholder engagement was taking place (*see Section 4*).

3. The third mapping stage: Two simultaneous reviews

3.1. Two reviews at once

Prior to presenting the mapped measures and their methodologies to the wider stakeholder and expert group, the mapped measures were decided on and reviewed by the Working Group (*Section 2*). By this stage, the Working and mapping groups had been working closely together to develop and review the Step 5 maps, but the wider SY LNRS stakeholder and expert group had not been involved in the mapping yet. One of the **main aims of the third stage** was to engage this wider group in the mapping process in order to provide **fresh perspective** and **more expert and local knowledge** to **sense-check the mapped outputs** before the public consultation stage. A staged approach was used to update the wider stakeholder and expert group on the LNRS process and prepare them to give informed feedback on the maps during a series of workshops (see Figure 2 below).

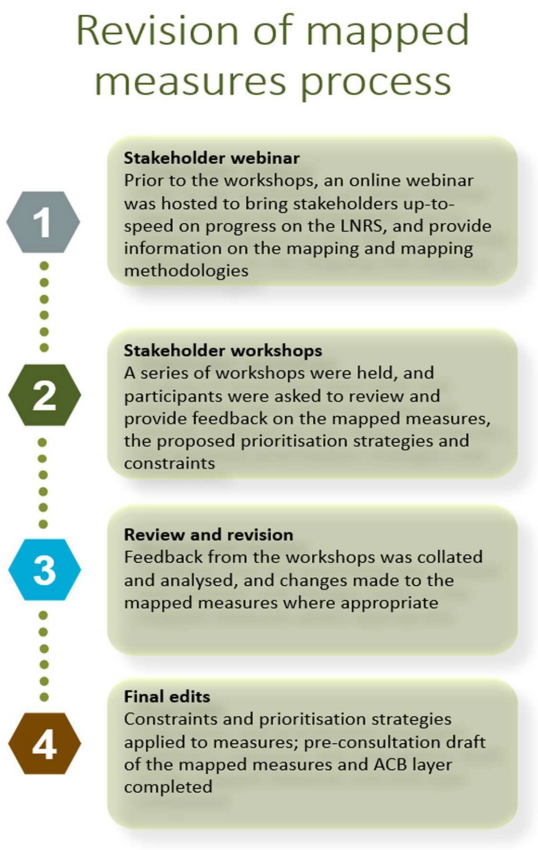


Figure 2. A flow diagram of the four stages of revising the mapped measures to create the pre-public consultation draft of the mapped measures and ACB layer.

During the wider stakeholder engagement process, the Working Group was conscientious about sending representatives from their groups that had not been heavily involved in the process thus far to the stakeholder engagement events. This was done to **bring more representatives from the Supporting Authorities into the LNRS process**, to **gain fresh perspective** and **sense-check** the results. Simultaneously, those representatives who had been working closely with the mapping team reviewed all of the mapped outputs in their entirety, and provided detailed feedback, which the mapping team subsequently reviewed and acted on where appropriate following the workshops (*see Section 4*).

3.2. Stakeholder webinar: Updates on the LNRS progress and mapping

The first engagement event with the wider stakeholder and expert group was the online webinar. The stakeholder webinar was held in mid-January 2026, it was intended to **increase awareness** about the LNRS with the wider South Yorkshire stakeholder and expert group and **update** them **on the current mapping work**.

At this stage, it was important to gain fresh perspective on the mapping, and include a wide variety of stakeholders and experts from multiple sectors in the mapping process. Table 1 below lists all of the organisations who were invited to the webinar and workshop series.

Table 1. A list of all of the organisations invited to the wider SY LNRS stakeholder and expert engagement events.

Organisation name:				
Advanced Wellbeing Research Centre, SHU	Dearne Valley Farmers cluster	National Farmers Union (NFU)	Royal Society for the Protection of Birds	The Conservation Volunteers
Barnsley Biodiversity Trust	Forestry Commission	National Highways	Sheffield City Council	The Land Trust
Barnsley Nats	Garganey Trust	National Trust	Sheffield Area Geology Trust (SAGT)	University of Sheffield South Yorkshire Sustainability Centre
Barnsley Metropolitan Borough Council	Green Estate	Nature North	Sheffield Green Spaces Forum	University of Sheffield
Bradfield Farmers Group	Greengage Environmental	Natural England	Sheffield Green Spaces Forum	Wentworth Fitzwilliam Estates
BSG Ecology	Harworth Group	Network Rail	Sheffield Hallam University	Wild Moors
Nuttgens Urban Forestry	Historic England	North Lincolnshire - Environmental Farmers Group	Sorby Natural History Society	Woodland Trust
City of Doncaster Council	J & E Dickinson	Opus	South Yorkshire Woodland Partnership	Yorkshire Water
Consultant ecologist	Kids Plant Trees	Peak District National Park Authority	Sheffield and Rotherham Wildlife Trust	Yorkshire Wildlife Trust

Country Land & Business Association (CLA)	Limestone Ridge Farmers	Rotherham Metropolitan Borough Council	SYMCA - A Tree For Everyone	

In total, there were 49 organisations invited to the webinar and workshop series. Of these, 13 registered for the event. The webinar and workshop series took place near the end of the government's financial year, which is a busy time for many, and may have influenced attendance.

The stakeholder webinar was hosted by SYMCA, with presentations from Natural England and NCS. During the webinar, attendees were updated on the progress of the LNRS thus far, reviewed the methodologies used for the mapping (both for the habitat basemap as well as the mapped measures) and could ask questions and reflect on the methods ahead of the workshops.

As part of the update on the mapping progress, examples of some of the main mapping outputs, including the habitat basemap, "enhance" measures and "create" measures were presented to attendees (see Figures 3-5). **When the webinar took place, there were 43 mapped measures and 113 measures in total**. Of the **mapped measures, 27 were "enhance" and 16 were "create"**.

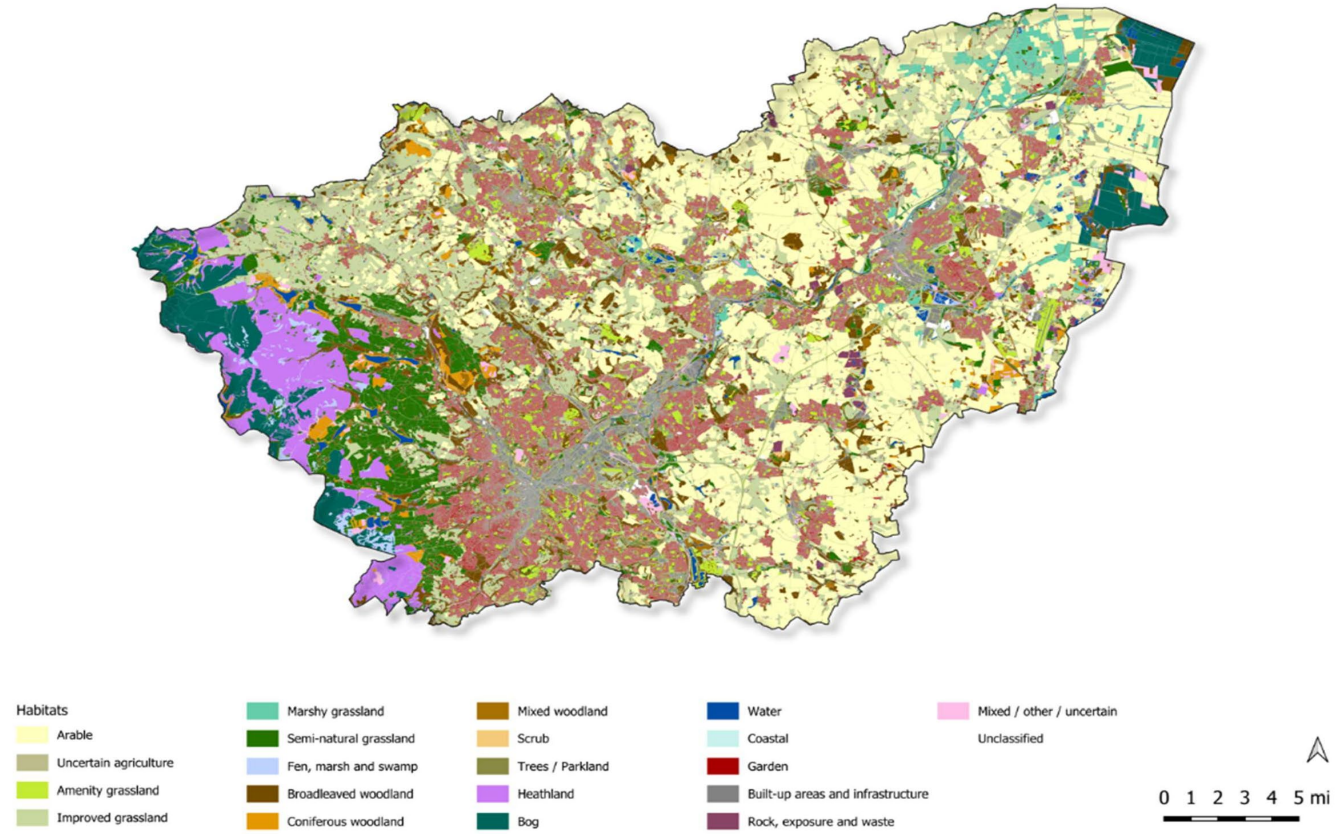


Figure 3. The South Yorkshire habitat basemap displayed during the webinar.

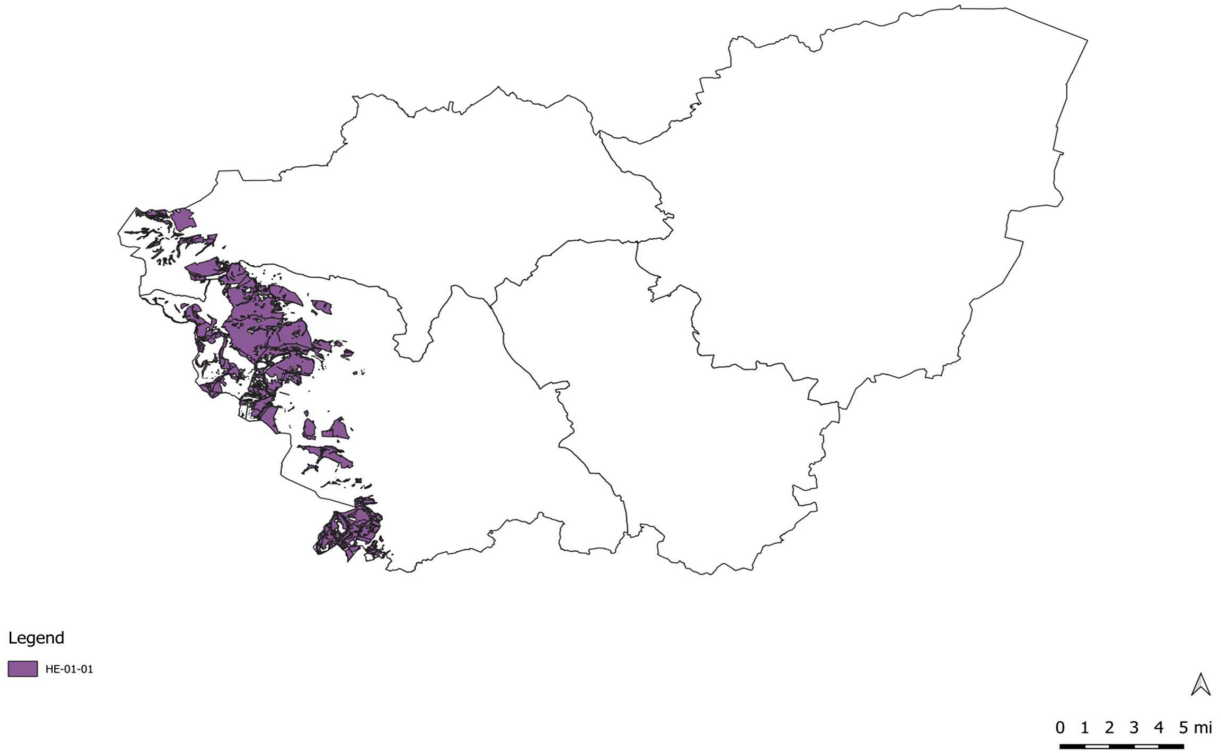


Figure 4. An example of an enhance measure, HE-01-01, shown during the webinar. HE-01-01 is, "Restore and enhance wet heath and complimentary mosaics of heathland, grassland, wetland, woodland, and scrub habitat, including transitional habitats, for example through an appropriate level of grazing, natural regeneration and using blocking grips and gullies."

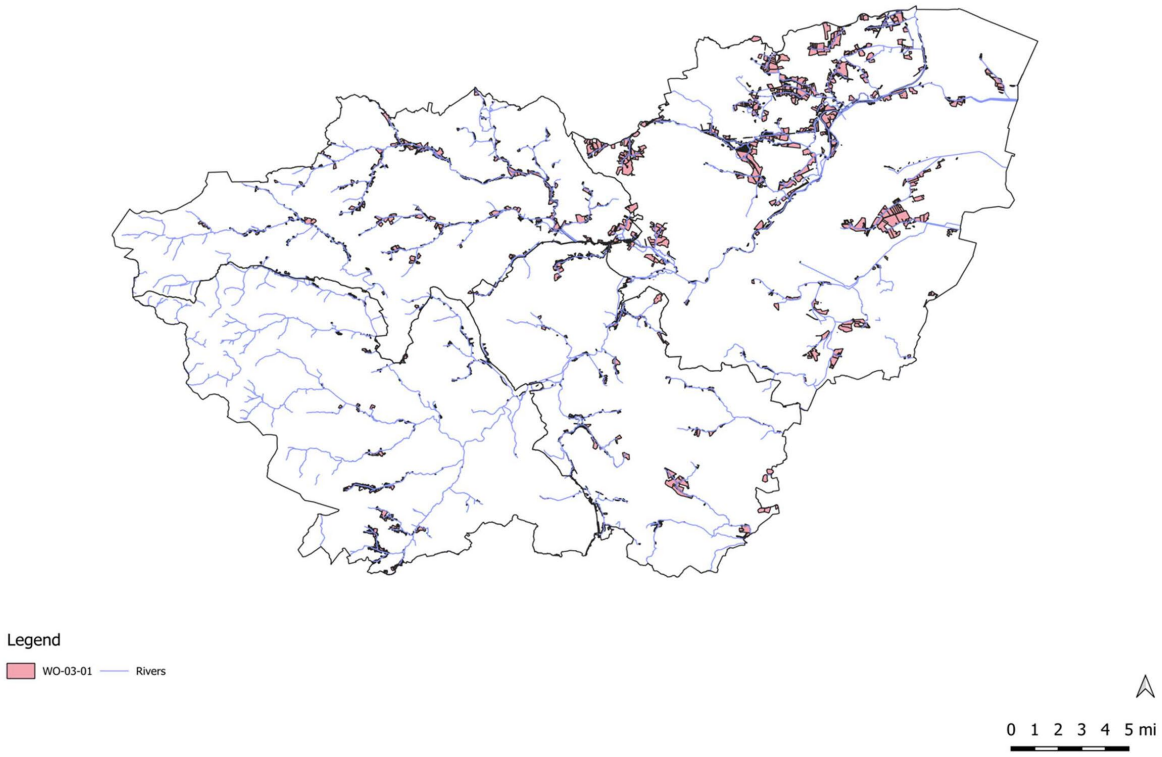


Figure 5. An example of a create measure, WO-03-01, displayed during the webinar. This map also displays the river network that runs throughout South Yorkshire (in light blue). WO-03-01 [now WO-01-06] was, "Create riparian woodland as part of natural flood management projects to reduce flooding, water quality, provide cooling and improve water quality for aquatic life or rewetting appropriate areas."

The webinar was recorded and the recording was sent to all those who were on the wider stakeholder group list (whether or not they were able to attend the webinar) and was later published to the South Yorkshire LNRS's YouTube channel, available *here*.

The webinar was intended to provide the workshop participants with information about the LNRS and the mapping methodology used, to prepare them to give informed feedback on the mapped outputs. For those who were unable to attend the upcoming workshops, information was provided as to how they could still provide feedback on the LNRS (see Figure 6).

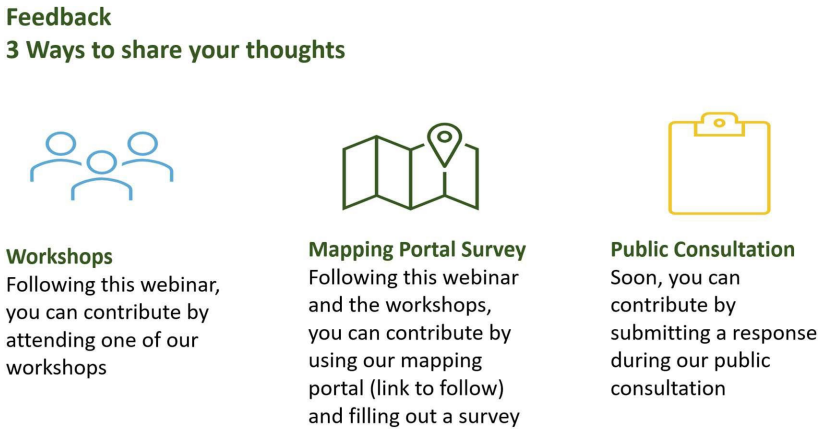


Figure 6. Different options for providing feedback that were highlighted during the stakeholder and expert webinar.

3.3. General habitat type workshop series

Workshop overview

A series of workshops were held from the end of January to the beginning of February 2026. These workshops were facilitated by SYMCA and NCS. The workshops were grouped by general habitat type, representing the **four habitat types with mapped measures**, namely:

- **Grassland and heathland**
- **Urban**
- **Woodland**
- **Water-related**

The **main aims for these workshop**s were to **update participants on the LNRS progress, brainstorm prioritisation** and **constraint strategies**, and provide an opportunity to **sense-check the mapped outputs**. Stakeholders and experts from across South Yorkshire, **representing the environmental, public, business, and agricultural sectors**, were brought together for these workshops. They provided an opportunity to gain **local, on-the-ground knowledge** and **in-depth habitat and systems**

expertise, to ultimately ensure an **accurate representation of the area's nature recovery opportunities**.

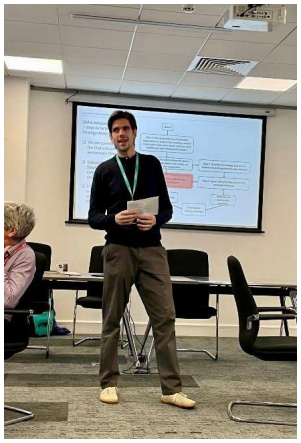
Although each workshop had a different general habitat focus, the structure of each workshop was the same. The mapping team developed the **workshop agenda**, which included:

- **Introduction**: Background information session on the LNRS and mapping progress, main aims of the session, and explanation of the break-out group activity.
- **Break-out session**: Four break-out sessions during each session, where a group visited one of the four tables to review mapped measures and record any feedback, before moving on to the next session, and so on.

~ Break ~ (between 2nd and 3rd break-out session)

- **Prioritisation discussion**: Review of the current percentage of overlap between measures and the current percentage of the combined measures map, discussion of best methods for prioritising and using constraints.
- **Summing up, and next steps**

The introduction section reiterated much of the same information that was included in the webinar (*see Section 3.2. above*), as well as an explanation of the break-out sessions.



Workshop break-out sessions

The **break-out sessions constituted the main activity of the workshops**, and they were designed to optimise the time that participants had to review and provide feedback on the mapped measures (see Figure 7 below).

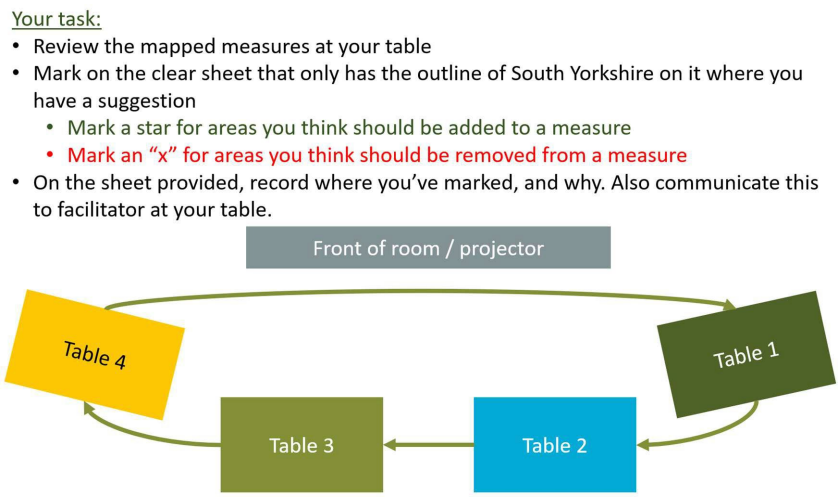


Figure 7. Slide from the introduction presentation, with the guidelines for the break-out session, and a diagram of how to move between tables.

The number of measures discussed per workshop varied, as some habitats had more mapped measures than others. At the time of the workshops, the **habitat groups respectively had**:

- **Water-related**: 15 mapped measures
- **Woodland**: 13 mapped measures
- **Grassland and heathland**: 8 mapped measures
- **Urban**: 7 mapped measures

At the workshops, a couple grassland-related mapped measures were not displayed. This was because they both only had one site mapped, and were under heavy scrutiny from the Working Group. The maximum number of mapped measures that an individual group had to review at a table during the break-out sessions was five. Measures were combined with other measures of similar focus where possible, in an attempt to make reviewing them more straightforward. For example, in the woodland break-out group that featured five maps, these maps were grouped into two measures relating to clough woodlands (WO-03-04, "Restore clough woodlands from areas where they have been lost…" and WO-03-05: "Increase riparian woodland, scrub and mosaic habitats in suitable cloughs of upper catchments…"), and three measures relating to ancient woodlands (RI-03-06: "Identify, record, and expertly manage ancient and veteran white willows…", WO-04-01: "Restore all ancient woodland into positive management…", and WO-04-02: "Connect and buffer existing ancient woodland with woody habitat corridors…").

During the break-out sessions, **each table was provided with**:

- Maps and information sheets relating to the table's mapped measures.
- A copy of the Areas that are of Particular Importance for Biodiversity (APIB) map (*see Glossary*)

- Habitat basemap
- A clear acetate sheet with an outline of South Yorkshire on it For the **water-related workshop**, each table was also provided with:
- Map of the rivers system throughout South Yorkshire, to be used with the other maps for reference.

The **information sheets** at each table contained a copy of the break-out session directions, the Priority description that the mapped measures fit within, the mapped measures full description, and the mapped measures methodology. On these information sheets, measures which were still actively being reviewed by the Working Group (and so perhaps were not in their final version) were marked with an asterisk (*), which was explained at the bottom of the sheet. These information sheets also contained tables for participants to fill in, where they could indicate whether they wanted an area added or removed from a measure, provide their reasoning for their suggestion, and their contact details, so the mapping team could follow up on any feedback if necessary.

Requirements for feedback

The **maps developed for the LNRS used a broad evidence base, with the most up-to-date data available, and fine-scale modelling**. By the time the workshops were held, the maps had already **undergone an extensive review and refining process by the Working Group** (*see Section 1 above*). Additionally, the maps were still actively being refined by the Working Group separately as the workshops were taking place (*see Section 4*). At this stage, the mapping team decided to **focus workshop efforts on the mapped measures** because although they had been carefully checked manually, they were not ground-truthed. The wider stakeholder and expert group engagement provided an excellent opportunity to use this group's collective knowledge to **capture more insight**

and local knowledge in the mapped measures and **catch any data gaps or misalignment** before the maps went out to public consultation. It should be noted, that although the main aim of the workshops was to sense-check the mapped measures, **participants were reminded they could still provide feedback on the habitat basemap**.

During the break-out sessions, workshop participants reviewed the mapped measures and their methodologies, using the other maps provided as references. They were asked to a**ssess whether the opportunities identified made sense** for the specific measure, and provide feedback on **whether areas within the maps needed to be added or removed**. Participants were asked to provide **sound ecological reasoning to support any suggestions made**, and given a mapped measure's description, describe to the best of their ability why certain areas did not make sense for inclusion, or why they needed to be included.

There were two copies (a digital and hard-copy) made of participants feedback during the workshops. Participants were asked to fill in the information sheet with their suggestions, which served as the hard-copy. Meanwhile, a facilitator at each table recorded the feedback using specialised online pin-drop survey forms created by SYMCA. Facilitators digitally inputting feedback during the workshops expedited the feedback review process. In addition, facilitators used the mapping portal as a tool to answer any questions about other measures that may not have been available at the table.

Reviewing the workshop feedback

After the workshops, the mapping team ensured all feedback from the hard-copies was transferred to the online pin-drop survey forms and began reviewing all of the suggestions for additions and removals of sites for each mapped measure. The vast **majority of suggestions made provided**

sound ecological reasoning and were taken forward, with the mapping team implementing the changes requested for each measure.

Concerns were raised about certain measures not covering various issues, for example, a lack of pollution-specific measures, which were in fact addressed by other measures. These comments were likely made as the workshop participants were not provided with a complete list of the priorities and measures at the workshops, and they may not have had time to review the other mapped measures from the mapping portal before their workshop session.

Others voiced concern over whether or not certain opportunities should be retained, as participants feared the current landowners would not be amenable to the opportunities on their land. However, the mapping and Working Groups decided these opportunities should remain; as the evidence-base supported an opportunity there, other LNRSs in other Responsible Authorities had implemented similar standards, and it was felt to be a more consistent approach, especially as the landowner could change their mind, or the land could change hands, but the opportunity of the land remained regardless. This was also done with the recognition that if landowners were opposed to certain opportunities on their land, they could make their opinions known during the public consultation, as suggested in the guidance.

There were also some suggestions which were not taken forward as the suggested areas covered very limited areas, and concerns were raised over whether they were not ecologically or strategically significant due to their limited coverage. Additionally, there were a number of revisions to the measures after the Working Group completed their in-depth review of them following the workshops, but regardless of whether measures were merged with other measures or re-numbered, the workshop participants' feedback was still implemented.

3.3.a. Determining the prioritisation strategy

It became apparent as the mapped measures were developed, that some of the **mapped measures covered a large percentage of the county** and there was a **significant amount of overlap** between

mapped measures. The LNRS guidance warns against "indiscriminate or widespread mapping of areas", as the ACB map is intended to **target effort in areas where it will have the most benefit** (LNRS Statutory Guidance, para 77). The mapping should be strategic, with Natural England generally advising that measures should cover 30 – 50 percent of a LNRS area. When the workshops took place, all of the mapped measures combined covered 58 percent of South Yorkshire, with a 55 percent overlap across measures (see Figure 8).

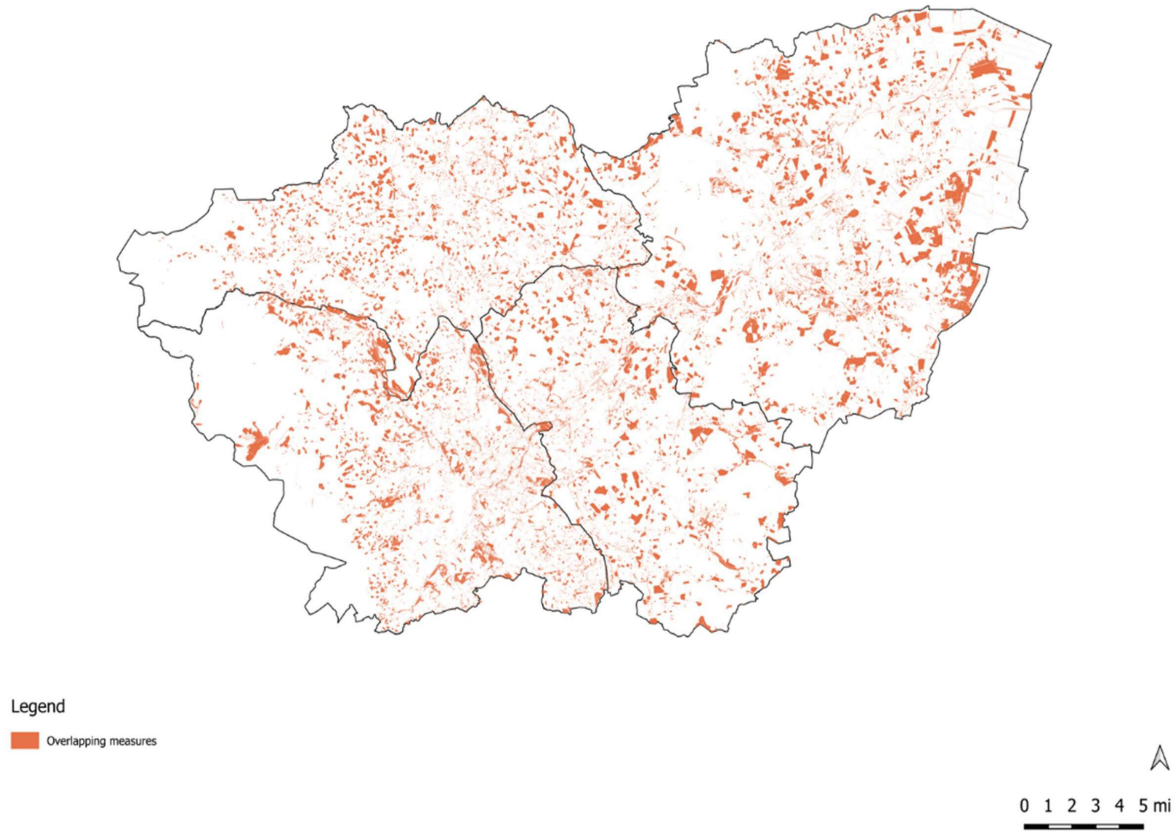


Figure 8. A map displaying the overlapping measures coverage shown during the webinar.

Due to this large coverage, one of the aims of the workshop series was to **discuss the best way of prioritising and constraining the mapped measures** with the stakeholder and expert group, in order to achieve the strategic coverage outlined by the guidance. Several prioritisation strategies were presented to the workshop participants, these were based on strategies other Responsible Authorities had used in their LNRS, such as prioritising opportunities that will help achieve national environmental objectives (NEOs) (*see Glossary*), prioritising by Priority Habitat Inventory, or prioritising South Yorkshire's unique and scarce habitats. Participants discussed potential strategies to use with their table groups, before a more general discussion was held with the entire group. The ideas discussed by each group were recorded during each workshop, and these were later collated and analysed. The Working Group reviewed the workshop discussion findings, the results of which are described below.

Focusing woodland creation opportunities

Before the workshop series began, the Working and mapping groups realised that some **woodland measures had extremely widespread coverage**, and wanted to use the workshops to discuss ways of reducing this. At the beginning of the prioritisation discussion, the mapping team raised these concerns in order to foster specific suggestions regarding these measures. A widely-supported suggestion was to **prioritise the woodland measures by** using the England Woodland Creation Low Sensitivity Map (v4.0) to **remove any opportunities from areas that are unsuitable for woodland creation**. The Working Group decided to use this suggested prioritisation strategy to further prioritise measures WO-01-04 and WO-04-02, thus **only displaying opportunities within low-sensitivity areas** (areas well-suited for woodland creation, with low environmental and / or social constraints).

Prioritising the APIB and other environmental benefits

Two other methods for prioritising measures with large coverage were to **prioritise using the other environmental benefits (and the NEOs they support)** that would be enhanced by that opportunity, and if they would **buffer or join up APIB areas**. These prioritisation strategies were echoed across all four workshops and the Working Group supported them. After the mapping team prioritised opportunities that joined-up or buffered the APIB, or would benefit biodiversity and the delivery of other environmental benefits, the mapped measures showed **significantly less coverage** and a **more strategic approach**.

Prioritising where measures overlap

During the workshops, there was a brief discussion about the number of mapped measures which overlapped, with the prioritisation discussions providing some insights into how best to address these. The idea to prioritise **unique or scarce habitats** where they occurred in South Yorkshire was popular in the workshop discussions, and accepted by the Working Group. Based on the mapped outputs and expert knowledge, the **following habitats were prioritised across the four Local Authorities**:

- **Barnsley Metropolitan Borough Council**: Grassland, wetland and heathland
- **City of Doncaster Council**: Heathland, grassland*
- **Rotherham Metropolitan Borough Council**: Grassland, wetland, heathland
- **Sheffield City Council**: Wetland, grassland**

* There would be many wetland and woodland opportunities

**Heathland was not included here as there are many opportunities for upland heathland on peat soils, where woodland is constrained

Generally, if there were areas where multiple measures overlapped, the above prioritisation list was considered for each Local Authority area respectively, and the most scarce habitat prioritised.
However, some measures were further prioritised to favour these unique and scarce habitats, see Table 2 below.

Table 2. All mapped measures that were further prioritised to favour unique and scarce habitat opportunities across South Yorkshire.

Measure #	Prioritisation for Barnsley	Prioritisation for Doncaster	Prioritisation for Rotherham	Prioritisation for Sheffield
WE-01-01 *Create and manage mosaics of fen, marsh, swamp and open water habitats through hydrological and vegetation management, for example introduction of suitable plant species to increase diversity and ecological connectivity.*	Areas intersecting GR-01-03 were removed in order to prioritise grassland creation	Areas intersecting HE-02-02 and GR-01-03 were removed in order to prioritise heathland and grassland creation	Areas intersecting GR-01-03 were removed in order to prioritise grassland creation	NB: Only a few opportunities due to the restriction of the constraints dataset across the region.
GR-01-03 *Create new semi-natural grassland habitats of value and secure good management on these sites, prioritising sites that buffer existing 'Good' grasslands.*	N/A	Areas intersecting HE-02-02 were removed in order to prioritise heathland creation.	N/A	Areas intersecting WE-01-01 were removed in order to prioritise wetland creation.
HE-02-01 *Manage and restore heathland to prevent loss of condition and extent, including where present as part of a habitat mosaic.*	Areas intersecting WE-01-01 or GR-01-03 were removed in order to prioritise wetland and grassland creation.	N/A	Areas intersecting WE-01-01 or GR-01-03 were removed in order to prioritise wetland and grassland creation.	Areas intersecting WE-01-01 or GR-01-03 were removed in order to prioritise wetland and grassland creation.

HE-02-02 *Create and buffer wildlife-rich and structurally diverse heathland habitat mosaics of acid grassland and scrub to improve connectivity for heathland species between new and existing heathland sites, for example in the Humberhead Levels. This could include seed and brash collection from donor sites*	Areas intersecting WE-01-01 or GR-01-03 were removed in order to prioritise wetland and grassland creation.		Areas intersecting WE-01-01 or GR-01-03 were removed order to prioritise and grassland creation.	Areas intersecting WE-01-01 or GR-01-03 were removed in in order to prioritise wetland wetland and grassland creation.
WO-01-04 *Create new woodlands to buffer and connect existing woodlands to enable habitat connectivity and increase the overall tree and woodland cover in South Yorkshire, ensuring resilience to wildfire in new woodland and promoting public access to woodlands*	Areas intersecting WE-01-01 or GR-01-03 or HE-01-02 or HE-02-02 were removed in order to prioritise wetland, grassland and heathland creation.	Areas intersecting HE-02-02 and GR-01-03 were removed in order to prioritise heathland and grassland creation.	Areas intersecting WE-01-01 or GR-01-03 or HE-01-02 or HE-02-02 were removed in order to prioritise wetland, grassland and heathland creation.	Areas intersecting WE-01-01 or GR-01-03 were removed in order to prioritise wetland and grassland creation.
WO-01-07 *Create and enlarge existing species-diverse mosaics as transitional habitats between new grassland and woodland*	Areas intersecting WE-01-01 or GR-01-03 or HE-01-02 or HE-02-02 were removed in order to prioritise wetland,	Areas intersecting HE-02-02 and GR-01-03 were removed in order to	Areas intersecting WE-01-01 or GR-01-03 or HE-01-02 or HE-02-02 were removed in order to prioritise wetland,	Areas intersecting WE-01-01 or GR-01-03 were removed in order to prioritise

sites, incorporating scrub, hedgerows, wood pasture, ancient and veteran trees.	grassland and heathland creation.	prioritise heathland and grassland creation.	grassland and heathland creation.	wetland and grassland creation.
WO-03-01 *Create and manage new wet and riparian woodland where it will support the presence of priority species, and where it will provide wider ecological connectivity and ecosystem benefits including flood alleviation.*	Areas intersecting WE-01-01 or GR-01-03 or HE-01-02 or HE-02-02 were removed in order to prioritise wetland, grassland and heathland creation.	Areas intersecting HE-02-02 and GR-01-03 were removed in order to prioritise heathland and grassland creation.	Areas intersecting WE-01-01 or GR-01-03 or HE-01-02 or HE-02-02 were removed in order to prioritise wetland, grassland and heathland creation.	Areas intersecting WE-01-01 or GR-01-03 were removed in order to prioritise wetland and grassland creation.
WO-04-02 *Connect and buffer existing ancient woodland with woody habitat corridors using appropriate blend of conventional planting with natural colonisation and natural regeneration.*	Areas intersecting WE-01-01 or GR-01-03 or HE-01-02 or HE-02-02 were removed in order to prioritise wetland, grassland and heathland creation.	Areas intersecting HE-02-02 and GR-01-03 were removed in order to prioritise heathland and grassland creation.	Areas intersecting WE-01-01 or GR-01-03 or HE-01-02 or HE-02-02 were removed in order to prioritise wetland, grassland and heathland creation.	Areas intersecting WE-01-01 or GR-01-03 were removed in order to prioritise wetland and grassland creation.

The prioritisation strategies significantly reduced the overall extent of the mapped measures. The **prioritisation strategies used aligned with the statutory guidance**; ultimately **creating mapped outputs that are joined-up, prioritise unique and rare habitats**, and **provide multiple environmental benefits across South Yorkshire which support NEOs**.

3.3.b. Constraints

Once the prioritisation strategies had been decided and implemented, the final step in developing the mapping was to review and add the constraints (although note that some general constraints were used in the opportunity mapping process (*see Appendix A.2.*). **Constraints are an important tool** in further **targeting opportunities**, and **ensuring only areas with low environmental, historical and social risks** are included. To target opportunities in this way, the **main constraints applied to "create" measures** were:

- **Agricultural Land Classification**: All agricultural land of high value, with a Grade 1-3a, were removed as an opportunity
- **Airports**: The Doncaster airport site was removed
- **Allocated sites**: All developed or under development sites, according to planning allocations, were removed
- **Inland rock**: This constraint was specifically applied to woodland creation opportunities

- **Local heritage**: Local heritage sites provided by the Supporting Authorities were removed
- **Peaty soils**: Any woodland opportunities on peaty soils (from Natural England's Peaty Soils Location map) were removed (as woodland on peat soils can serve as a source of carbon emission, rather than sequestration or storage and can change the hydrology dynamics of peatland)
- **Playing fields**: Playing field sites provided by the Supporting Authorities were removed. However, some may still appear, and it was decided to retain these as there may be opportunities for wildlife corridors or habitat buffers along the borders of these areas.
- **Priority habitats**: All priority habitats (Natural England) were removed
- **Registered parks and gardens**: All registered parks and gardens (from the National Heritage List for England) were removed
- **Scheduled monuments**: All scheduled monuments (from the National Heritage List for England) were removed

Following discussions with the Working Group, **further constraints were applied to some measures**. The constraints were added to **focus opportunities further**, and **ensure opportunities were not appearing in areas that would be inappropriate** (such as creation of floodplain grazing marsh in urban areas, or woodland in bog). Some examples of other constraints applied include: national designations, the Environment Agency floodzone data, and urban built-up areas or infrastructure or gardens.

4. Reflections: Exploring how the mapped measures changed

Throughout the third project stage, the **mapped measures were carefully scrutinised and sense-checked by a wide range of stakeholders and experts, representing multiple sectors**. This process included an in-depth review by Working Group members who had worked closely on the mapped outputs throughout the LNRS process. During this project stage, the mapped measures were reviewed by stakeholders and experts during the workshop series, and by the Working Group separately, before **the feedback from both groups was collated, analysed and implemented where appropriate**. At the same time, the workshop participants' suggestions for prioritising between and across measures were reviewed by the Working Group and mapping team, and **a series of prioritisation strategies were applied to the mapped measures**. The constraints used on the mapped measures were also reviewed as part of the Working Group's efforts, and **additional constraints were added to some measures, in line with the statutory guidance and the prioritisation strategies**.

The feedback from the workshops was straightforward to address, as workshop participants were only asked to make suggestions regarding the mapped outputs and whether the mapped opportunities made sense for the measure description, or whether certain areas needed to be added or removed from the measure's map. This feedback was then reviewed individually by the mapping team, and if sound reasoning had been provided for the suggestion and the suggestion was technically feasible, it was taken forward.

The feedback from the Working Group's review was much more intensive, as there were multiple rounds of feedback where they made similar suggestions for additions and removals as the

workshop participants, but they also considered the Priorities and Measures as a whole. As part of their review, the Working Group closely investigated measure and priority wording, the mapping methodologies used, and examined whether the mapped outputs made sense as a collective, or whether there were measures that would be stronger if combined. The Working Group has an in-depth knowledge of the Supporting Authorities' available data and they suggested certain measures should not be mapped in this iteration of the LNRS because of current data limitations.

Collaboration: Reviewing the Working Group's feedback

There were **two rounds to the Working Group's in-depth review of the Priorities and Measures**. In the **first round**, after receiving all mapped measures, each Supporting Authority submitted their feedback on the Priorities and Measures. Given the number and range of feedback from the Working Group, the mapping team created a spreadsheet form to support collaboration on the suggestions made. After the first round of feedback, the mapping team reviewed all of the feedback, and provided suggestions and comments in the spreadsheet. In the **second round** of feedback, this spreadsheet was shared with the Working Group and allowed each of the Supporting Authorities within the Working Group to view all of the comments made on the wording or methodology for each measure from all of the other Supporting Authorities*, along with the mapping team's comments. The Supporting Authorities were asked to review this sheet, and either provide further feedback as to suggested approaches or wording, or signal their approval of a suggestion.

Once all Supporting Authorities submitted their final feedback, it was reviewed by the mapping team. By this time, the Working Group had reached general consensus on the Priorities and Measures, so no further discussions were necessary. The mapping team summarised the agreed changes on each measure, distinguishing between measures that needed wording changes, measures with mapping changes, and measures with both types of changes needed. This updated spreadsheet with the summaries, any final comments, and the final mapped measures list was circulated to the Working Group. The mapping team applied all agreed changes to the mapped measures, handing off the final wording change decisions directly to the Working Group.

In total,

- **9 mapped measures methodologies** were adjusted
- **10 mapped measures were combined** to create 3 mapped measures
- **3 mapped measures were changed to unmapped**
- **Priority (RI-03) was merged with RI-02**
- **9 mapped measures required wording changes**

Additionally, a couple of placeholder measures were removed at this stage, as they became species-specific measures.

Following all of the changes made during this project stage, the **complete pre-public consultation draft version of the Priorities and Measures contains 32 mapped measures of 102 measures total.** This list has been **substantially reduced from the beginning of this project stage**, when there were

* Note that the Peak District National Park was not directly consulted during this stage, as they did not have capacity to review all LNRS changes. Instead, the PDNP created a guidance as to their recommendations for LNRS, which was consulted during this process.

43 mapped measures and 113 measures total. Seven "enhance" and four "create" measures have either been combined or become unmapped, for a **new total of 20 "enhance" and 12 "create" measures**. When all of the measures are combined, the **total coverage across South Yorkshire is now 39%**, a steep reduction of 19 percent compared to its percentage before the workshops (58%). As discussed, woodland was a primary focus for the prioritisation and constraint strategies, and the current woodland area now covers:

- Existing woodland (habitat basemap): 11% (remained the same)
- Enhance woodland measures = 6% (previously 7%)
- Create woodland measures = 13% (previously 31%)

The **current ACB layer**, generated after all of the Working Group and workshop feedback was applied, now **covers a strategic 23% of the county**.

5. Conclusions

The mapping stages described in this document follow the **rigorous, collaborative**, and **evidence-based process of updating the South Yorkshire habitat basemap and determining and refining the mapped measures**, in order **to create** the pre-public consultation version of the **ACB map**. This work was driven by the **collaboration between the mapping team, Working Group and wider stakeholder and expert group**. The Working Group and wider stakeholder and expert group's **feedback and decision-making were instrumental** in shaping the current versions of the habitat basemap, mapped measures and ACB map.

Engagement began with the Working Group, comprised of representatives from the LNRS supporting authorities and Defra-family partners, who reviewed the habitat basemap, which was created by updating the SY natural capital and biodiversity mapping project's basemap. In the **first mapping stage**, the Working Group and mapping team also reviewed the draft Priorities and Measures list and worked together to determine which measures could be taken forward for mapping, and what the methodologies for these mapped measures should be. Both the habitat basemap and mapped measures were further refined by the Working Group in the **second stage**, when the first maps were produced and subsequently examined by the Working Group. Decisions regarding changes to the methodologies or specific sites were settled on, with some of the mapped measures reviewed multiple times, as a result of the iterative review process the mapped measures underwent at this stage. Once a first draft of all mapped measures had been reviewed, the **third mapping stage** began, with two separate, simultaneous reviews. The first was a comprehensive review of the Priorities and Measures by the Working Group, and the second encompassed a series of engagement activities with a wider range of stakeholders and experts from across South Yorkshire. The series of engagement activities with the wider stakeholder group included an online webinar, and a series of workshops (organised by general-habitat type) where the workshop participants sense-checked the mapped outputs.

The feedback from the comprehensive, in-depth Working Group review of the Priorities and Measures was combined with the feedback from the workshop series. From this feedback, mapped measures underwent substantial changes, with 11 mapped measures either combined or becoming

unmapped from the beginning of the workstream phase, for a new total of 32 mapped measures out of 102 measures total. Individual mapped measures were reviewed and sense-checked by the workshop participants and Working Group, who determined whether mapped opportunities made sense for the particular measure at hand, and could suggest where areas either needed to be added or removed. The mapped measures were then further revised by implementing prioritisation and constraint strategies, suggested by the workshop participants and Working Group, that aligned with the guidance. The workshop participants and Working Group considered and shared the strategies they felt would work best for South Yorkshire, which led to substantial changes in the prioritisation and constraints associated with individual measures, and across measures. The total coverage of mapped measures across South Yorkshire was reduced from 58 percent at the beginning of the third mapping stage, to 39 percent. The steep reduction in overall coverage was achieved in this stage after both the prioritisation strategies and constraints were applied to the mapped measures.

The current pre-public consultation versions of the habitat basemap, mapped measures layer and ACB have now been finalised. The combined feedback from the workshop participants and the Working Group has led to a substantial reduction in the number of mapped measures, from 43 mapped measures at the beginning of this workstream phase, to 32 mapped measures currently. By **general habitat type, the mapped measures currently have**:

- **Water-related**: 14 mapped measures (previously 15)
- **Woodland**: seven mapped measures (previously 13)
- **Grassland and heathland**: seven mapped measures (previously eight)
- **Urban**: three mapped measures (previously seven)
- **Farmland**: one mapped measure (previously none)

All of the combined feedback has developed a pre-public consultation **ACB map with a 23 percent coverage of the LNRS area**. This coverage **exemplifies a systematic, evidence-based, collaborative approach to targeting nature recovery** opportunities in the areas that make the most sense, provide wider benefits, and support NEOs in South Yorkshire.

Glossary

- **Areas of Particular Importance for Biodiversity (APIB**): Map of all national conservation sites, local nature reserves, and other locally important areas for biodiversity (e.g. local wildlife sites, irreplaceable habitats).
- **Areas that Could Become of particular importance for biodiversity (ACB)**: Map of areas where habitat restoration or creation could achieve the most for biodiversity and wider environmental benefits.
- **Create measures**: relate to habitat-creation sites, actions are centred around creating new habitat to buffer, join-up or increase a particular habitat or habitat mosaic
- **Enhance measures**: relate to existing sites, and actions are centred around the restoration, enhancement or management of the site.
- **Measures**: actions to take to help achieve the LNRS priorities
- **National Environmental Objectives (NEOs)**: Encompass various national environmental goals, such as increasing the total tree and woodland cover from 14.5% (of total land area) to 16.5% by 2050. LNRS should "seek to contribute" to relevant NEOs, this should be a core pillar of the LNRS development process.
- **Priorities**: list of identified main goals for recovering or enhancing biodiversity within the LNRS area
- **Responsible Authority**: the leading authority on the LNRS, appointed by Defra Secretary of State. South Yorkshire Mayoral Combined Authority is the Responsible Authority for the South Yorkshire LNRS, and as such, is required to work with stakeholders from the public, private and voluntary sectors to meet the requirements set out by the LNRS Statutory Guidance.
- **Supporting Authority**: comprised of all Local Authorities (LPAs), National Park Authorities, and Natural England. Supporting Authorities are involved in and support all aspects of the LNRS preparation.

Appendices

A.1 Basemap Habitat Asset Register

Table A.1 shows the asset register for South Yorkshire. It identifies the broad habitat types found across the region, the area of each in ha, and the proportion of the region that each of them covers.

Table A.1 Basemap habitat asset register table displaying total area coverage (ha) of broad habitats in South Yorkshire.

Habitat type	Total area (ha)	Total area (%)
Amenity grassland	6026.5	3.9
Bog	6060.5	3.9
Broadleaved woodland	11771.2	7.6
Built-up areas and infrastructure	19634	12.6
Coastal	9.4	0
Coniferous woodland	1403.2	0.9
Cultivated / disturbed land	40291.5	25.9
Fen, marsh and swamp	980.2	0.6
Garden	11440.7	7.4
Heathland	6319.1	4.1
Improved grassland	22187.4	14.3
Marshy grassland	2539.8	1.6
Mixed / other / uncertain	4534.3	2.9
Mixed woodland	1054.2	0.7
Rock, exposure and waste	558.4	0.4
Scrub	602.6	0.4
Semi-natural grassland	10074.4	6.5
Trees / Parkland	6277.9	4

Uncertain agriculture	937	0.6
Unclassified	527	0.3
Water	2234.6	1.4
TOTAL	**155,463.9***	**100**

*Please note that the total area quoted in the asset register is 250 hectares larger than the actual area of South Yorkshire. This is due to there being small overlaps in polygons in the basemap GIS layer. This is a product of knitting together numerous different layers of GIS habitat data. It takes a very long time to deal with this issue, and sometimes it is not possible to resolve it completely. As we are not using area data for this project from the basemap, it is not a problem. If the area data from this asset register is to be used, this issue needs to be taken into consideration.

A.2 Biodiversity opportunity maps

The importance of landscape-scale conservation and ecological networks has become increasingly recognised over recent years. Many wildlife sites have become isolated in a landscape of unsuitable habitats and efforts are now being directed towards enlarging existing sites, linking existing habitat patches, and increasing connectivity, in line with the Lawton principles. Species are more likely to survive in larger habitat networks, are able to move and colonise new sites, and are more resilient to climate change and other detrimental impacts.

Habitat opportunity mapping to enhance biodiversity follows this ethos by using ecological networks to identify potential areas for new habitats. Identified areas will be ecologically connected to existing habitats, thereby expanding the size of the existing network, increasing connectivity and resilience, and potentially increasing the ecological quality of the new site.

The approach used here identifies three categories of opportunity, indicating three priority levels of importance for each habitat and ecosystem service mapped. It was performed for five key habitat groupings, incorporating the main semi-natural habitats found in South Yorkshire. The broad habitats and their constituent types are shown below:

Box A.1. Broad habitat descriptions for the five major habitat types used in the LNRS.

Broad habitat	Specific habitats included
Wet grassland and wetland	Marshy grassland, floodplain grazing marsh, lowland fen and swamp (reedbed)
Bog	Bog, blanket bog, lowland raised bog

Heathland	Acid grassland mosaic, dry heath (with or without woods / trees /scrub), marshy grassland, dry dwarf shrub heath (acid / basic), wet dwarf shrub heath , upland heathland, wet heathland with cross-leaved heath
Semi-natural grassland	Neutral, acid, calcareous, rough and semi-improved grasslands
Woodland	Broadleaved and mixed woodland types (excludes coniferous woodland, parkland or individual trees)

In the mapping of measures (*Sections 2 and 3*), opportunity mapping was also run for more specific habitat types. This included ancient woodlands (as a subset of woodland), lowland meadows, calcareous grassland, floodplain grazing marsh and other individual habitat types. Heathland opportunities were also mapped, grouped alongside acid grassland, which can often be interchangeable.

Biodiversity opportunity mapping follows a four-step process, and is based on the approach developed by Catchpole (2006)[2] and Watts et al. (2010)[3]. It is based on estimating the permeability of the landscape for typical species of each habitat type and the distance that species would move through the landscape. In all cases, constrained areas (areas where new habitat could not be created) will be excluded and typically includes existing buildings, gardens, infrastructure and water, existing high-quality habitats, heritage features, and gas pipelines and overhead cables (for woodland only). Note that opportunity areas for the five broad habitats often overlap. The mapping will identify two different opportunity zones:

- **Buffer** – areas that are immediately adjacent to existing habitat patches and will usually be the priority for habitat creation.
- **Stepping stone** – areas that are slightly further away from existing habitats, but are close enough to be ecologically connected, and could potentially be used to create stepping-stone habitats that could link up more distant habitat patches.

Three different priority levels are also identified:

- **Priority 1** – buffer and stepping stones close to existing nationally designated sites (e.g. SSSI's) or ancient woodland (for woodland opportunity map only).
- **Priority 2** – areas close to existing locally designated sites (either Local Nature Reserves or Local Wildlife sites).
- **Priority 3** – areas close to undesignated sites in the wider countryside.

As the buffer and stepping stone areas identify portions of land in relation to the ecological network for each habitat, it often results in thin slivers of land being identified adjacent to existing habitats,

[2] Catchpole, R.D.J. (2006). Planning for Biodiversity – opportunity mapping and habitat networks in practice: a technical guide. *English Nature Research Reports*, No 687
[3] Watts, K., Eycott, A.E., Handley, P., Ray, D., Humphrey, J.W. & Quine, C.P (2010). Targeting and evaluating biodiversity conservation action within fragmented landscapes: an approach based on generic focal species and least-cost networks. *Landscape Ecology,* 25: 1305–1318.

which bear no relationship to existing fields and boundaries. As habitat creation or restoration projects usually operate on whole fields, an additional step will be taken to identify those fields that present buffer and stepping stone opportunities.

A.3 Ecosystem services opportunity maps

Ecosystem services opportunity [or wider environmental benefit and non-environmental co-benefit] mapping is a Geographic Information System (GIS) based approach used to identify potential areas for the expansion of key habitats to meet different environmental objectives, whilst taking constraints into account. Opportunities have been mapped to:

- **reduce surface water runoff** (and hence flood risk),
- **reduce soil erosion and improve water quality**,
- **ameliorate air pollution**,
- **reduce noise pollution,**
- **reduce urban heat,**
- **enhance public access to natural greenspace**.

The first step of this process is to map ecosystem service provision and demand (*see section A.5*).

The opportunity mapping uses the basemap and the ecosystem service mapping to highlight the top 5%, 10%, 10-25% and 25-50% best opportunity areas for each respective service, indicating four levels of importance, based on the ecosystem services maps. Constrained areas are excluded and, as for the biodiversity opportunity maps, will consist of existing buildings, infrastructure, gardens and water, existing areas of high-quality habitats, and listed heritage assets. Initial opportunity layers were converted into field-scale maps.

- The water flow regulation opportunity map identifies areas where runoff is currently high and could be reduced through changing land use or habitats. The greatest number and highest priority opportunities generally correspond to areas with relatively steeper slopes. Areas of bare soils, such as quarries and mineral extraction sites, are also highlighted as priorities throughout the study area.

- The water quality (soil erosion) regulation opportunity map focusses on areas where soil erosion is currently high and could be reduced through habitat change. To further prioritise the opportunity areas identified, we will gather information on the overall waterbody status from the Water Framework Directive, for each river waterbody catchment. This data will be used to weight the opportunity map, with catchments with worse water quality given greater weighting. Opportunities will be focussed close to watercourses and especially on arable land, which is a significant source of soil erosion.

- The air pollution regulation opportunity map is demand led, so areas highlighted will be those with the highest demand, but currently low supply of the service. This tends to be urban areas and close to main roads, with no existing tree cover.

- The noise regulation opportunity map is also demand led, so areas highlighted will be those with the highest demand, but currently low supply of the service. As for air pollution regulation, this tends to be urban areas close to main roads, with no existing tree cover.

- The local climate (urban heat) regulation opportunity map works in a similar way to the previous two and highlights areas with the highest demand, but currently low supply of the service. The urban heat island effect is entirely focussed in the larger urban areas, so this map will highlight locations in and immediately adjacent to these urban areas which are not currently constrained by buildings and infrastructure, and with no existing tree cover or lakes/rivers.

- The accessible natural greenspace opportunity map also focuses on areas with the highest demand, where supply is low. The best opportunities for increasing access to the natural environment are concentrated around the edges of the urban areas, often in rings around the edges of settlements.

A.4 Combined opportunity maps – delivering multifunctionality

In addition to mapping the individual opportunities, multiple opportunities were mapped. These area areas where new habitat can be created that provides opportunities to enhance more than one of the services mapped previously. These are areas that could deliver multifunctional outcomes. This was assessed by overlaying individual opportunity maps to determine the degree of overlap, examining each of the main habitat types in turn. Here, if an opportunity fell within the top 10% (highest) opportunity it is given a score of 3, an opportunity in the 10-25% (high) zone is given a score of 2, and an opportunity in the 25-50% (medium) zone is given a score of 1. Biodiversity opportunities (*Appendix A.5*) can also score between 1 and 3, with the highest priority score taking precedence where there is more than one opportunity in the same location. The combined score is summed, with the higher the sore indicating the greatest priority in terms of delivering multiple benefits[4].

The maps were combined in a number of different ways, depending on the objective. When biodiversity enhancement was the primary objective, as was usually the case for the LNRS, we have restricted combined opportunities to areas that present a biodiversity opportunity. Hence opportunity areas are only included for locations that are ecologically connected to existing habitats. Some of the measures also focus on specific or combined environmental benefits, such as combining the water flow, water quality and woodland biodiversity opportunities together to highlight the best areas to plant woodland to reduce flood risk and enhance water quality.

[4] Note that for broadleaved woodland, all ecosystem services maps are combined, along with the woodland biodiversity opportunity map (each scored out of 3), so the combined opportunity score is out of a theoretical total of 15. For semi-natural grassland and wet grasslands and wetlands, air quality regulation opportunity areas are not included as these habitats will not significantly improve the provision of this service, hence the combined score is out of a theoretical total of 12.

A.5 Modelling and mapping ecosystem services (benefits)

Using the habitat basemap it was possible to quantify and map the environmental benefits and co-benefits that these habitats (natural capital) provide to people. These ecosystem service models are the basis for informing the ecosystem service opportunity maps (*Appendix A.4, above*). The ecosystem services mapped that were relevant to the South Yorkshire LNRS are outlined in Box A.2.

Box A.2: Ecosystem services mapped

- **Air purification** (air quality regulation) estimates the relative ability of vegetation to trap airborne pollutants or ameliorate air pollution. Woodland habitats are by far the most effective habitat type at providing this service, but all woody habitats including hedgerows and scattered trees have some effect.
- **Noise regulation** is the capacity of the land to diffuse and absorb noise pollution. Complex vegetation cover, such as woodland, trees and scrub, is considered to be most effective, and the effectiveness of vegetation increases with width.
- **Local climate regulation** estimates the capacity of an ecosystem to cool the local environment and cause a reduction in urban heat maxima. Natural vegetation, especially trees / woodland and water bodies, are able to have a moderating effect on local climate, making nearby areas cooler in summer and warmer in winter.
- **Water flow regulation** is the capacity of the land to slow water runoff and thereby potentially reduce flood risk downstream. The model is based on roughness (dependent on habitat type), slope, and imperviousness (based on soil type).
- **Water quality (soil erosion) regulation** maps the risk of surface runoff becoming contaminated with high sediment loads before entering a watercourse, with a higher water quality capacity indicating that water is likely to be less contaminated. The model focuses on sedimentation risk from agricultural land, rather than urban diffuse pollution.
- **Accessible nature capacity** maps the availability (public access) of natural areas and scores them by their perceived level of naturalness.

For every ecosystem service listed in Box A.2, the capacity of the natural environment to deliver that service – or the current supply – was mapped. For air quality regulation, noise regulation, local climate regulation, and accessible nature, it is also possible to map the local demand (the beneficiaries) for these services. The importance and value of ecosystem services can often be dependent upon its location in relation to the demand for that service, hence capturing this information provides useful additional insight and will be used in the ecosystem services opportunity mapping (*Appendix A.3*).

The capacity models were applied at a 5m by 5m resolution, while the demand models were mapped at 10m resolution providing fine scale mapping across the area. The models were based on the detailed habitat information determined in the basemap, together with a variety of other external data sets (e.g. digital terrain model, UK census data, open space data, and many other data sets and models). Note, however, that many of the models are indicative (showing that certain areas

have higher capacity or demand than other areas) and in all cases the capacity and demand for ES is mapped relative to the values present within the wider study area (South Yorkshire).

Annex F – Strategic Significance in Mapped Measures

The Local Nature Recovery Strategy (LNRS) identifies areas where development could have the biggest impact on nature and where habitat creation, restoration or enhancement are most beneficial for nature recovery. The LNRS does not protect land outside of designated areas/sites or compel landowners to deliver the works identified in the strategy. However, some land/sites in the LNRS are already designated for nature conservation at different levels and benefit from existing protections as such.

New development has a positive opportunity to support nature recovery by incorporating sustainable land uses and facilitating long term gains for biodiversity within their schemes. Where mapped Measures, identified in the LNRS, interact with development sites, including sites allocated in Local Plans, developers can use the LNRS as a tool to help them identify strategic priorities and guide the interventions they incorporate within their schemes.

The table below has been prepared to provide clarity for planning applications subject to Biodiversity Net Gain (BNG), in relation to the 'Strategic Significance' multiplier used within the Statutory Biodiversity Metric (SBM).

Within South Yorkshire, the LNRS plays a role in BNG by determining the 'strategic significance' multiplier used within the SBM. The Statutory Biodiversity Metric User Guide sets out that high strategic significance should be applied when:

- the location of the habitat parcel has been mapped in the Local Habitat Map as an area where a mapped Measure has been proposed to help deliver the priorities of that LNRS; and
- the proposed intervention is consistent with the mapped Measure in the LNRS for the habitat parcel.

Habitat creation or enhancement, within the red line boundary of a planning application or habitat bank, that delivers interventions identified as mapped Measures in the LNRS, are incentivised in the SBM as they generate more biodiversity units. It is therefore important that there is clarity regarding what interventions are considered consistent with delivery of a mapped Measure.

The LNRS uses general habitat definitions, such as 'grassland' and 'wetland'. It also talks about interventions in a general way, for example talking about 'enhancement' or 'restoration' of habitats. This is necessary in order to make the document accessible. In comparison the SBM uses the UK Habitat Classification System to describe habitat types, and uses detailed Condition Assessment Criteria to measure improvements to a habitat. There is therefore a need to translate between the habitat types and language used in the SBM and the LNRS.

The table below has been prepared to clearly define these translations. For each mapped Measure, either the 'UK Habs'[1] habitat type, or the SBM distinctiveness level of a habitat, that is considered to represent delivery of that Measure, is set out. The SBM distinctiveness level of a habitat has been used where lots of different habitats might be consistent with delivery of a Measure. Target conditions that must be met for habitat creation or enhancements are also indicated.

[1] ukhab – UK Habitat Classification

Measure	Measure Wording	UK Habs Habitat Type or SBM Habitat distinctiveness and SBM Condition Targets considered to be used for assigning strategic significance.
RI-01-02	Create and maintain native, species-rich and structurally diverse habitats along watercourse margins to enhance and connect biodiversity, provide shade, intercept pollutants (urban, transport and industrial), and capture run-off.	Any medium distinctiveness (or higher) habitat in moderate (or better) condition proposed for creation.
RI-01-04	Create and manage new floodplain grazing marsh, where appropriate to reconnect rivers with floodplains, and by expanding existing habitats.	Projects that create habitat that meets the UK Habs definition of Floodplain Wetland Mosaic and Target Moderate condition or better.
RI-02-02	Remove or modify artificial barriers such as culverts and weirs to support the movement and dispersal of migratory fish and promote diverse and resilient aquatic populations and communities.	Where projects delivering the mapped Measures result in an uplift in river condition, or change of encroachment band, as set out by the watercourse module of the Statutory Metric User Guidance.
RI-02-03	Enhance the biodiversity of man-made and artificially impacted waterbodies (including mill ponds, recreational lakes and reservoirs) by installing habitat features such as vegetated margins, floating islands, and by planting reedbed and fen.	Creation of marginal habitats around identified mapped waterbodies. Include creation of any medium distinctiveness or better and moderate condition or better habitats.
RI-03-02	Enhance the water quality and biodiversity value of canals, through sensitive in-channel vegetation management practices, eradication of invasive non-native species, creating and managing buffering bankside habitats by up to 10m from the top of the bank, catchment management, remediation and removal of sediment, and removing blockages at goits, unless demonstrated as unfeasible.	Within the Area Habitats module, any creation of, or enhancement to, any type of medium distinctiveness (or better) habitat in moderate (or higher) condition within the riparian zone adjacent to the canal. Within the Watercourse Module, any improvement in River condition or reduction in the extent of encroachment.
RI-03-03	Enhance the water quality and biodiversity value of drains and other artificial watercourses, through sensitive in-channel vegetation management practices, eradication of invasive non-native species,	Within the Area Habitats module, any creation of, or enhancement to, any type of medium distinctiveness (or better) habitat in moderate (or higher) condition within the riparian zone adjacent to the drain.

	creating and managing buffering bankside habitats, catchment management, remediation and removal of sediment, and removing blockages at goits.	Within the Watercourse Module, any improvement in River condition or reduction in the extent of encroachment.
RI-03-06	Identify, record, and expertly manage ancient and veteran white willows in the former fenlands of the Humberhead Levels, to prevent further loss of the trees and the rare and specialist species that live with them.	No definition as veteran trees are considered an irreplaceable habitat so not subject to BNG.
WE-01-01	Create and manage mosaics of fen, marsh, swamp and open water habitats through hydrological and vegetation management, for example introduction of suitable plant species to increase diversity and ecological connectivity.	Creation of Fens Upland and Lowland, Reedbeds or Ponds targeting a minimum of moderate condition.
WE-01-02	Restore and manage mosaics of fen, marsh, swamp and open water habitats through hydrological and vegetation management, for example introduction of suitable plant species to increase diversity and ecological connectivity.	Enhancement of Fens Upland and Lowland, Reedbeds or Ponds by uplift of condition from Poor to Moderate or Moderate to Good.
WE-01-04	Restore and manage existing floodplain grazing marshes through early summer hay cuts, 'aftermath' interventions such as extensive grazing regimes and water level management.	Projects that restore and manage habitat that meets the UK Habs definition of Floodplain Wetland Mosaic and target Moderate condition or better.
BO-01-01	Restore and enhance existing lowland raised bog by managing water levels to promote peat forming vegetation, including through planting sphagnum species, preventing scrub succession and the control of invasive and non-native species.	No target applied as lowland raised bog is the reason for designation of the sites where this habitat is found.
BO-01-06	Manage vegetation and water levels on lowland agricultural peat to re-wet ground conditions and habitats, reduce carbon emissions and reduce soil loss by wind erosion.	Creation of Lowland or Upland Fens, Reedbeds, Floodplain wetland Mosaic targeting a minimum of moderate condition.
B0-01-08	Restore and enhance blanket bog, for example through blocking grips and gullies, planting sphagnum mosses, and increasing vegetation cover.	Blanket Bog enhanced to moderate condition or better.

GR-01-01	Manage and enhance existing grasslands (acid, neutral, calcareous, and wet) of high biodiversity value to maintain and extend the existing ecological network.	Projects that Enhance existing Lowland Calcareous Grassland, Lowland Dry Acid Grassland, Lowland Meadows, Other Lowland Acid Grassland, Upland Acid Grassland, Upland Hay Meadows or Other Neutral Grassland to a target Condition of Good.
GR-01-02	Restore and enhance degraded or unmanaged semi-natural grassland habitats to bring them into good management, prioritising sites that buffer existing 'Good' grasslands or areas with rare species such as ground nesting birds. For example, through low intensity grazing and/or appropriate cutting regimes.	Projects that enhance Lowland Calcareous Grassland, Lowland Dry Acid Grassland, Lowland Meadows, Other Lowland Acid Grassland, Upland Acid Grassland, Upland Hay Meadows or Other neutral Grassland to a target Condition of Moderate or better.
GR-01-03	Create new semi-natural grassland habitats of value and secure good management on these sites, prioritising sites that buffer existing 'Good' grasslands.	Projects that Create Lowland Calcareous Grassland, Lowland Dry Acid Grassland, Lowland Meadows, Other Lowland Acid Grassland, Upland Acid Grassland, Upland Hay Meadows or Other Neutral Grassland with a target Condition of Moderate or better.
HE-01-01	Restore and enhance wet heath and complimentary mosaics of heathland, grassland, wetland, and scrub habitat, including transitional habitats, for example through an appropriate level of grazing, natural regeneration and using blocking grips and gullies.	Projects that enhance habitats that meets the UK Habs definition of upland heathland/willow scrub/upland acid grassland/fens upland and target condition uplift from Poor to Moderate condition or Moderate to Good condition.
HE-01-02	Create wet heath and complimentary mosaics of heathland, grassland, wetland, and scrub habitat, including transitional habitats, for example through an appropriate level of grazing, natural regeneration and using blocking grips and gullies.	Projects that create habitat that meets the UK Habs definition of upland heathland/willow scrub/upland acid grassland/fens upland and Target Moderate (or higher) condition.
HE-02-01	Manage and restore heathland to prevent loss of condition and extent, including where present as part of a habitat mosaic.	Enhancement of Lowland Heathland. Target any condition as restoration may involve a change of habitat type via reversing successional changes.
HE-02-02	Create and buffer wildlife-rich and structurally diverse heathland habitat mosaics of acid grassland and scrub to improve connectivity for	Creation of Lowland Heathland. Target any condition as creation may involve changing habitat types as you restore

	heathland species between new and existing heathland sites, for example in the Humberhead Levels. This could include seed and brash collection from donor sites.	heathland via reversing successional changes.
WO-01-04	Create new woodlands to buffer and connect existing woodlands to enable habitat connectively and increase the overall tree and woodland cover in South Yorkshire, ensuring resilience to wildfire in new woodland and promoting public access to woodlands.	Create Lowland mixed deciduous Woodland, Other Woodland Broadleaved, Other Woodland Mixed, Upland Birchwoods, Upland Mixed Ashwoods, Upland Oakwood, Wet Woodland. Targeting a Condition of Poor or better.
WO-01-05	Enhance existing woodlands and wet woodlands by working with land managers to bring more woodland into sustainable management, including water level management, for nature recovery and wider environmental benefits.	Enhancement in condition of Lowland mixed deciduous Woodland, Other Woodland Broadleaved, Other Woodland Mixed, Upland Birchwoods, Upland Mixed Ashwoods, Upland Oakwood, Wet Woodland. Targeting uplift to moderate condition or better.
WO-01-07	Create and enlarge existing species-diverse mosaics as transitional habitats between new grassland and woodland sites, incorporating scrub, hedgerows, wood pasture, ancient and veteran trees.	Creation of: Mixed Scrub/Blackthorn Scrub/Gorse Scrub/ Hawthorn Scrub/ Hazel Scrub/Willow Scrub targeting Good condition; Hedgerows Any type of species rich native hedgerow targeting Good condition; Wood pasture (in landscapes where there are existing veteran trees) Targeting Good condition.
WO-02-02	Safeguard, restore and manage existing hedgerows (including trees in hedges to create wildlife corridors to increase the connectivity of habitats.	Enhancement of existing hedgerows to any Species rich native hedgerow type targeting a minimum of Good condition.
WO-01-03	Create and manage new wet and riparian woodland where it will support the presence of priority species, and where it will provide wider ecological connectivity and ecosystem benefits including flood alleviation.	Creation of Wet Woodland W1d. Target condition Poor or better.
WO-03-02	Enhance the diversity and condition of existing wet woodland to support Priority Species such as willow tit.	Enhancement in condition of Wet Woodland W1d. Targeting condition uplift of Poor to Moderate or Moderate to Good condition.
WO-03-04	Restore clough woodlands from areas where they have been lost if supported following application of open habitats policy, wader guidance, and the peatland decision support framework. Incorporate an	Creation of Upland mixed ashwoods, Upland Birchwoods, Upland oakwoods. Target condition Poor or better

	appropriate mix of native tree species (oak, aspen, rowan, birch) and shrubs (hazel, bilberry) to re-establish clough woodlands.	
WO-04-01	Restore all ancient woodlands* into positive management, in accordance with current government guidance and standards. * Ancient Semi Nature Woodlands, Woodland Pasture, Plantation on Ancient Woodland Sites, Ancient and Veteran Trees, Historic Parkland	Enhancement of Lowland mixed deciduous Woodland, Upland Birchwoods, Upland Mixed Ashwoods, Upland Oakwood, Wet Woodland. Target condition moving from Poor to Moderate or Moderate to Good.
WO-04-02	Connect and buffer existing ancient woodland with woody habitat corridors using appropriate blend of conventional planting with natural colonisation and natural regeneration.	Creation of Mixed Scrub/Blackthorn Scrub/Gorse Scrub/ Hawthorn Scrub/ Hazel Scrub/Willow Scrub. Target condition Good; Creation of any type of Species Rich Native Hedgerow. Target condition good. Creation of Other woodland; broadleaved or other woodland; mixed. Target is Poor (or higher) condition.
WO-05-01	Support management of existing traditional orchards as biodiverse areas, with benefits to mental and physical health across local urban and peri-urban communities.	Enhancement of existing Traditional Orchards to Moderate or Good Condition.
WO-05-02	Create new traditional orchards as biodiverse areas, with benefits to mental and physical health across local urban and peri-urban communities.	Creation of new Traditional Orchards in Moderate Condition or better.
WO-05-04	Improve and maintain public access through wooded green space, focussing on areas with greatest need.	TBC
UR-01-04	Create, enhance and manage urban trees, providing habitat connectivity, climate resilience and fairer access to trees for people in urban areas.	Creation of Individual trees. Target moderate condition or better.
UR-03-01	Create high-quality habitat on existing mineral extractions sites that is suitable for the site's soil type, (for example collieries in the Coalfields, limestone in the Magnesian Limestone area or sand and gravel in the Humberhead Levels area).	Creation of Open Mosaic Habitat on previously developed land in good condition or creation of any high distinctiveness grassland suitable for the soil type in moderate condition or better.
UR-03-04	Maintain, enhance and manage inland rock habitats to safeguard the condition and extent of their features	Sparsely Vegetated Land - Inland rock outcrop and scree or other inland rock and scree enhanced to good condition.

	of special biodiversity interest and the species that depend on them.	
UR-04-04	Enhance existing biodiverse green spaces at public buildings, schools and hospitals and other anchor institutions which are well managed, provide more and better habitat sites and provide benefits for people and nature.	Enhancement of any low distinctiveness habitat to a medium distinctiveness habitat or better or enhancement of any existing medium distinctiveness habitat.

Gunthwaite Spa. Credit: Barnsley Council

SYMCA LNRS Engagement Report

31st March 2025

nature positive

RSK wilding

ADAS

Contents

1. Executive summary

This report outlines the methodology, rationale, findings and insights gathered from engagement activities conducted to shape the Local Nature Recovery Strategy (LNRS) for South Yorkshire. This includes workshops, farmer engagement events and meetings, public engagement events, and an online survey in two parts. It was conducted following both statutory and non-statutory guidance.

We ran:

- fourteen **workshops** for: planners, environmental NGOs, organisations that operate at the landscape-scale, green space and partnership groups, parish councils and large landowners for a total of **229 people** (section 5).
- two **workshops** for: farmers for a total of **21 people** (section 6)
- a stand at **8 public events**: total **565 people** (section 7)
- an **online survey** on the Participtr platform which involved a series of questions (**963 respondents**) as well as a map-based element (**78 respondents**) (section 8)

So overall, **engagement with 1,845** people.

The engagement events were designed to be specific for different stakeholder groups, but with underlying similarities so that comparisons could be drawn across different groups, bearing in mind that we were working with everyone from specialist experts through to a general public audience. We designed the questions and prompts to achieve two things: firstly, to help inform the drawing up of a list of priorities and measures for nature recovery; and secondly, to explore the barriers and enablers for nature recovery in order to help shape the delivery stage of the LNRS. Although delivery is beyond the remit of this project, it is imperative to be able to draw up a strategy in such a way that it has the best chance of gaining broad support and being deliverable: enabling nature recovery while taking into account other societal priorities and competing demands on resources including finite land.

One of the elements deployed consistently across all groups and modes of engagement was a series of images to respond to (see section 4). These were used in two image groups:

- images of urban or semi-urban 'local' green spaces
- images of the wider landscape of the county

This is because urban green spaces and the wider landscape are thought about and used in quite different ways by different people. All of the images have positive elements but are different in character. Participants were asked to select four from each image group and then explain why they had chosen those four. This pictorial approach doesn't rely on understanding any particular terminology or having any ecological knowledge – just an opinion on what they would like spaces to look like in the future and to start a discussion, which helps to reveal what people value about these spaces.

Workshops were designed to target specific stakeholder groups, while the public events and online survey were open to anyone who wanted to contribute. Techniques and questions used endeavoured to encourage responses that focused on nature recovery, but in the context of many other issues and points of view.

1.1. Key findings from each engagement mode

1.1.1. Key points from workshops

Despite the range of groups involved, a core of commonly agreed themes emerged.

- a preference for urban green spaces with a more 'wild' and natural appearance;
- the importance of accessibility, such as well-maintained paths and benches, to bridge the connection between nature and people;
- a strong desire for wilder and more natural landscapes in the wider environment, with some support for reintroductions, even including of predators such as lynx;

- beavers being the most mentioned species for reintroduction, followed by water voles;
- importance of integration of renewable energy and food production within the landscape;
- Species groups featuring strongly for prioritisation were invertebrates, plants and trees, and birds. For habitats, woodland including wood pasture, wetlands, grasslands/ meadows and riparian habitats were the most frequently emphasised;
- Developers were perceived as not prioritising nature recovery, followed by farmers, governments, politicians and businesses, with the drive for profit as the primary theme;
- The perceived top barrier to nature recovery was financial resourcing: the amount, but also the security and longevity of funding. There was a perception that money was available for many other priorities, but that nature recovery was poorly funded, relying on NGOs and volunteers.
- Other barriers mentioned were land use and ownership, public and stakeholder support, political will and competing priorities.
- Participants believed there was a lack of knowledge and understanding in other members of society about the importance of nature.
- There are many existing plans and policies among the organisations represented that will already align with and support the roll out of a nature recovery strategy. The LNRS should be seen and used as a unifying framework to align and amplify these.
- LNRS roll-out will require collaboration, communication, and cross-sector working.
- It needs to be easy to use, accessible to a wide range of users, to be compatible with existing software, operate at an appropriate level of detail, and become part of the everyday processes that different stakeholders use, especially planners.
- The LNRS needs to be compatible and consistent with bordering counties' LNRSs.

1.1.2. Key points from farmer engagement

NB, it is important to note that many of those that took part were in farmer clusters, and already thinking about nature on their farms. They may not represent the breadth of views of farmers across South Yorkshire.

- These farmers agreed with others in preferring more natural and 'wilder' urban green spaces.
- They showed support for varied wider landscapes, including incorporating productive farming.
- They mentioned the need for less intensive agriculture, with integrated nature conservation.
- They want guidance on how they can maintain productivity while integrating nature.
- Farming is a business and as such there need to be clear, long-term financial incentives to make nature-friendly farming financially viable. They were sceptical about isolated conservation efforts and were looking for further information around DEFRA's approach to incentives.
- Farming is also a way of life, and farmers are wary of anything that will reduce their or future generations' opportunities for how they choose to manage their land.
- Dog walkers were raised numerous times as people who do not prioritise nature.
- There is still a way to go in framing the LNRS as an opportunity for farmers. However their participation is crucial in achieving landscape-scale nature recovery.

1.1.3. Key points from public events

- Citizens may not always be able to identify species, or distinguish between 'natural' or highly managed unfarmed landscapes, but they do want 'wild' and beautiful areas full of wildlife.
- Accessibility is crucial: safe and well-maintained pathways, cycle routes, and better public transport connections to nature-rich areas were frequently mentioned as priorities.
- Everyone had a thoughtful, balanced and well-informed view of what they would like, and how it relates to nature recovery for its own sake as well as for the benefit of people. Conversations often demonstrated an appreciation for diverse, functioning ecosystems.

- There was also a strong recognition of the need to balance different land uses, such as supporting food production and the generation of clean energy.
- People desire clean, safe, nature-rich areas close to their homes, as long as they are well-maintained and accessible for all, including those with mobility challenges.

1.1.4. Key points from the online surveys

- Survey respondents are citizens committed to wildlife and nature, and ought to be strong advocates for a Local Nature Recovery Strategy.
- They hold strong views, but generally take a balanced view of what is required of finite land.
- They already do a great deal for nature recovery, but don't feel listened to or supported.
- There is strong opposition to housing and industrial development destroying green spaces, and a general view that local green spaces are not looked after properly.

1.2. Overall synthesis and implications for the LNRS

There was much coherence of views across the whole of the engagement process. People's reasoning may vary, but the desired goal was remarkably similar across the board:

- strong preferences for 'wild', biodiverse landscapes across both urban and rural landscapes;
- water as an important feature in both;
- urban green spaces that are well-maintained, appear 'looked after' and feel safe;
- accessibility, both to and within nature-rich spaces;
- access to the landscape planned and managed so that people can access nature, but that it is not damaged by that access;
- a wider landscape balancing the needs of nature and wildlife, food production, renewable energy generation and recreational access.

1.2.1. Implications for Priorities and Measures

The detail drawn in particular from expert workshops has been fed into the parallel process to write the Statement of Priorities for the LNRS. This will also take into account the preferences of other stakeholder groups described in this report, and the Statement and subsequent mapping will be influenced by this and the map-based responses from the second part of the online survey. In essence, though, there is broad support for nature recovery as guided by expert knowledge for both urban and landscape spaces, as long as it is seen to be well-planned, well monitored and maintained, and is planned and delivered taking into account the other demands on land-use such as food production, clean energy generation and access for recreation and enjoyment.

1.2.2. Implications for policy

The activity of nature recovery is influenced by and will influence very many other policies and plans. The planning and integration of nature recovery in relation to housing and infrastructure development is a key area that needs to be focused on. BNG should be a major part of this, but the introduction of other local, regional and national initiatives and incentives are needed to ensure that, for example, new or existing housing developments or plans are created and managed in such a way that they provide for nature recovery *and* the access to green spaces that people so desire close to where they live.

Policies and plans that influence ongoing maintenance are also key. For example, the way that urban green spaces are maintained has a major impact on how they work and feel for people who use them – and whether they are viewed as beautiful or neglected. Likewise, opportunities for habitat connectivity via linear infrastructure such as road and rail verges or the waterway network

need to be integrated with the thinking on how those land areas are managed and maintained; providing nature linkages, but also taking into account visibility and other safety considerations.

While there are already some helpful plans and policies in place at all levels of governance, it will take time and collaboration to align them for mutual benefit. But if done well, such integration has the potential to be highly efficient both financially and in achieving multiple wins, and is likely to garner broad support.

The financial support structure is also crucial, making sure that funding opportunities and incentives are clear and accessible, as well as being stable and long-term. Much of nature recovery previously has been left to NGOs, volunteers, and sympathetic farmers and other landowners and managers. Going forward, the policy and finance frameworks need to be in place to make landscape-scale nature recovery financially viable and even profitable.

The LNRS will need to be part of the everyday work of local authorities and many other organisations. It should be user-friendly, widely accessible, and compatible with existing systems, especially mapping software.

1.2.3. Implications for communication, engagement and collaboration

People may have different ways of articulating what they want, and state different personal priorities and reasons for their choices, but what they want the future to look like is broadly similar, whoever you ask.

Throughout this engagement work, a recurring theme was that those involved in nature conservation often view other sections of society as ignorant, uncaring and greedy. There was a particularly negative view of developers, intensive farmers and both national and local government. And these groups and the 'general public' were also often described as needing to be educated on the importance of nature. Characterising entire sectors - who are delivering important projects and services, and who are operating within societally imposed frameworks of incentives and constraints - as ignorant and uncaring is not conducive to collaboration.

We would suggest that our engagement findings challenge those perceptions. Wider society seems to be remarkably thoughtful and knowledgeable about nature and wildlife. They may not know how to identify particular species, or describe in-depth ecological detail, but there is a general understanding of the importance of nature and other green spaces, and the need for this to be balanced by other demands on land use. It is not that nature engagement and education are not valuable – indeed they should continue to be championed - but to portray wider society as uncaring, greedy and ignorant of nature seems to be a false narrative and needs to be challenged to enable a well-funded, well designed and collaborative approach for nature recovery to happen.

To conclude, there is a great deal of agreement across the various modes of engagement and stakeholder groups, and a strong desire for nature recovery in South Yorkshire.

It appears that most people in South Yorkshire broadly agree on what is required and what they want. The focus now needs to be on communicating that shared vision to aid collaboration rather than division, and then co-developing and championing the legal, practical and financial frameworks to enable that shared nature-rich future to be realised.

2. Introduction

This report outlines the findings and insights gathered from engagement activities conducted as part of the Local Nature Recovery Strategy (LNRS). This includes workshops, public engagement events and an online survey.

The LNRS aims to enhance biodiversity, support ecosystems, and encourage nature-rich land use by fostering a collaborative approach across the region. Engaging a wide variety of stakeholders, including the public is critical to understanding local priorities, identifying key areas for nature recovery, and securing broad support for conservation initiatives. This document provides an overview of the engagement process, highlights key themes, and offers recommendations to guide the development and implementation of the strategy. All data were gathered by Nature Positive, RSK Wilding and RSK ADAS from May through November 2024.

3. Following LNRS guidance

Defra guidance requires broad engagement in the development of LNRSs. They need to be informed by local knowledge, and ensure that key players in potential delivery are involved. Environmental organisations, landowners and managers, and community groups are key stakeholders. In addition to the statutory guidance, '*Local Nature Recovery Statutory Guidance*', various advice and guidance documents were referred to including: '*Engaging the Land Management Sector in Local Nature Recovery Strategies – Advice for Responsible Authorities*'; '*Local Nature Recovery Strategies: Advice on governance and working with partners*', and '*Inclusive Engagement with Communities: Non statutory guide for Responsible Authorities*'.

4. Methods

4.1. Consistency of approach to enable delivery

Engagement with a wide variety of stakeholders was conducted, and it was considered important to use this not only to inform the development of the LNRS, but to look beyond that to enable delivery. To that end, we designed a series of questions about the ecological insight needed to define and shortlist the priorities and measures for nature recovery, but also to understand what urban green spaces and the wider landscape could look like following the preferences and views of different stakeholders, both with and without ecological expertise. We also wanted to tease out the perceived barriers and enablers for nature recovery in the authority area.

These questions were then delivered in appropriate ways across the variety of engagement modes – workshops, public engagement events and an online survey – so that points of agreement across society would be revealed, but also the differing views and beliefs of different stakeholder groups. Where there is broad agreement, this would be an indication of a unified end-point to aim for that is likely to get broad support. Where there are points of difference, those would need to be considered not only in the drafted LNRS, but also in delivery towards a shared vision of a nature-rich future for South Yorkshire.

4.1.1. Engagement using images

One of the elements that was deployed consistently across all groups and modes of engagement was a series of images to respond to. These were used in two groups:

- images of urban or peri-urban 'local' green spaces (Figure 1);
- images of the wider landscape of the county (Figure 2).

This is because urban green spaces and the wider landscape are thought about and used in quite different ways by different people. All of the images were chosen to have positive elements, all looking pleasant, but different in character. Participants were asked to select four from each image group, and then explain why they had chosen those four. We were careful not to lead anyone, but to simply let them choose and then discuss their reasons. There are no right or wrong answers, just different views on what people might envision the future being like for them. This pictorial approach doesn't rely on understanding any particular terminology or having any ecological knowledge – just an opinion on what they would like spaces to look like in the future.

These are the images used. (**NB, Image O was not used for the first workshop** – it was added later as people pointed out the lack of a woodland image to choose. Likewise, it was not included at the first public event at RSPB Old Moor.)

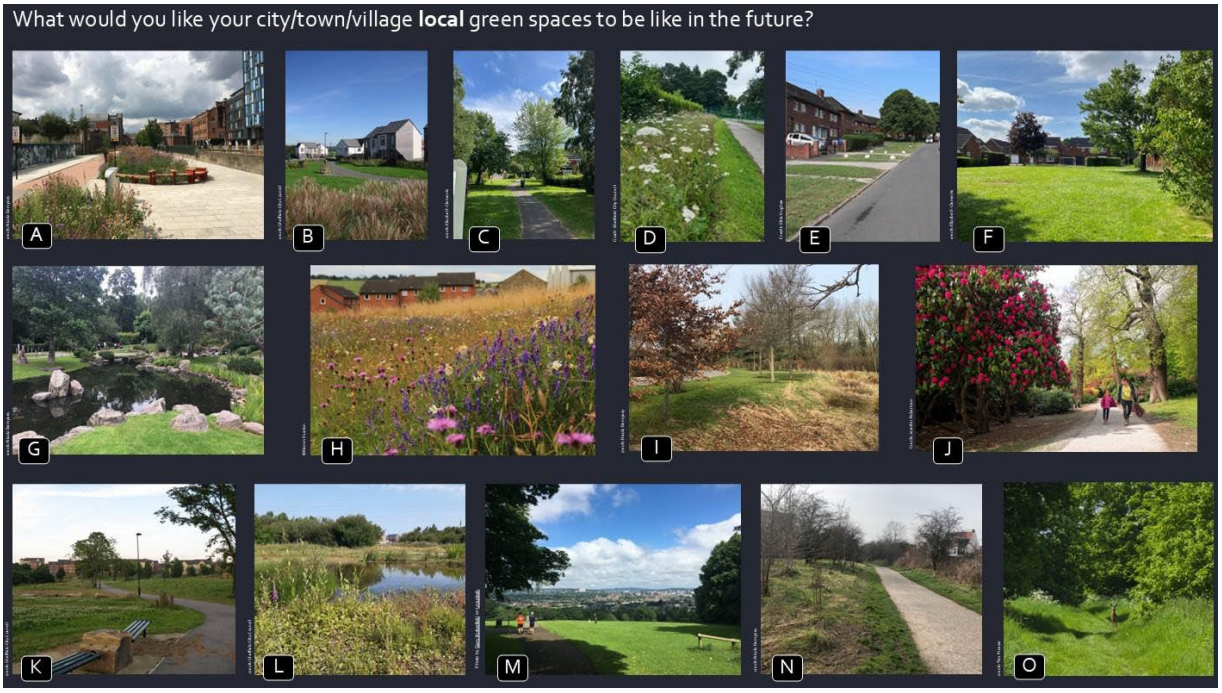


Figure 1. a selection of 15 images representing urban or peri-urban 'local' green spaces in South Yorkshire

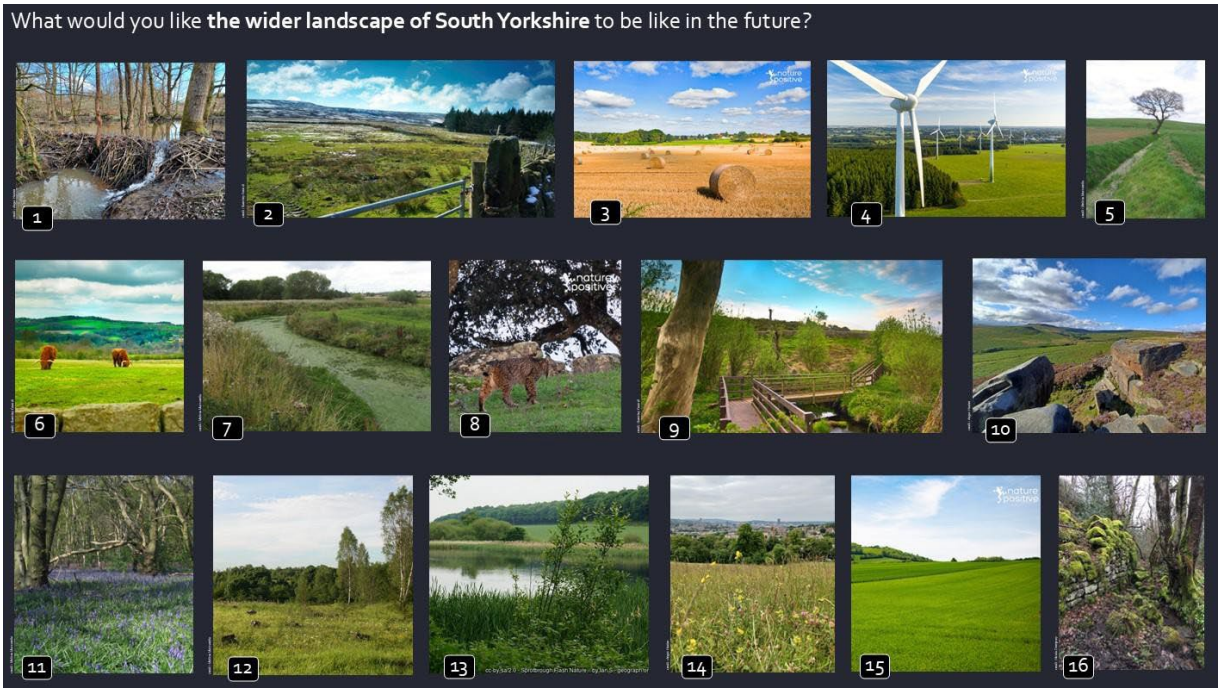


Figure 2. a selection of 16 images representing the wider landscape of South Yorkshire

5. Workshops

5.1. Design

Workshops were held either in-person or online using Teams. The basic structure was:

- an introduction to Local Nature Recovery Strategies and work done to date. This ensured that everyone understood the origin of LNRSs, the processes involved in creating it, and the opportunities to shape it;
- an interactive session using Mentimeter, with live discussion of the results. This tool allows people to respond to questions anonymously, and then displays amalgamated results in real time, initiating group discussion. A list of questions asked can be seen in Table 1. workshop questions for MentimeterTable 1;
- discussion in breakout groups around key questions relevant to each stakeholder group. Discussion points can be seen in Table 2;
- a mapping session to plot out key areas of relevance or importance – both opportunities and constraints;
- a final general discussion on any remaining points or questions.

Table 1. workshop questions for Mentimeter

1.	Please let me know who you are today (i.e. role/job, not name)
2.	What does the future look like?
2.1	Which four images represent your local 'urban' green space in the future?
2.1.1	Why did you choose those four?
2.2	Which four images best represent the 'wider landscape' in the future?
2.2.1	Why did you choose those four images?
3.	When might nature 'get in the way'?
4.	Who might not prioritise nature recovery?
4.1	Why?
5.	What are the barriers to nature recovery?
6.	Who would most enable nature recovery in South Yorkshire?
7.	Which species or species groups should be prioritised?
8.	Which habitats need to be prioritised in South Yorkshire?
9.	Any specific location opportunities to explore?

Table 2. workshop question prompts for breakout tables

Constraints	
1.	What group plans and policies would support LNRS and its future delivery?
2.	What group plans and policies would conflict with LNRS and its future deliver?
3.	What constraints are there when considering integrating LNRS into your future plans?
4.	What is needed to overcome the constraints?
Opportunities	
1.	What opportunities are there for nature recovery in South Yorkshire?
2.	What opportunities are there for nature recovery on your property or land holding?
3.	What opportunities for your organisation might come from the delivery of the LNRS?
Priorities	
1.	What are the priorities for nature recovery from your organisation's perspective?

*Questions were tailored to suit the type of stakeholder group we were speaking with

5.2. Participants

In collaboration with the SYMCA Engagement Working Group, the workshops were organised into stakeholder groups shown in Table 3. To facilitate participation registration, event pages were created on Eventbrite for each group, which outlined the structure of the workshops, the location, date and time of the sessions. The event pages also included unique booking links which were distributed to a targeted list of potential participants compiled by the SYMCA Engagement Working Group. Invitations were issued by SYMCA, and cascaded by Supporting Authorities and other contacts. Attendees were able to register via the provided links.

Table 3. overview of workshops, detailing the date, location, groups represented and attendee numbers

Date	'Title'	Location	Groups represented	No. of attendees
4 June	Sheffield Waterways Strategy Group (SWSG)	Town Hall, Sheffield	SCC Flood & Water, S&R Wildlife Trust, Rivelin CVG, Rivelin & Loxley River Rangers, River Stewardship Co, SY Industrial History Soc, Loxley Valley, City Centre Volunteers & Blackburn Brook, Sheaf & Porter Rivers Trust, Friends of Loxley Valley, Sheffield University, SCC Ecology, SCC Parks, Yorkshire Water, Upper Don Trail Trust, Don Catchment	18
13 June	South Yorkshire's Nature Recovery Strategy – what should the future look like?	South Yorkshire Sustainability Centre (SYSC) meeting, AESSEAL New York Stadium	Sheffield Halam University, Barnsley College The University of Sheffield, Sheffield City Council Barnsley Metropolitan Borough Council, Sheffield Social Enterprise Network	10
4 July	Don, Dearne and Rother Network Day (organised by Don River Catchment Trust) (DRCT)	Niagara Centre	Burnet Heritage Trust, City of Doncaster Council, Coal Authority, Denby Dale Parish Council, Derbyshire County Council, Derbyshire Wildlife Trust, Don Catchment Rivers Trust, Environment Agency, Friends of blue loop, Friends of the Dearne, Kirklees Council, Moors for the Future Partnership, Opus Independent, Rivelin Valley Conservation Group, River Stewardship Company, Sheaf & Porter Rivers Trust, Sheffield & Rotherham Wildlife Trust, Sheffield City Council, Sheffield Hallam University, South Yorkshire Woodland Partnership, Steel Valley Project, The Conservation Volunteers, Trent Rivers Trust, Wild Trout Trust, Yorkshire Water, Yorkshire Wildlife Trust	68
10 Sept	Conservation Organisations (1)	AMP Technology Centre	Natural England, City of Doncaster Council, Environment Agency, Don Catchment River Trust, Barnsley Council, River Stewardship Company, Peak District NPA, Sheffield Area Geological Trust, Idle Catchment Partnership, South Yorkshire Econet, Rivelin Valley Conservation Group, Garganey Trust, Yorkshire Wildlife Trust, Forestry Commission, Sheffield Lakeland Partnership, TVC The Conservation Volunteers, Rotherham Council, Wild Moors, Sheffield and Rotherham Wildlife Trust, Dearne Valley Green Heart Partnership, Humberhead Levels Partnership, Sheffield Council, Thorne and Hatfield Moors Conservation Forum, Rotherham Local Records Centre, Burnet Heritage Trust, RSPB, Barnsley Biodiversity Trust, Woodland Trust	36
11 Sept	Conservation Organisations (2)	online	Sheffield City Council, Natural England, Sheffield and Rotherham Wildlife Trust, Peak District National Park, Rotherham Metropolitan Borough Council, Amateur Naturalist	8
19 Sept	Large Landholders	online	Barnsley Council, Natural England, Rotherham Metropolitan Borough Council, University of Sheffield, National Trust	8
19 Sept	Green and Other Environmental Groups	online	Barnsley Council, Bellway, University of Sheffield, GSC Grays, AquaSensor Ltd, The Yorkshire Wildlife Trust, Natural England	12
20 Sept	Council Planners (1)	online	Barnsley Council, Natural England, Rotherham Metropolitan Borough Council	5
26 Sept	Landscape-Scale Landowners	online	Harworth Group, Forestry Commission, Natural England	4
26 Sept	Schools, Colleges and Universities	online	Royal Horticultural Society, Barnsley Council, Sunny Fields, Kind Edward VII School	8
27 Sept	Friends of' and Local Groups	online	Open University, Sheffield Swift Network, Groundwork Yorkshire, Ecoloserve, Mannor and Castle Development Trust	9
4 Oct	Council Planners (2)	Dorothy Fox Education Centre, Sheffield Botanical Gardens	Natural England, Sheffield City Council, Rotherham Metropolitan Borough Council, Doncaster Council, Barnsley Council	7
21 Oct	Testing the Prioritisation	Dorothy Fox Education Centre. Sheffield Botanical Gardens	Barnsley Council, Doncaster Council, Rotherham Metropolitan Borough Council, Sheffield City Council, Peak District National Park Authority, Natural England, Forestry Commission, Sheffield and Rotherham Wildlife Trust, Environment Agency, The Yorkshire Wildlife Trust, Eastern Moors Partnership	16
7 Nov	Testing the Prioritisation	The Circle, Sheffield	Sheffield City Council, Barnsley MBC, Sheffield and Rotherham Wildlife Trust, Natural England, Yorkshire Wildlife Trust, Rotherham MBC, Don Catchment Rivers Trust, Eastern Moors Partnership	20
TOTAL				**229**

* The farmer and landowner sessions were run slightly differently, so are presented and discussed separately in section 6.

5.3. Workshop outputs and analysis

The following sections relate to the outputs from each part of the workshops:

From the Mentimeter session:

1. Choices of images of urban green spaces and 'why'?
2. Choices of images of the wider landscape and 'why'?
3. Responses to 'When might nature 'get in the way?'
4. Word clouds on who might not prioritise nature recovery, and responses to 'why?'
5. Word clouds on barriers to nature recovery, and responses to 'why'?
6. Responded to what would most enable nature recovery in South Yorkshire?
7. Word clouds on species to be prioritised
8. Word clouds on habitats to be prioritised

From the mapping exercise:

9. Mapping of spatial opportunities and constraints

From the breakout tables:

10. Notes from discussions on organisational plans, policies, opportunities and constraints, and potential format for the LNRS

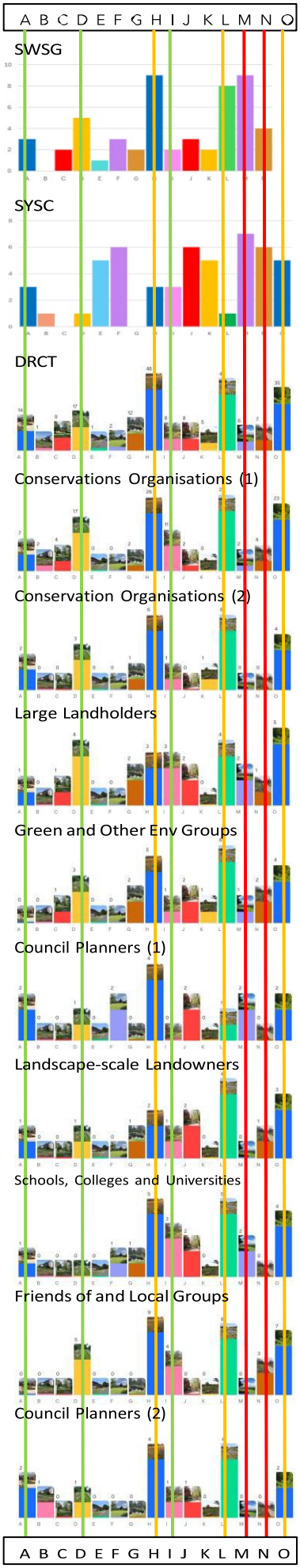


Figure 3. comparison of workshop choices for urban green space images

5.3.1. Urban green space image choices

For the workshops, there was a core of general agreement about the future of urban green spaces: images **H, L** and **O** (highlighted by yellow lines in Figure 3) were frequently chosen. All of these represent natural 'wilder' landscapes (untidy, ecological richness).

Images **A, D** and **I** were also moderately selected by participants. These images have the combined elements of green nature, with clear accessibility – paths and benches.

There are some interesting differences: images **M** and **N** (more manicured/accessible areas) were deemed as popular by the Sheffield Waterways Strategy Group (SWSG) and South Yorkshire Sustainability Centre (SYSC), whereas these images remained unpopular by all other stakeholder groups who instead chose images A, D and I more often.

It should be noted that some workshops were bigger than others, and in the smaller ones a single choice one way or the other can make the graph appear quite different so one should be careful not to overanalyse small differences.

Pooled workshop results are shown in Figure 4. This masks the inter-workshop differences but highlights the combined overall preferences of those who attended these workshops.

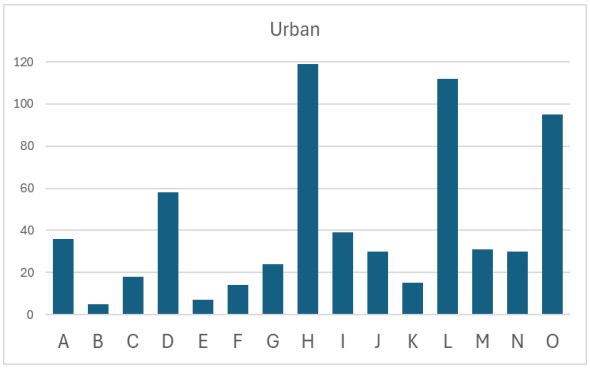


Figure 4. pooled workshop results for urban images

Reasons given

When asked why they had chosen those images, the comments fell into several broad themes. The following reflects the combined responses across all workshops, with selected illustrative quotes.

The top theme was about **wildness and naturalness**, with 51 quotes specifically mentioning that, such as:

"Variety of wild spaces currently missing from urban areas"
"These looked like the wildest spaces without evidence of humans"
"Want to re-wet, re-wild"
"Needs to be kept natural"
"Focus on nature, habitats, wildlife"
"Rewilding areas to shift the concept that only manicured green spaces are beautiful"

This was supported (50 quotes) by **biodiversity** being the second most popular theme:

"Need to tackle the biodiversity crisis by improving habitats for different creatures, Grey to green is great"
"Good for biodiversity"
"We need a mix of wetland, woodland and wildflowers to improve greens spaces for wildlife"
"Mosaic of habitats to support different species"
"Planting with native, near native and exotic plants will increase biodiversity and habitats"
"Botanical interest, wildlife, inverts, diversity"

Community engagement was also a top theme (26 quotes):

"For the LNRS to work it takes people and community engagement and co-design with local communities, ensuring good space within short walk for all including most vulnerable groups"
"Bringing nature to where people are"

Water features were often alluded to, with 25 quotes specifically mentioning this, such as:

"Water, diverse habitats,"
"Space where water or wetland is visible"
"Water in the landscape"

And the related concept of **accessibility** came up frequently (24 quotes):

"Public access to nature and greenspaces"
"Varied green spaces for people to access and enjoy"
"Accessible and joined up mosaics of habitats for nature and people to thrive"
"Open space for access but nature rich"
"Various typologies to provide for all the different needs and uses, especially women. Not just MUGAs and skate parks for teenagers - these are dominated by boys"
"Ponds, renaturalised rivers and wetlands important"
"Rivers and our water carry biodiversity through our region"

Diversity of spaces was also mentioned considerably (22 quotes):

"Variety of habitats"
"Multifunctional areas. Biodiverse habitat mosaics. Water in the landscape"
"Importance of both green and blue spaces"
"A mixture of spaces serving different functions"
"Mixture of areas - both urban and rural, natural and formal"

And finally, the importance of **recreation** also emerged (18 quotes):

"It"s about getting the balance right between providing informal recreational spaces with the need for biodiversity"
"I walk the dogs there"
"Cycle /foot paths with diverse habitats and blue space"
"I picked high nature but need to include places for people / sport / fun"

Climate benefits was also a minor theme referred in 5 quotes.

All of this input shows a strong desire for wilder spaces, but well integrated into the needs of people and communities in urban settings. It illustrates the value of taking many views into consideration when planning urban green spaces which need to be, by their very nature, multipurpose, well maintained and respond to the needs and desires of those living in the vicinity. Nature recovery in

urban settings, with the many added human benefits of improved air quality, physical and mental health, flood alleviation, etc will require very careful creation *and* curation.

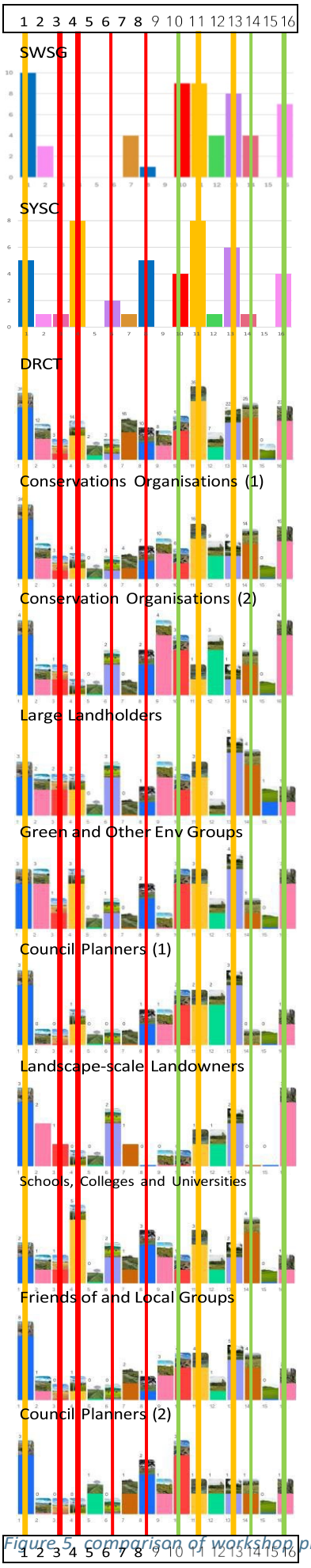


Figure 5. comparison of workshop preferences for wider landscape images

5.3.2. Wider landscape image choices

There was a degree of variation between workshop groups as to which images they chose to represent the wider landscape of South Yorkshire, but some images were generally more popular: **1, 11** and **13**. These images represent the natural landscape, with water being a prominent feature.

Images **10, 14** and **16** were moderately popular.

Despite **14** being a relatively popular selection among most stakeholder groups, landscape-scale landowners and schools, colleges and universities were the only groups that did not vote for this image. However, it should be noted that some workshops were bigger than others, and in the smaller ones a single choice one way or the other can make the graph appear quite different so one should be careful not to overanalyse small differences.

While not a top choice, there was broad agreement among the stakeholder groups on the reintroduction of predators and the inclusion of renewable energy within the landscape, with image **8** chosen in eleven workshops and image **4** in eight. Although to a lesser degree, images **3** and **6**, depicting traditional agricultural practices, were also selected by seven workshop groups each, emphasising the importance of the landscape supporting food production.

Pooled workshop results are shown in Figure 6. This masks the inter-workshop differences but highlights the combined overall preferences of those who attended these workshops.

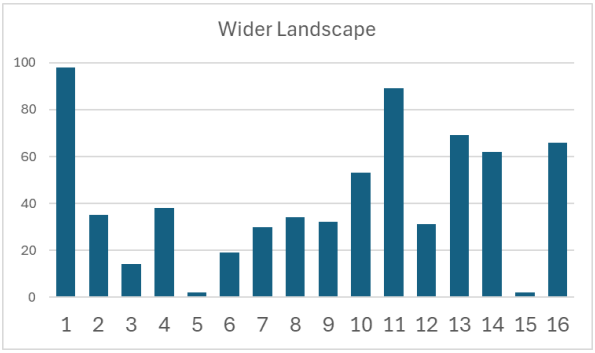


Figure 6. pooled workshop results for wider landscape images

Reasons given

When asked why they had chosen those images, the following themes emerged, with selected quotes illustrating each theme:

Biodiversity emerged as the top theme, with 75 quotes mentioning it, such as:

"Habitats of higher biodiversity value"
"Most diverse habitats, structure and species"
"Different habitats to support different species"
"Important habitats for indigenous species"
"Beavers (keystone species), have massive benefit to other wildlife and habitats"
"Britain is deprived of key species"
"Incorporation of a variety of species within the landscape"

This was supported by the second most popular theme, **variety and diversity** (48 quotes):

"Diverse semi natural landscapes"
"Variety of habitats and landscapes"
"Ecologically diverse and complex"
"respect the variety of geology, native plants which underpin all the possibilities"
"variety, not monoculture"

Natural preservation also received 32 mentions:

"They looked the most natural"
"Want to see natural areas preserved"
"Most untouched"
"Representing natural landscapes"
"Retain/Reinstate Natural Floodplains"
"Reinstate natural order of nature"
"Re-naturalisation of the landscape"

Rewilding was also popular, receiving 21 mentions:

"Reintroduction of keystone species to help restore naturally functioning ecosystems"
"Rewilding opportunities"

Water management was also a top scoring theme (20 mentions):

"Need more natural water bodies in the area"
"Flood management"
"Sheffield is built in steep valley with lot of fast flowing streams and rivers. Need to slow down flow re leaky dams etc"
"Our water systems need reeds, woodland, a variety of water side areas for biodiversity"
"Flood alleviation/need to re-wet land"
"Visited FC beaver colony project in N Yorks this summer - amazing improvements to biodiversity on site as well as wider flood risk reduction from releasing just 2 beavers a few years ago!"
"Restore our aquatic environments"

And finally, **accessibility,** with 19 mentions, such as:

"Multifunctional landscapes. Good public access to nature in some areas"
"Balancing habitat with accessibility"
"Opportunities for access to the natural areas"

Other themes that were mentioned, albeit less frequently were **ecosystem balance, renewable energy, sustainability, aesthetics, community and engagement, agriculture and food production** and **historical and geological engagement.**

All of this indicates again a desire for much wilder landscapes but always balancing other requirements including accessibility and water management.

5.3.3. When might nature 'get in the way'?

This question was posed to prompt realistic thinking about competing priorities rather than thinking only of nature. Responses can be grouped into themes as follows:

Development emerged as a key theme, with 29 attendees mentioning it. Below are some example quotes:

"When land is required for development"
"Infrastructure development"
"Urban development"
"Economic development, infrastructure, housing"
"Grey infrastructure"
"Flood defence building and maintenance"
"Short term greening of brownfield development sites"
"New roads & rail networks"
"Tension between development e.g. housing and keeping some green spaces"
"Developers consider nature as a hinderance"

Similarly, but more specifically, **housing** emerged as the second most popular theme (23 mentions):

"When people think the economy is about building and housing development"
"Short term political targets around building projects, housing schemes, etc."
"Addressing the issues with the housing crisis"
"Housing developments, Developers re Housing, highways"
"To meet housing need, to restrict development, obstructive to "progress""

Food production emerged as relatively frequent choices (11 mentions):

"If farmers needing land for food production"
"Conflicts with food production and economic development. Also may conflict with current land use"
"Conflicting demands on land use. Space for nature - space for food production"

Invasive species was also a mentioned in 10 quotes:

"Invasive species dominating"
"Control of invasive species"

Other themes that received under 6 mentions were **accessibility**, **climate change**, **economic growth**, **conflicting land use**, **public opinion** and **human-wildlife conflict**.

Thus, there was a strong notion that nature might be seen to get in the way of housing development and infrastructure, as well as the need to produce food, and that nature is sometimes a nuisance if it overgrows paths or reduces visibility at road junctions, for example. Throughout the variety of groups that we engaged with, there was a common understanding of the competing demands on finite land. Thus, it is an important consideration in the production of the LNRS for it to be seen to be not only championing nature recovery, but doing it in a way that **integrates** with other land uses as far as possible.

5.3.4. Who might not prioritise nature recovery?

These are the word clouds reproduced from each workshop. They are consolidated and analysed below.

SWSG

SYSC

DRCT

Conservation Organisations (1)

Conservation Organisations (2)

Large Landholders

Green and Other Environmental Groups

Council Planners (1)

Landscape-scale Landowners

Schools, Colleges and Universities

Friends of and Local Groups

Council Planners (2)

When asked who might not prioritise nature recovery, the most common response was consistently developers followed by farmers as the second most frequent response. Governments, politicians and businesses were also frequently mentioned. It is extremely important to point out here that this is people's (anonymous) opinions, and the actions of these other groups are driven by many other factors – the need for housing, upgraded infrastructure and the force of financial incentives and externally-imposed targets. However, these are the major factors in people's minds, and this force of feeling needs to be considered in future delivery plans and the structuring of the frameworks (legislative, financial, societal) that drive decisions around land use. The trick will be to integrate these necessities where possible in a way that achieves what is required from multiple angles, and BNG legislation, for example, could be one driver that eases the integration of nature into new developments such that it achieves the housing that is required, but in a way that incorporates access to nature in its design, thus supporting biodiversity as well as creating the nature-rich spaces close by that people are saying that they most desire and benefit from. (NB, some of the longer quotes come from the first two workshops when handwritten comments were used rather than Mentimeter – the word clouds for those above only show partial responses)

When asked why, the responses were clustered as follows:

Money was by far the most mentioned theme, featuring in 79 comments, such as:

"It doesn't make business sense and putting nature first is bad for profit, nature isn't profitable, you can"t make money from nature"

"Everyone is too focused on financial gain"

"Economic drivers"

"Money and ignorance"

"Profit is the primary driver for business"

"Their business model inherently values a dead fish more than a live one. The costs to our lifestyle is externalised"

"Money grabbing, Short-sighted"

"More interested in money and pleasing wealthy people"

"Profit/shareholder driven, Government connected to big corp bosses"

"Nature doesn't make money"

"High upfront costs"

"Local authority's terrible lack of funding for ranger provision"

"Cost of leaving land fallow"

Next was a wide perception that there is a **lack of awareness and understanding** in society (30 mentions):

"Lack of understanding of how their lives are dependent on nature"

"Ignorance"

"Lack of support and education."

"Lack of appreciation, Lack of Knowledge, Apathy"

"Understanding of how it will actually have a difference"

"Lack of awareness"

"Lack of buy in from the majority of the population, either/or due to not understanding the issues or not caring"

The notion that people have different **priorities** than nature recovery was also a relatively popular theme (20 mentions):

"Other priorities based on need for popularity and profit"

"Local authority priorities"

"Because they have different priorities"

"Conflicting priorities"

"Personal priorities"

"Political priorities linked to finance/growth"

"Having other concerns in their day-to-day life, feeling like nature is not "for them

Short-term thinking emerged occasionally (12 mentions):

"Short term thinking, timescales too long / hard to comprehend"

"Short term financial or political interest

"Short term gains"

As well as **land use** (10 mentions):

"Land availability"

"Scarce amount of land available for developing"

"Many demands on land - need food/housing/recreation etc. Need to change diet so that more land can be devoted to nature"

"Nature recovery is perceived to conflict with food production"

"Competing land pressures"

"Local authorities - agenda for more housing"

Other themes which emerged, but were mentioned less than 10 times, include **self interest**, **culture**, **time** and **politics**.

All of these comments indicate that some people hold a strong negative perception of other people's views, beliefs and priorities. This will need addressing to make collaborative progress on nature recovery. For some people to dismiss other groups in society as (to paraphrase) greedy and ignorant is not a useful starting point, and (as should be gleaned from the rest of this report) is not a fair representation anyway - most people we talked to understood what was needed, and held sensible balanced views of an integrated future landscape that was nature-rich while at the same time supporting the integration of other needs such as housing, food production and green energy infrastructure.

5.3.5. What are the barriers to nature recovery?

SWSG

SYSC

DRCT

Conservation Organisations (1)

Conservation Organisations (2)

Large Landholders

Green and Other Env. Groups

Council Planners (1)

Landscape-scale Landowners

School, Colleges and Universities

Friends of and Local Groups

Council Planners (2)

When participants were asked 'what are the key barriers to nature recovery', the most common response across workshop groups was related to funding, cost or finance. This was followed by land use and ownership concerns as well as a general lack of understanding of nature and biodiversity which highlights a strong demand for education. While various other opinions were expressed in the word clouds, the ones mentioned below were the most dominant. (NB, as above some of the longer quotes come from the first two workshops when handwritten comments were used rather than Mentimeter).

Funding was by far and away the biggest category, featuring in 92 comments:

"People like money"
"Short term funding"
"Funding and resource"
"More capital grants, not enough revenue"
"Cost of living"
"Available funding"
"Revenue, Funding"
"Public and private funding"
"It costs too much"
"Strategy Costs"
"Cuts to funding for charities and interest groups"

Next was **land use and ownership,** which was mentioned 44 times:

"Land owner agreement"
"Perceived lack of space"

“Access to land”
“Pressure on land use”

"Competing demands for land"
"High competition for land"
"Land control"
"Lack of landowner support"
"Landowner intentions"
"Ownership of land being too concentrated and private interests driving land use"
"Pressure on budgets and land"
"Why would a landowner use their land for nature? What is their business case?"

Public and stakeholder engagement was mentioned frequently by many respondents (41 times):

"Poor stakeholder engagement"
"Appetite to get involved"
"Personnel to do it, public engagement and support"
"Lack of connected working"
"Lack of public support. Lack of landowner support"
"Community involvement, local monitoring ability to flag problems, local training"
"Stakeholder buy in"
"Communication - still need to improve more joined-up approach between stakeholders"
"Apathy by a proportion of public. Careless disposal of rubbish, chemicals and plastics into natural environment"

Knowledge and education also featured in 41 comments:

"People not understanding the importance of the nature emergency"
"Lack of understanding about food supply and security"
"Policy understanding"
"Understanding of what nature recovery is and what interventions are beneficial - knowledge of current state of things"
"Lack of understanding of why need to change"
"Expertise, Training"

Another popular theme was **policy and political will** (34 mentions):

"Legislation"
"Wrong regulation"
"Weak legislation"
"Policy salience"
"Government priorities"
"Political inaction, disagreement"
"Local Plan Government changes"
"Local planning. The council and competing agendas"
"Political/power blocker for a more democratic or evidence led public process to progress"
"Lack of policy levers for support - lack of resources - systemic inertia"
"Lack of political and economic will"

Conflicting priorities and values was another main category identified, featuring in 23 comments:

"Competing priorities"
"Conflicts of interest, economic priorities"
"Government priorities"
"Competing priorities - for many people day to day survival comes first"

Other categories that were identified, but had below 20 mentions each include **short-termism and mindset**, **environmental challenges** and **bureaucracy and red tape**.

An understanding of these barriers, whether real of perceived, is crucial to creating a LNRS that is implementable. If they are not addressed, either practically, or through communication of the real context, then roll-out will always be a challenge.

5.3.6. What would most enable nature recovery in South Yorkshire?

Funding was the most common theme across all workshop participants, featuring in 49 comments:

"Political buy-in and funding to make sure not just another Strategy that sits on the shelf!"
"Commitment to support ongoing review of the LNRS through funding, staff resource at SYMCA (dependant on Defra funding)"
"Long term funding strategies"
"More funding for catchment partnerships" "Funding for environmental charities" "Funding for staff to enable project delivery"

"Funding for ecosystem services" "Private finance"

"Local authority funding because our site is managed by the council but largely done by volunteers"

"Schemes and funding that allow farmers to diversify and work with nature"

"Better Funding and incentives"

"Funding mechanisms for long term site management that values nature"

"Funding for companies giving up areas to nature recovery"

"Funding pots that are easily accessible for small landowners and farmers. And maintenance payments!"

"Funding with central delivery plans"

"Funding for staff to enable project delivery"

Education also emerged as a popular theme, mentioned by 30 participants:

"Increased education and awareness"

"Investment in education and institutions"

"Better education of both children and adults about the importance of this, less silo"d working"

"School education getting youth involved"

Partnership was a relatively popular theme, receiving 10 mentions. Below are a few example quotes:

"Catchment Partnership, Local Nature Partnership"

"Partnerships and collaboration"

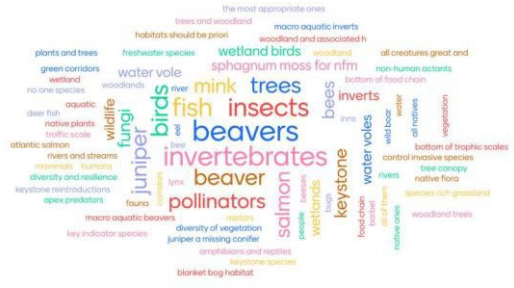
"Partnership cooperation"

Other themes which received less than 10 mentions include **political will, legislation, collaboration, public engagement, local action, long term strategy** and **policy change**.

These enablers, as so often, are the corollaries to the barriers – particularly funding. And not just the amount of funding, but the longevity of it. Nature conservation has so often relied on NGOs and volunteer support. If sustained nature recovery at scale is to be achieved and maintained, it is clear that it will need to be supported by long-term, reliable and sustainable funding. It is interesting that education was also such a strong theme. Many in nature conservation in particular appear to assume that other members of society need educating about the importance of nature. However, we would maintain that this engagement work has shown that there is already wide understanding of the importance of nature, both intrinsically and people's benefit. Many citizens may not be able to identify individual species or categorise habitats, but they do understand and can articulate the broad importance of nature and its functional integrity (understanding basic food webs for example).

5.3.7. Which species or species groups should be prioritised?

DRCT



Conservation Organisations (1)

Conservation Organisations (2)

Large Landholders

Green and Other Env. Groups

Council Planners (1)

Landscape-scale Landowners

School, Colleges and Universities

Friends of and Local Groups

Council Planners (2)

Workshops at the SWSG and SYSC were shorter and therefore this question was not included. When participants from the other workshops were asked this question a range of different species and species groups were mentioned, with their frequency is displayed in broad taxonomic categories in Table 4 as well as their relative popularity visually displayed in Figure 7 below.

Table 45. frequency of species and/or species groups mentioned

Species category	Count
Invertebrates	51
Plants and trees	34
Birds	33
Other	20
Beavers	19
Fish	16
Wetland species	15
Woodland species	14
At risk species	13
Keystone species	12
Native species	10
Other mammals	9
Pollinators	8
River species	8
Ecosystem engineers	7
Water vole	6
Peatland species	6
Lower trophic level species	5
Amphibians	4
Invasive species	3

*Other includes species resilient species, aquatic species, apex predators, reptiles, moorland species, humans, fungi, heathland species, co-benefit species, freshwater species, lowland heath species, limestone species, key indicator species.

Table 5.5 additional points mentioned on species preferences

Other comments
All
All creatures great and small
All need to be protected
All of them
Biodiversity
Everything
Flagship species
Go with the evidence data
Habitats should be prioritised
No one species
None - diversity priority
Non-human actants
non-replaceable habitats
NOT beavers
Removal of invasives
Something newsworthy
Species in peatland areas
Species-rich grassland (x2)
The most appropriate ones
Those we can't see
Umbrella species
Whatever helps biodiversity

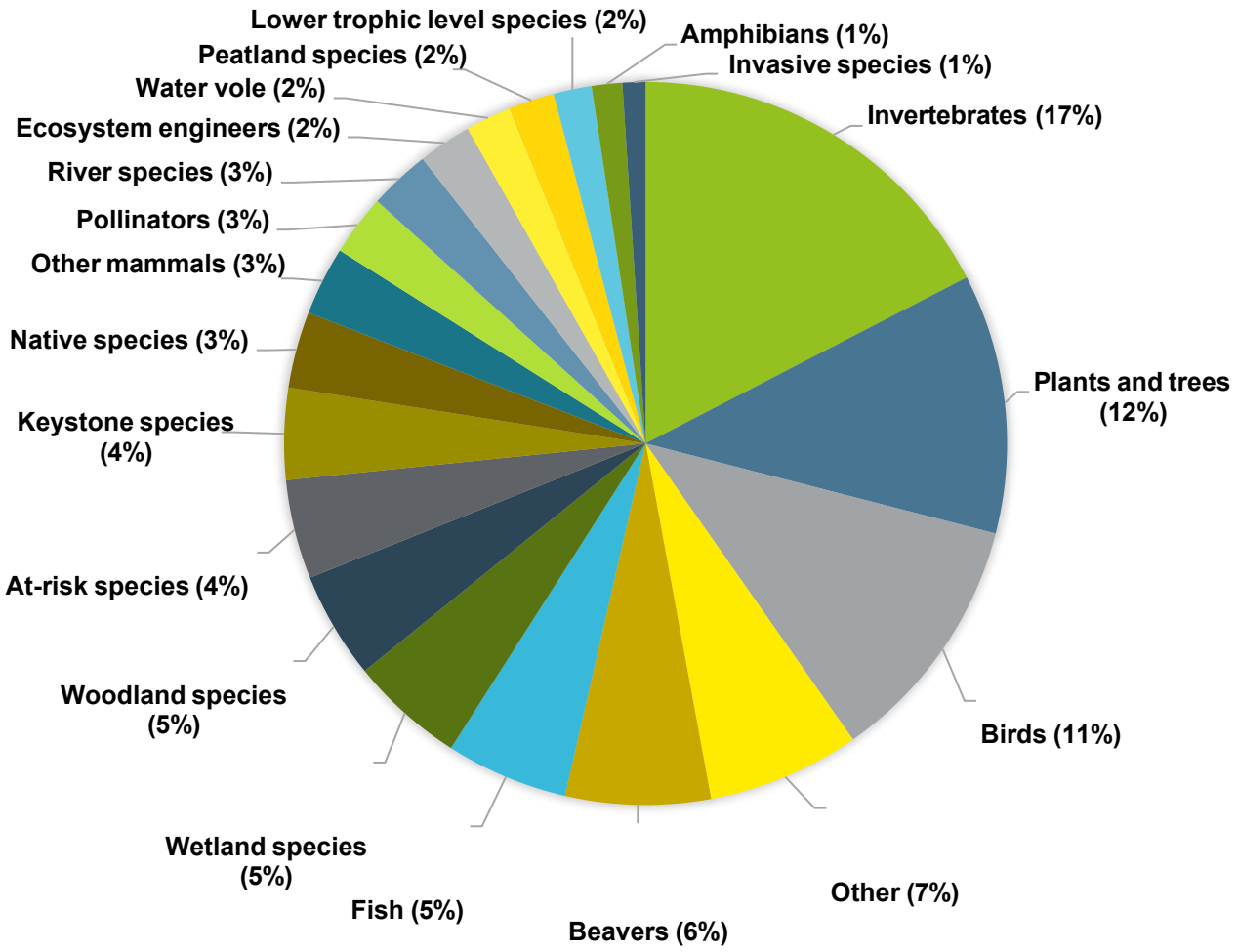


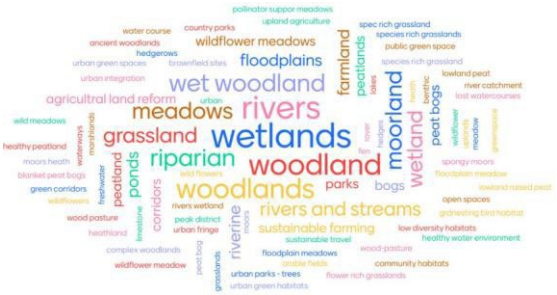
Figure 7. pie chart displaying the relative mentions of species and/or species groups

The species data highlights that invertebrates (51) were the most commonly cited category making up 17% of the share, followed by plants and trees (34) and birds (33), which also had high counts and made up 12% and 11%, respectively. Notably, out of the total mammals mentioned (34), 19 of the responses specifically mentioned beavers and 6 mentioned water voles. Similar to these species groups, species critical for ecosystem stability were also mentioned with keystone species and ecosystem engineers specifically being mentioned 12 and 7 times respectively. Attention to species at risk (13) as well as invasive species (3) also got mentioned relatively frequently.

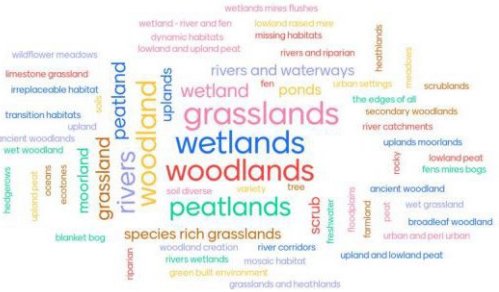
Although less scientific in their nature, comments in Table 5 also revealed some interesting findings. Many participants thought that all species should be prioritised, and although this lacks specificity, it highlighted that there was a general want for conservation and biodiversity preservation (*"whatever helps biodiversity"*). Despite one comment emphasising the discouragement towards beaver reintroduction, this was outweighed by 19 comments favouring beavers in Table 4. Interestingly, there was one mention towards species that were *"newsworthy"* highlighting perhaps not a focus on biodiversity as such, but more something that would grab people's attention and perhaps spark their interest in the topic. There were also some mentions towards species in certain habitat types, however this is more relevant for section 5.3.8 below.

5.3.8. Which habitats need to be prioritised in South Yorkshire?

DRCT



Conservation Organisations (1)



Conservation Organisations (2)

Large Landholders

Green and Other Env. Groups

Council Planners (1)

Landscape-scale Landowners

Schools, Colleges and Universities

Friends of Local Groups

Council Planners (2)

When asking participants which habitats they want to see prioritised in the county, a variety of different responses were given. The terminology varied greatly and therefore the results have been grouped by category, as displayed in Table 6 and Figure 8.

Table 6. frequency of habitats mentioned

Species category	Count
Woodlands inc. wood pasture	83
Wetlands	71
Grasslands/meadows	65
Rivers inc. riparian habitats	64
Peatland	38
Moorland	20
Urban	17
Heathland/upland	15
Agricultural/farmland	13
Freshwater	10
Other	8
Hedgerows	6
Scrub	6
Mosaic habitat	6
Depleted/exploited	3

*Other included brownfield sites/reclaimed land, wildlife habitat, bare sand, benthic, irreplaceable, limestone.

Table 7.6 additional points mentioned on habitat preferences

Extra comments
Accessible
All need to be protected
Building_dependent_species
Community_habitats
Corridors (x2)
Dynamic habitats
Ecotones
Green_corridors
Peak_District
Public green space
Rocky
Soil diverse
Soils
Variety
Whatever helps biodiversity

The recorded habitat data highlights that woodlands including wood pasture (83) was the most commonly mentioned category, making up 20% of the share, followed by wetlands (71), grasslands/meadows (65), and rivers including riparian habitats (64), which also had high counts and made up 17%, 15% and 15%, respectively. The remaining habitat groups mentioned made up a smaller proportion of the chart, but this included peatlands, moorlands and urban areas, for example.

Although less scientific in their nature, comments in Table 7 also revealed some interesting findings. There was a real mix of extra comments, with no general themes being drawn. However, there was a mention around all habitats needing to be prioritised which, similarly to the species data, reveals a general desire for nature recovery, even if people aren't able to break it down to habitat level. Perhaps expectedly, accessibility came up when considering habitat priorities, which has been a common theme across our findings for our different modes of engagement. Other mentions included for the landscape and habitats to align to those of the Peak District. Although not directly linked to habitat type, but more the flow between habitats, habitat "connectivity" was mentioned twice revealing how participants would like for the council and the LNRS to not only consider the habitat type, but also the flow and connections between them.

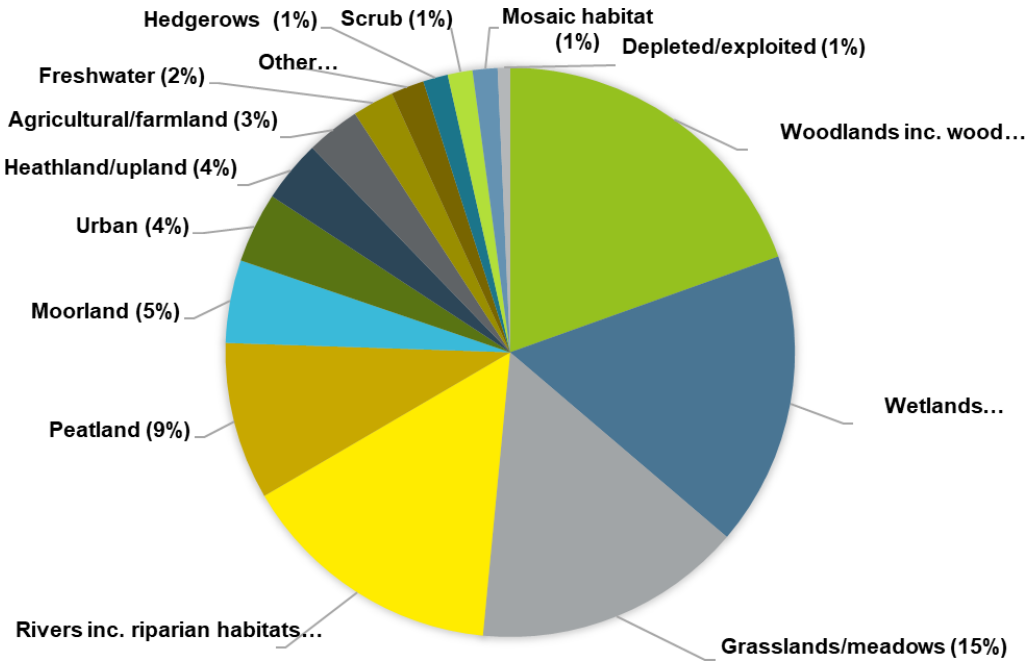


Figure 8. pie chart displaying the relative mentions of habitats

5.3.9. Mapping of spatial opportunities and constraints

Conservation organisations' workshops also included a part where participants were asked to draw on printed maps to gather spatial insight, both enablers and constraints, that may influence the LNRS priorities and in particular the priorities that will be mapped.

The outputs were fed in to inform the prioritisation and mapping process, so are not discussed further in this report.

5.3.10. Other workshop discussion points

In many of the workshops, there was time to have a discussion around the following prompts:

Constraints	What group plans and policies would support LNRS and its future delivery?
	What group plans and policies would conflict with LNRS and its future delivery?
	What constraints are there when considering integrating LNRS into your future plans?
	What is needed to overcome the constraints?
Opportunities	What opportunities are there for nature recovery in South Yorkshire/on your property or land holding/for your organisation?
Priorities	List the priorities for nature recovery from your/your organisation's perspective (Think about these themes: woodland, wetland, uplands, grasslands and agriculture, urban and species)
LNRS format	How does the LNRS need to be produced to make it both useful and usable?

Responses:

What group plans and policies would support LNRS and its future delivery?

It is clear that all organisations have existing plans and documents that the LNRS needs to build on rather than starting from scratch. But since many would have been drawn up in isolation, they may not necessarily support the shaping and then delivery of the LNRS. The relevant policies and plans mentioned were:

- 0% glyphosate use policies
- Green Belt
- Green infrastructure strategies
- Woodland management schemes
- Biodiversity Net Gain (BNG)
- Biodiversity Duty
- NHS and ambulance estates policies (Yorkshire Ambulance services)

What group plans and policies would conflict with LNRS and its future delivery?

- Plans relating to housing developments
- National development policies

What constraints or challenges are there when considering integrating LNRS into your future plans?

Financial limitations and funding barriers were mentioned as significant obstacles to implementing new strategies and services by participants. Many emphasised the significant costs and resource constraints involved, calling for government support through funding or grants to ease the financial burden on councils. Concerns were also raised about the accessibility of funds for specific habitat creation, with some noting for example that existing funding streams aren't tied to farmland birds.

Capacity and resource constraints were also frequently highlighted as key challenges. Participants noted that educational settings often lack time and mental space to take on additional issues like nature recovery. Councils also face significant resource pressures, and creating and maintaining habitats requires both funding and personnel for tasks such as fencing, hay cutting and ditch clearing. Additionally, the high financial cost of ending tenancies early on low-value farmland was raised by a participant and this poses further obstacles to effective land management. The ability to access support was also raised in the context of habitat banks as they are often inaccessible to small

developers due to minimum thresholds, with local authorities lacking the resources to step in.

A **lack of joined-up thinking** was mentioned many times. The idea of local authorities working collaboratively was a strong theme across all workshop groups. However, there was uncertainty as to how coordinated planning and collaboration would be achieved in practice. It was mentioned that effective nature recovery relies on cross-county connections, ensuring opportunities are well-linked and efforts are not duplicated, as it is often the case that many groups are working independently. Additionally, participants emphasised the need for local plans to align with various policies, strategies and other authorities to create a more cohesive.

Competing priorities were occasionally mentioned, particularly in relation to developers and farmers. Some participants expressed concern that nature and wildlife considerations are often low on developers' agendas, with infrastructure projects taking precedence. Farmers were also seen as struggling to balance conservation with financial pressures, as making a living has become more difficult due to food prices. Additionally, the demand for affordable housing was highlighted as another competing priority in land use decisions.

A range of other challenges were mentioned briefly including, but not limited to:

- **Regulatory barriers:** Red tape hindering management changes and self-build/retrospective planning bypassing BNG requirements.
- **Public engagement barriers:** Difficulty engaging local people, as nature often isn't a priority.
- **Scale and implementation issues:** Challenges in large-scale implementation and the complexity of other new requirements like the enhanced Biodiversity Duty as well as grasping LNRS on top of this.
- **Habitat banking difficulties:** Issues with the habitat banking process and registering sites.
- **Land use conflicts:** Challenges restoring peatlands near land used for farming, leading to dry zones on edges.
- **Knowledge and awareness gaps:** Need for education on alternative land management methods, such as reducing herbicide and pesticide use.

What is needed to overcome the constraints?

A variety of ideas were put forward to smooth the integration of the LNRS; these have been grouped into the five themes below:

Participants highlighted a strong need for **governance and policy support** emphasising the importance of local government buy-in and necessary policy changes. Some suggested that having conservation officers in every local authority to collaborate with community groups would be beneficial. However, a key challenge remains the perceived attitude of local councils, which are often seen as more responsive to developers than to community groups.

Community engagement and collaboration were seen as vital, with participants stressing the importance of involving local residents in decisions about their areas, as they are the end users. It was recognised that good networks and easy information sharing are essential to avoid siloed working and to achieve effective engagement. Accessibility of land, along with public facilities like toilets, was also highlighted as crucial for attracting and engaging local communities.

Participants emphasised the need for **sustainable, long-term planning**, with a focus on ensuring that changes are enduring. The need for resilient landscapes was brought to attention, particularly in response to climate change and the rise in tree health issues. However, it was also acknowledged that these tree health issues also offer opportunities to restructure woodlands, such as by removing trees affected by diseases.

Participants stressed the need for increased **education and awareness** to help make more informed choices that benefit biodiversity, particularly regarding knowledge gaps on specific species. They also suggested that the LNRS should work alongside programs that are already in place that are aiming to improve biodiversity in certain areas. Additionally, there was a call for broader education

on the importance of certain species, as some have been labeled as vermin, stressing the need for awareness across all age groups.

Although participants mentioned funding was a key barrier to implementation of LNRS into their future plans (section 5.3.5), they also pointed out that **financial and resource allocation** as a key enabler to LNRS, with many challenges ultimately coming down to a lack of money and resources.

What opportunities are there for nature recovery in South Yorkshire/on your property or land holding/for your organisation?

Although many constraints and challenges were voiced, a huge variety of opportunities that could be derived from this process were suggested:

Participants highlighted the role of LNRSs in **increasing awareness of biodiversity and nature** recovery, aligning with its core objectives. They noted that it could encourage people to spend more time outdoors, promoting active travel, reducing air pollution, and improving well-being. LNRSs, if implemented well, may also help make green spaces feel safer and more inclusive for people from different cultural backgrounds. However, the potential cascading impacts from the LNRS putting more pressure on local authorities was also mentioned.

Participants highlighted the opportunity for **habitat connectivity and landscape-scale recovery** as a result of the LNRS. They emphasised the need to link habitats across county boundaries and for LNRSs to connect up with adjacent LNRSs. Beyond simply expanding green spaces, the LNRS was also viewed as a way to promote a more coordinated, council-wide approach to nature recovery.

Governance, policy and strategic planning was another key theme that emerged from the workshop discussions. Participants saw the LNRS as a way to create a more consistent and coordinated approach to nature recovery, helping to harmonise efforts across different areas. They highlighted opportunities for collaboration between various departments within local authorities and emphasised the importance of LNRS in guiding where to prioritise efforts. Participants mentioned that the LNRS would also provide further insight in relation to Biodiversity Net Gain (BNG) as it would help identify suitable sites and inform local planning.

Participants highlighted the opportunities within **land management, agriculture, and ecosystem services** through the LNRS. They emphasised the need for a balanced approach that integrates food security, soil health and habitat conservation. Upland areas were seen as particularly important due to their role in reducing flooding through well-maintained blanket bogs. Additionally, they noted that opportunities can depend on the incentives and new markets for different crops and alternative land uses, such as solar farms. For example, it was suggested that revisiting sustainable drainage systems could also support farmland with higher water levels, helping to reduce peat shrinkage and carbon emissions.

Biodiversity net gain (BNG) and habitat banking opportunities were mentioned by participants. Many highlighted the connection between BNG and the LNRS and noted BNG as a good opportunity that encourages landowners to make their land available. Similarly, a participant noted that opportunities for habitat banking have already been identified.

The opportunity of **species reintroductions and wildlife conservation** was discussed in some workshops. Some participants mentioned the opportunity of introducing beavers and noted that the council had been working on potential sites for their reintroduction. However, while this was seen as an opportunity, some also acknowledged the potential challenges, particularly the impact beavers can have on farmland.

Practical initiatives for community-based nature recovery were drawn out as an opportunity from workshops. Participants noted the opportunity of utilising underused land on council estates. Similarly, one suggestion was a scheme allowing residents to purchase subsidised fruit trees for

planting in council gardens, with minimal red tape barriers. Additionally, efforts to develop a community orchard were also discussed.

List the priorities for nature recovery from your/your organisation's perspective:

The outputs from this section in particular were fed into the Priorities and Measures process.

The priorities suggested for nature recovery where split into two categories: general themes and specific themes related to habitats and species.

General themes:

Participants emphasised the importance of focusing on **urban spaces** for nature recovery. They highlighted the potential of green spaces within and around cities to support biodiversity while also serving as valuable educational resources. In particular, in the schools, colleges and universities' workshop, the proximity to schools was seen as a key advantage, helping raise awareness with nature among pupils and students.

Participants stressed the importance of **restoring and effectively managing existing areas** rather than solely focusing on creating new ones. They highlighted the need to improve reclaimed land, which is common in South Yorkshire, but often lacks proper management and planning. Protecting and maintaining veteran features, managing current habitats for biodiversity, and identifying irreplaceable habitats in need of restoration were seen as key priorities. Collaboration was emphasized as essential to ensuring these areas are preserved and enhanced for the future.

Accessibility was a key theme when discussing priorities. Participants highlighted the need to balance access with the protection of natural areas. It was mentioned that the people are the most important thing in South Yorkshire, so making nature accessible to all groups was seen as really important. Suggestions included incorporating metrics to measure public access to nature.

The need to **alter people's perceptions** toward nature recovery was mentioned by participants. Raising awareness was seen as important. Projects like 'Grey to Green' were highlighted as examples of how transforming urban areas can positively influence public attitudes.

Following on from this, **education, guidance and information** was also another strong priority theme. Participants noted that many areas lack clear management guidelines, unlike designated SSSIs, and called for updated surveys, particularly on water level management plans, which are often outdated. Similarly, the idea of increased guidance was a key priority from the LNRS as it will provide more insight into where to prioritise efforts. Additionally, there was a suggestion for biodiversity and nature recovery topics to be integrated into the school curriculums or extra-curricular activities, such as gardening clubs. The LNRS will also serve to improve public awareness and more accessible information was viewed as essential for guiding conservation efforts.

Another priority drawn out from the workshops, was for **stronger communication and collaboration** between different stakeholders, particularly bridging the disconnect between the mayoral office and local councils. Bringing like-minded people together was seen as essential for effective nature recovery efforts. Additionally, participants stressed the importance of aligning competing priorities across departments to ensure wider support for the LNRS. They also suggested incorporating small, low-cost actions that everyone can participate in to encourage broader involvement.

Another priority was the idea of introducing a **rewards-based system** for individuals that are already doing great work for nature recovery. Participants noted that many areas and landowners are already positively contributing towards nature recovery, but their efforts can sometimes go unnoticed.

Participants emphasised the need for **long-term resources and funding** to ensure the sustained maintenance and success of nature recovery efforts.

It has also been recognised through the workshops that there are likely to be commonalities for priorities across stakeholder groups, with an example being the reduction in fertiliser and pesticide pollution.

Specific themes that were reiterated, related to habitats and species:

- Priority species with a large reach
- Focus on species that are only found in South Yorkshire
- Species that excite people – would increase interest in the LNRS
- Farmland birds
- Ground nesting birds
- Wildflower meadows
- Calcareous grasses
- Arable margins
- Upland heathland
- Magnesian limestone
- Woodland (all types)
- Hedgerows and field margins for connectivity to fit actions taken within one landowner's boundary sites within the wider landscape and ensure wider connectivity
- River Don – invasive species management
- Focus on SSSI sites
- Reducing area of low-land peatland that is dry and oxidising away
- Meadow creation on concrete areas
- Former colliery sites being restored

How does the LNRS need to be produced to make it both useful and usable?

This discussion was to help shape the format in which the LNRS is produced. To make the LNRS both useful and useable, many workshop participants have stated their preference for it to include a really well-designed **interactive mapping tool** that allows direct comparison with local plans. Clear visual elements, including **colour gradients** indicating site favourability would enhance accessibility. It has been suggested that the LNRS should use **concise, engaging and visually appealing** summaries alongside clear recommendations to ensure it's easily understood. Therefore, the challenge lies in making it simple and accessible for the general public, while also powerful and detailed enough to become, for example, a normal part of planning processes. Finally, it has been proposed that demonstrating the strategy **in action** would help stakeholders see its practical application and benefits.

5.4. Key findings and relevance for the LNRS

Despite the range of groups involved, a core of commonly agreed themes emerged.

The vision for the future, revealed through the choice of images, and rationale for those choices, highlighted a preference for urban green spaces with a more 'wild' and natural appearance – 'untamed' landscapes that emphasise ecological richness. At the same time, there was also broad agreement on the importance of ensuring accessibility, such as well-maintained paths and benches, to bridge the connection between nature and people. Similar to urban green spaces, participants expressed a strong desire for wilder and more natural landscapes in the wider environment. However, there was slightly more diversity in responses, as the reintroduction some species including predators, integration of renewable energy and supporting food production within the broader landscape also garnered moderate support. This indicates that aesthetics and nature recovery are not the sole considerations; energy generation and farming were also in the mix. However, across both urban and wider landscapes, the reasonings for image selections were consistently driven by an ecological focus, followed by accessibility.

When asked who might not prioritise nature recovery, developers were most cited, followed by farmers, governments, politicians and businesses. These responses are perhaps understandable, but the reasoning behind them was particularly revealing: the drive for profit and financial motives emerged as the primary theme, with terms such as *'ignorance'* and *'short-sighted'* being used. Additionally, participants pointed to a general lack of understanding about the importance of nature and acknowledged that differing priorities mean that nature may not always be a focus for everyone. The differing perspectives and values across society pose perhaps the greatest challenge to delivering a successful nature recovery strategy. For those focused on nature recovery, dismissing entire sectors - who are delivering important projects and services, and who are operating within

societally imposed frameworks of incentives and constraints - as ignorant and short-sighted is not conducive to collaboration!

Moreover, as discussed below in section 7, we would suggest that wider society seems also to be remarkably thoughtful and knowledgeable about nature and wildlife. They may not know how to identify particular species, or discuss in-depth ecological detail, but there appears to be a general understanding of the importance of nature and other green spaces, but also the need for this to be balanced by other demands on land use. We are not saying that nature engagement and education are not valuable – indeed it should continue to be championed - but to portray wider society as uncaring, greedy and ignorant of nature may be a false narrative and needs to be challenged to enable a well-funded, well designed and collaborative approach for nature recovery to happen.

When considering the barriers and enablers of nature recovery in South Yorkshire, the enablers are often the counterparts to the barriers, with funding being a prime example. While funding was both the top barrier and enabler, the focus was not merely on the availability of capital and revenue funding, but more so the importance of its longevity and sustainability. Another overlapping theme for barriers and enablers was the need for improved societal knowledge and education around nature and biodiversity. Notably, there appeared to be more barriers than enablers, reflecting a predominantly negative outlook. Other key barriers include land use and ownership, public and stakeholder support, political will and competing priorities.

Certain species and habitat categories stood out, particularly invertebrates, plants and trees and birds which were the most frequently mentioned species. For habitats, woodland including wood pasture, wetlands, grasslands/meadows and riparian habitats were the most popular. Across both the species and habitat data collection, less scientific suggestions were also captured. While these lacked specificity, they indicated a broad desire for nature recovery. The results of this part in particular were fed into the parallel process writing the Statement of Priorities and Measures for nature recovery in South Yorkshire.

Key points from workshops

- A preference for urban green spaces with a more 'wild' and natural appearance;
- The importance of accessibility, such as well-maintained paths and benches, to bridge the connection between nature and people;
- A strong desire for wilder and more natural landscapes in the wider environment, with some support for reintroductions, even including of predators such as lynx;
- Beavers being the most mentioned species for reintroduction, followed by water voles;
- Importance of integration of renewable energy and food production within the landscape;
- Species groups featuring strongly for prioritisation were invertebrates, plants and trees, and birds. For habitats, woodland including wood pasture, wetlands, grasslands/ meadows and riparian habitats were the most frequently emphasised;
- Developers were perceived as not prioritising nature recovery, followed by farmers, governments, politicians and businesses, with the drive for profit as the primary theme;
- The perceived main barrier to nature recovery was financial resourcing: the amount, but also the security and longevity of funding. There was a perception that money was available for many other priorities, but that nature recovery was poorly funded, relying on NGOs and volunteers.
- Other barriers mentioned were land use and ownership, public and stakeholder support, political will and competing priorities.
- Participants believed there was a lack of knowledge and understanding in other members of society about the importance of nature.
- There are many existing plans and policies among the organisations represented that will already align with and support the roll out of a nature recovery strategy. The LNRS should be seen and used as a unifying framework to align and amplify these.
- LNRS roll-out will require collaboration, communication, and cross-sector working.
- It needs to be easy to use, accessible to a wide range of users, to be compatible with existing software, operate at an appropriate level of detail, and become part of the everyday processes that different stakeholders use, especially planners.
- The LNRS needs to be compatible and consistent with bordering counties' LNRSs.

There are many existing plans and policies among the organisations represented in the workshops that will already align with and support the roll out of a nature recovery strategy, and indeed the LNRS should be seen and used as a unifying framework to align and amplify all of the existing great work going on. It will take time for lots of disparate strategies, policies and plans to be influenced by the LNRS, but time and effort spent on building a large-scale collaborative approach with a clear

vision of the future should be well worth it. And it is clear from the workshop outputs that the LNRS needs to be seen to be not *just* about nature recovery in isolation, but be used to inform the design of, for example, housing developments. BNG could and perhaps should be a major part of this, but the introduction of other local, regional and national initiatives and incentives are needed to ensure that, for example, new or existing housing developments or plans are created and managed in such a way that they provide for nature recovery *and* the access to green spaces that people so desire close to where they live. All of this will require collaboration, communication, cross-sector working, and, crucially, an LNRS that is designed in such a way that it becomes part of the everyday work of local authorities across the board, and especially for planners. It needs to be easy to use, accessible to a wide range of users, to be compatible with existing software, particularly for mapping, to operate at an appropriate level of detail, and to become part of the everyday processes that different stakeholders use. Alongside this, the LNRS needs to be compatible with bordering counties' LNRSs which may prove challenging given the complexities and specifics of each LNRS to a given area as well as the varying formats (or lack of a standardised format across England). Nevertheless, it is clear from these workshops that there are huge opportunities in the production of a well-used LNRS that informs many aspects of how the county looks and operates to support the sustainable recovery of nature for decades to come.

6. Farmer engagement events

6.1. Design

To gather farmers' opinions on the LNRS, two in-person workshops were held on 17 October 2024 at Billingley Village Hall and 11 November 2024 at The Shoulder of Mutton, Worrall. The workshops were informal in nature and included pie and peas as a way to encourage attendance and participation. Two other events were planned but were cancelled due to poor or no take-up. This is a key audience to engage further with during future consultation and delivery stages.

Table 87. overview of farmer workshops, detailing the date, location, groups represented and attendee numbers

Date	'Title'	Location	Groups represented	No. of attendees
17 Oct	Farmer's Workshop	Billingley Village Hall	Farmers, conservation adviser, land manager	12
11 Nov	Farmer's Workshop	The Shoulder of Mutton, Worrall	Farmers	9
TOTAL				**21**

Billingley Village Hall (17/10)

The first workshop that took place followed the same structure as those described in Section 5 (Mentimeter activity) however it did not include the mapping exercise and breakout rooms, instead an open conversation was encouraged.

The Shoulder of Mutton (11/11)

The second farmer workshop did not include the Mentimeter images. However, the remainder of the Mentimeter activity was carried out (questions on barriers, enablers, species and habitat groups).

The following outlines the structure of the workshops:

6.3.1	Which 4 images represent your local 'urban' green space in the future?	Billingley Village Hall
6.3.2	Which 4 images represent the wider landscape in the future?	Billingley Village Hall
6.3.3	When might nature get in the way?	Billingley Village Hall The Shoulder of Mutton
6.3.4	Who might not prioritise nature recovery and why?	Billingley Village Hall
6.3.5	What are the barriers to nature recovery?	Billingley Village Hall The Shoulder of Mutton
6.3.6	What would most enable nature recovery in South Yorkshire?	ditto
6.3.7	Which species or species groups should be prioritised?	ditto
6.3.8	What habitats need to be prioritised in South Yorkshire?	ditto
6.3.9	Other discussion points	ditto

6.2. Participants

A total of 21 farmers attended the workshops. At Billingley Village Hall attendees consisted mostly of farmers, but there was also presence from a conservation adviser and a land manager. Attendees at The Shoulder of Mutton remained anonymous but were predominantly farmers.

6.3. Outputs and analysis

Below are the farmer workshop results from the interactive Mentimeter session.

6.3.1. Urban green space image choices

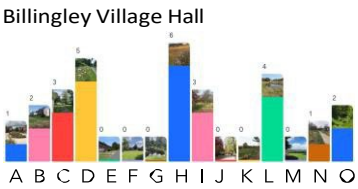


Figure 9. workshop choices for urban green space images

When considering urban green spaces, it was clear that from the first farmer workshop, there was a sway towards images **H**, **D** and **L** which was similar to the results from the workshops discussed in section 5.3.1. These images had a focus on natural and wilder green spaces.

Images **B**, **C**, **I** and **O** also got some moderate support

6.3.2. Wider landscape image choices

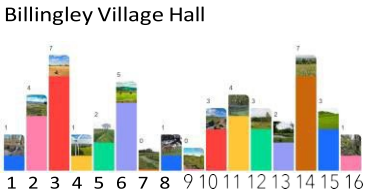


Figure 10. workshop choices for landscape images

In previous workshops (section 5.3.1) there was moderate appetite for selecting images which focused on traditional agricultural practices and food production. However, as is to be expected, the images that farmers selected were closely aligned with their industry (images **3**, **6** and **14** were the highest choices). But a variety of other images chosen show a broad support for a diverse landscape:

Reasons why?

Participants noted that image 3 was *"achievable and appropriate"* for South Yorkshire's landscape as *"food production is missing on a wider scale* [in this set of images]*"*. The idea of incorporating nature recovery was woven into some of the responses as farmers noted that *"you can grow crops and have conservation"*.

6.3.3. When might nature 'get in the way'?

Farmers frequently mentioned food production as a key area when nature could pose challenges, which is unsurprising from their perspective. There was also evidence of bigger-picture thinking, with recognition that reducing food production, and thus country-wide food security, could lead to conflict, ultimately hindering nature conservation efforts further. Additionally, nature was noted as a potential obstacle to large infrastructure projects and development schemes. Conflicting priorities among different groups were highlighted using the example of ground-nesting birds vs. ragwort.

6.3.4. Who might not prioritise nature recovery and why?

As in Section 5.3.4, developers were the most frequently mentioned group, with participants attributing this to profit-driven motives. Farmers also noted that intensive farmers may not always prioritise nature recovery due to a lack of financial incentives. An additional group, not mentioned in any other workshop discussions, was dog walkers, who were criticised for not always keeping to footpaths, allowing dogs to roam freely across land and potentially disrupt nature.

6.3.5. What are the barriers to nature recovery?

The farmer workshops identified funding and a lack of incentives as key barriers to nature recovery. Conflicting priorities and insufficient public and landowner engagement were also mentioned. Additional challenges include siloed thinking, resistance to change and a general lack of public understanding about nature and biodiversity. Notably, food production was highlighted as a barrier, a point not raised in other workshop discussions, highlighting the value of engaging farmers further in the LNRS process.

6.3.6. What would most enable nature recovery in South Yorkshire?

Funding and financial incentives for farmers were identified as key enablers in both workshops, with an emphasis on the need for long-term, stable funding. Farmers highlighted the importance of guidance and support, particularly in understanding what actions to take and how to maintain farm profitability. Improved partnerships and better communication between stakeholders also emerged as strong themes. Once again, the idea of increasing public knowledge about nature was seen as critical to enabling nature recovery, highlighting the synergy between farmer workshops and wider stakeholder workshops. However, unique to these workshops, farmers also noted that less intensive agricultural practices are needed and advocated for encouraging local and sustainable food production practices as a pathway to support nature recovery.

6.3.7. Which species or species groups should be prioritised?

A range of species were identified in the farmer workshops and are displayed in Table 9 below. These data have been passed through to the prioritisation process to ensure their inclusion.

Table 9. list of species and species groups mentioned

Any endangered/red list animals	Ground-nesting birds	Lapwing	Pollinators
Barn owls	Hedgehogs	Little owls	Songbirds
Bats	Insects	Mammals	Species declining locally
Curlew	Invertebrates	None	What we already have
Grey partridge	Kestrels	Owls	

6.3.8. Which habitats need to be prioritised in South Yorkshire?

A range of species were identified in the farmer workshops and are displayed in Table below. This data has been passed through to the prioritisation process to ensure their inclusion.

Table 10. terms used for habitat priority suggestions

Coppice	Hedgerows	Moorlands/hay meadows (Penistone)	Unimproved grassland
Existing woodland	Hedges	Something that enhances the local area/landscape	
Grassland	Moorland	Species-rich grassland	

6.3.9. Other discussion comments:

Billingley Village Hall (17/10)

In open discussions in the workshop, farmers raised several relevant points. Questions arose about how DEFRA would incentivise farmers, along with scepticism about isolated actions making a difference, emphasising the need for broader efforts. An important consideration when implementing the LNRS, highlighted in discussions, is that farming is not just a job, but instead a way

of life. This led to some resistance towards the idea of prioritising nature conservation. It is therefore important to ensure that nature recovery initiatives align with the realities of agricultural life. Farmers also noted that previous environmental efforts by them have often been unnoticed.

Participants also identified two spatial opportunities to explore: connective areas and unused farmland.

The Shoulder of Mutton (11/11)

Farmers were asked to rank their level of agreement with various statements on land use, productivity and the LNRS. The responses highlighted a diverse range of perspectives on key issues related to integrating nature and farming. The majority of farmers strongly disagreed with the idea of completely separating land for food production and nature, indicating a preference for integrated approaches. Opinions were more divided on whether encouraging nature onto farmland reduces productivity, reflecting a mix of concerns and openness to the idea. There was mostly broad agreement on the need for nature and farming to be fully integrated across the landscape (confirming the result from the first statement). A few viewed their land falling within the LNRS mapped areas as a possible opportunity, while most were unsure and two disagreed somewhat.

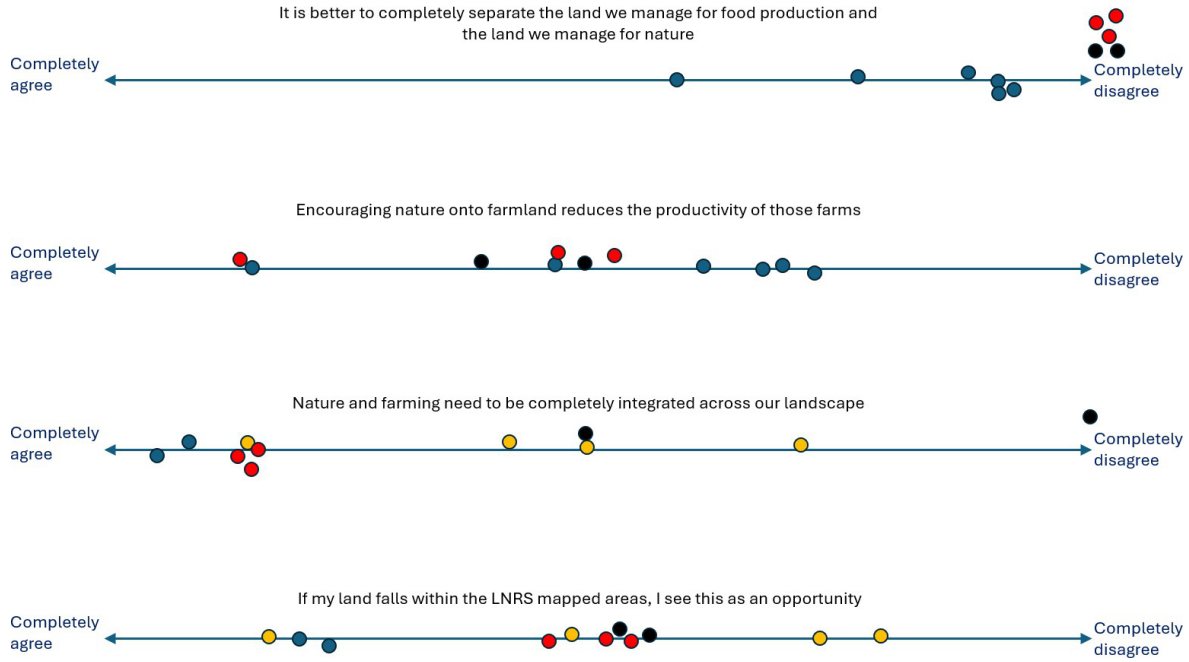


Figure 11. farmers responses to statements on land use, productivity and the LNRS

6.4. Key findings and relevance for the LNRS

It should be noted that that the first workshop was promoted through an existing farmer cluster, already interested in and working on nature-related projects, therefore the results from these two events, while informative, should not be taken as representative all farmers and landowners. There was significant overlap between the farmer workshops and the wide stakeholder outputs discussed in Section 5.3. For example, all workshop groups have expressed a preference towards natural and wilder urban green spaces, including the farmers. However, the farmer workshops have offered an additional layer of detail to inform the LNRS, uncovering extra insights that had not previously been highlighted. This was evident in the fact that a larger proportion of their image selections represented traditional agricultural and food production, reflecting their industry ties, compared to the wider stakeholder groups. However, what was interesting is that farmers did not disregard the diverse needs of the landscape and also showed support for more varied landscapes too. Furthermore, there was also evidence of bigger-picture thinking, with farmers recognising that

reducing food production could lead to conflict, potentially hindering conservation efforts in the long term.

Farmers have identified food production as a primary area where nature may pose challenges. Interestingly, farmers also recognised themselves as a group who may not prioritise nature recovery, particularly intensive farmers, as there is a lack of financial incentives to support it. However, similarly to the wider stakeholder workshops, developers were the most commonly cited stakeholders to be regarded as not likely to prioritise nature recovery. Dog walkers were raised numerous times by farmers as people who do not prioritise nature.

Similar to the wider stakeholder groups, funding and a lack of financial incentives were recognised as major obstacles to nature recovery, but here it was within the context of farming. Food production was also uniquely recognised as a barrier, reinforcing the importance of engaging farmers in the LNRS discussions. As with Section 5.3.5 and 5.3.6, the enablers are often counterparts to the barriers. This was evident in the farmer discussions as long-term financial incentives and funding for farmers were considered essential in enabling nature recovery across the county. Further guidance and better communication amongst stakeholders were also seen as key to a successful LNRS. Further guidance on how farmers can maintain productivity while integrating nature, along with improved communication amongst stakeholders, were also seen as key to a successful LNRS. These farmers also mentioned the need for less intensive agriculture and support for local food production.

Key points from farmers

- These farmers agreed with others in preferring more natural and 'wilder' urban green spaces.
- They showed support for varied wider landscapes, including incorporating productive farming.
- They mentioned the need for less intensive agriculture, with integrated nature conservation.
- They want guidance on how they can maintain productivity while integrating nature.
- Farming is a business and as such there need to be clear, long-term financial incentives to make nature-friendly farming financially viable. They were sceptical about isolated conservation efforts and were looking for further information around DEFRA's approach to incentives.
- Farming is also a way of life, and farmers are wary of anything that will reduce their or future generations' opportunities for how they choose to manage their land.
- Dog walkers were raised numerous times as people who do not prioritise nature.
- There is still a way to go in framing the LNRS as an opportunity for farmers. However their participation is crucial in achieving landscape-scale nature recovery.

In wider discussions during the workshops, farmers expressed scepticism about isolated conservation efforts and were looking for further information around DEFRA's approach to incentives. A key point raised in discussions about implementing the LNRS was that farming is more than just a job – it is a way of life. This perspective contributed towards some resistance towards prioritising nature conservation, not least because it may put additional constraints on the options that future generations may have in managing their land. Therefore, it is crucial that nature recovery initiatives are designed to fit with the practical realities of farming. Farmers favoured an integrated approach to land use, rather than separating food production and conservation. This reflected a positive outlook towards the LNRS, indicating a willingness to adapt and embrace some level of change, albeit with caveats to do with finance and maintaining land-use choices. However, there is still a way to go in framing the LNRS as an opportunity for farmers. As such, the LNRS must be designed to appeal to and accommodate a diverse range of stakeholders, with a particular focus on farmers, as they own and/or manage huge areas of land in South Yorkshire. Their participation is crucial to the success of nature recovery efforts.

It is important to note that engaging farmers in the process proved challenging as many are wary due to the many uncertainties surrounding the LNRS process, leaving many of their concerns unanswered. Additionally, the lack of recognised incentives for participation further discouraged their involvement at this stage.

7. Public engagement events

7.1. Event design

Many methods of engagement require participants to be proactive in taking part, whether responding to an invitation to a workshop or spending time responding to a survey. This results in a self-selected cohort often with a particular stake or position, either positive or negative, in an issue. Therefore, it is important to do the opposite: go to where people already are and give them an opportunity to engage when perhaps they were least expecting it, to gather

Figure 12. general stall set-up example

wider views from a broader cross-section of society. In consultation with the Engagement Working Group, we chose a variety of locations and opportunities to capture a wide range of people from suburban and rural populations, including shopping centres such as Meadowhall to catch a much more urban population. Of course, in those situations, the people that take part are also to a certain extent self-selecting as there are plenty that won't want to stop and engage, but the likelihood of going 'beyond the usual suspects' is much greater.

In such engagement opportunities it is important to use methods that are attractive to potential participants (e.g. not surveys on clipboards), that people feel comfortable engaging in and not feeling that they are being tested on any particular knowledge or skills. The process also needs to have some consistency with the engagement through other means with other stakeholder groups.


Figure 13. set-up at the Rotherham Show


Figure 14. set-up in Fox Valley Shopping Centre car park

Figure 15. set-up in Frenchgate Shopping Centre, Doncaster

For the reasons explained above, the 'picture opinion quiz' is a great way of gathering data and starting conversations, as everyone has an opinion on what they like (and don't like) about the green spaces in their local area and surroundings, so this was the element that featured across all modes of engagement, and formed the major part of the public events (see Figures 17 and 18 below for a reminder of the images used – the same ones that were used throughout the engagement modes). By fostering organic, face-to-face interactions in spaces that are culturally or socially relevant, these engagements are more effective at involving underrepresented groups such as youth, minorities, and economically disadvantaged individuals, ensuring a more inclusive and representative civic process.

Therefore, a stall was set up with large, printed images, a set of counters, and numbered and lettered jars as 'voting pots'. We spoke to people passing that we were interested in people's opinions on nature and their local green spaces, and that we had a quick game to play let us know their preferences. People often approached voluntarily to see what was going on and wanted to take part. We also displayed a LNRS banner and a large banner satellite map of South Yorkshire to refer to.

Figure 16. set-up at Rother Valley Country Park

Figure 17. set-up in Meadowhall, Sheffield

Figure 18. set-up at Penistone Agricultural Show

We gave people four counters and asked them to use them to choose the four images that represented what they would like their local green spaces to look like. We then asked them why they had chosen those four, and noted down on a tally sheet the key themes that emerged from the discussions that followed. We then asked them to do the same for the images of the wider landscape. Occasionally people would do it in the opposite order so that we could get two people or groups doing it simultaneously and swapping over. Most people placed the counters on the images, some chose to put them straight in the corresponding jars – but after each person or family had participated, the counters were moved to the correct jars to keep a tally of the choices made throughout the day.

The activity generally came first, and then some people wanted to know more about the LNRS and the process – but this was secondary; we didn't want to put people off with a long LNRS explanation at the beginning; gathering their views was the most important part. But if people were interested then we would talk about the LNRS in as much detail as was appropriate. We also had postcards available with a QR code to direct people to the online survey and answer a much broader set of questions should they so wish.

Finally, in Frenchgate Shopping Centre, we used a tally sheet with basic demographic headings in a table on a clipboard and we asked people if they wouldn't mind ticking the relevant headings on the sheet. We handed them the board and pen so they could tick the appropriate rows anonymously.

Some individuals took part, but most were couples, groups of friends or families. The group and family participation sparked some interesting conversations around what each person was choosing (we gave each group member their own set of counters).

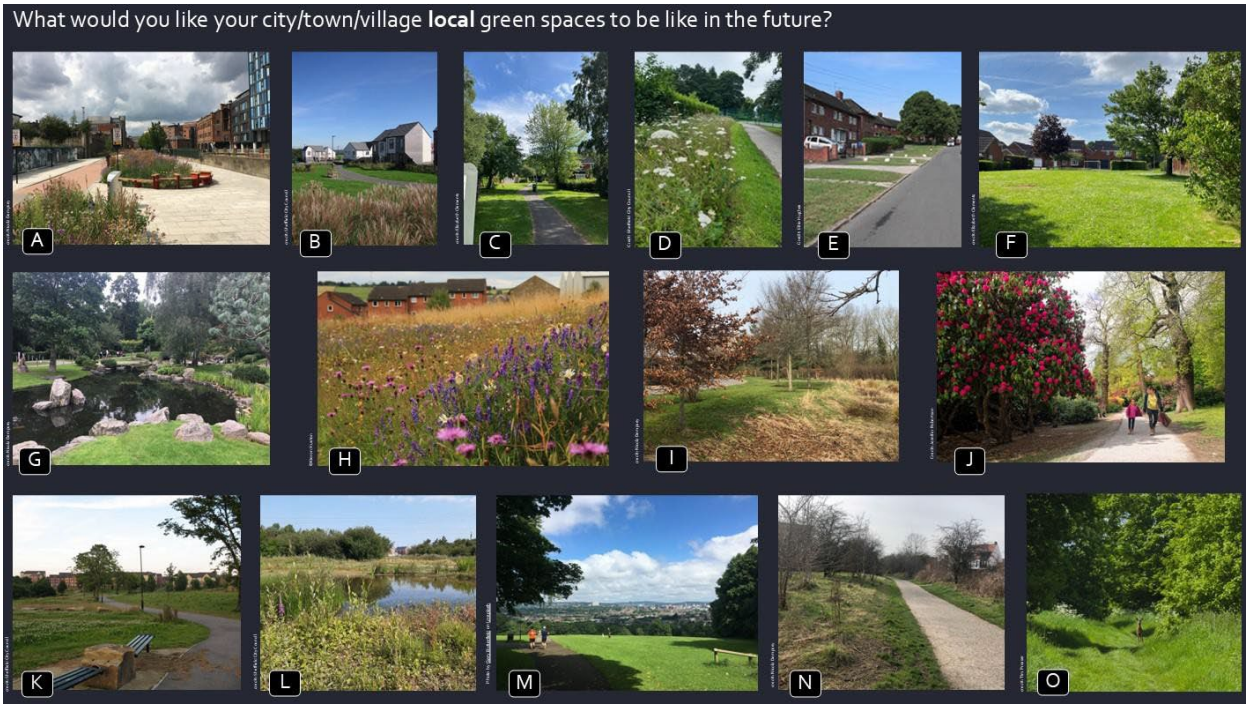


Figure 19. reminder of the 15 images used to represent urban or peri-urban 'local' green spaces in South Yorkshire

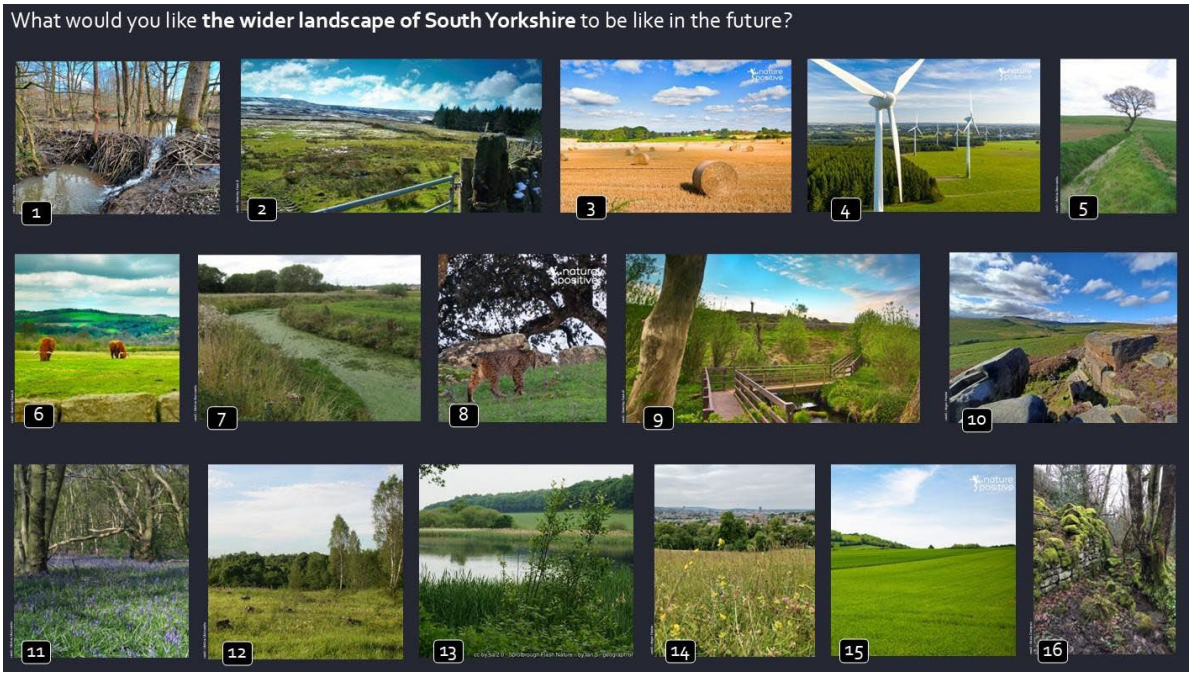


Figure 20. reminder of the 16 images used to represent the wider landscape of South Yorkshire

7.2. Events and locations attended

Engagement activities were conducted in high-traffic areas where people from diverse demographics gather. Suitable locations including shopping centres, fairs and festivals, wildlife conservation areas and transport hubs were chosen with guidance from the Engagement Working Group, and taking into account suitable dates and days of the week for maximum footfall.

Table 8: public events

date	location	description	No. of participants
21 Aug	RSPB Old Moor	Main courtyard by the toilets, restaurant, shop and entrance	22
22 Aug	Yorkshire Wildlife Park	A picnic area beside the sea lion enclosure	19
7 Sept	Rotherham Show	A busy show, positioned with environmental organisations	127
14 Sept	Penistone Show	Busy agricultural show – on one of the main thoroughfares	149
15 Sept	Fox Valley Shopping	In the car park on a direct route between major shops	50
5 Oct	Meadowhall Shopping Centre	Outside M&S by the transport hub	92
6 Oct	Rother Valley Country Park	Outdoors next to the cafe	58
13 Oct	Frenchgate Shopping Centre	Ground floor outside Poundland and TK Maxx	48
TOTAL			**565**

7.3. Outputs and analysis

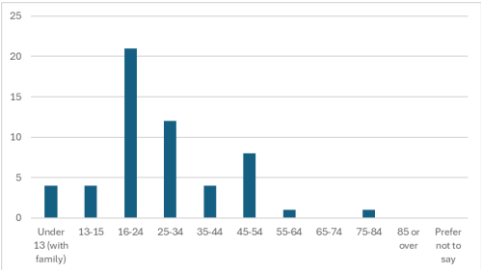


Figure 21. age group of participants at Frenchgate

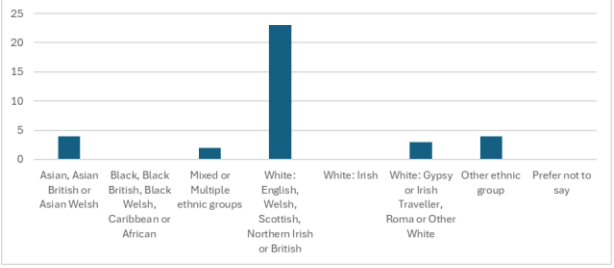


Figure 22. ethnicity of participants at Frenchgate

In contrast with the people who took part in the online survey, the demographic questions at Frenchgate indicated that this activity engaged with a wider range of people than the survey and workshops. They were younger and more ethnically diverse than individuals in other modes. It is not a statistically representative sample of the people in South Yorkshire, but it does show the value of going to places where a wider cross-section of people is likely to be, in order to get the views and opinions of people not necessarily already engaged in and attracted to places and events explicitly or implicitly about nature. At Meadowhall, for example, we engaged with a large number of older teenagers who were largely at the shopping centre as a social activity.

7.3.1. Urban image choices

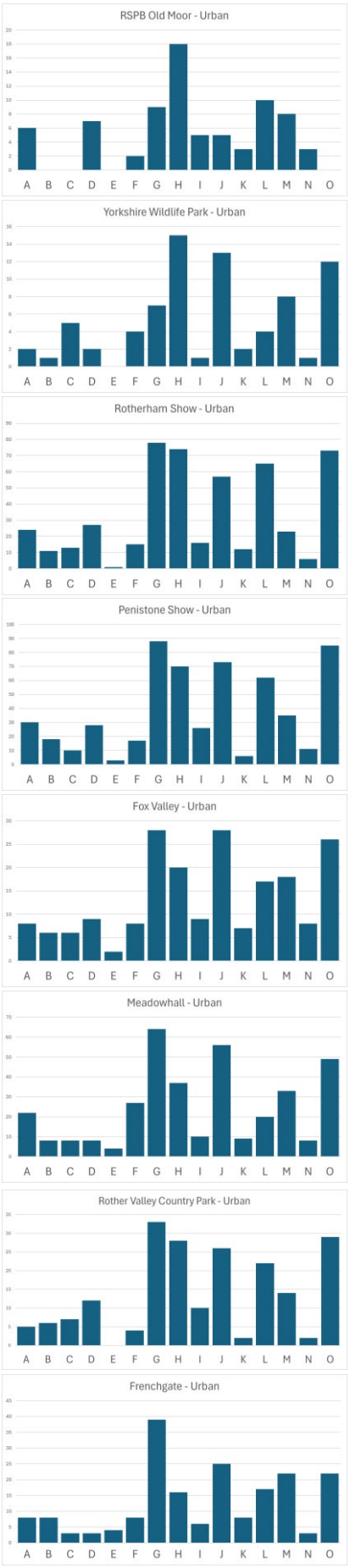


Figure 23. comparison of public engagement choices for urban images

Across the public engagement events, it was evident that there were a select few images that stood out across all events. Images **G**, **O**, **J** and **H** received significant attention, in that order. Images H and O represent wilder spaces, whilst G and J depict more manicured spaces which are more accessible. (Image O was added after the Old Moor event).

Also popular were images **L** and **M**, which also depicted natural 'wilder' landscapes as well as manicured accessible areas, respectively.

There were some interesting small differences. Image **E** was a very low voted image across all public events but got some votes at Frenchgate. For people living in very urban areas who said they had little or no access to greenery this was considered an aspirational image as a step-up for some people's experience of somewhere nice to live. Also, image **D** got more traction, particularly at Rother Valley Country Park; perhaps it suggests the similar aesthetic to a country park – a close juxtaposition of wild and managed.

All of this illustrates the value of taking many views into consideration when planning urban green spaces which need to be, by their very nature, multipurpose, well maintained and respond to the needs and desires of those living in the vicinity. Nature recovery in urban settings, with the many added human benefits of improved air quality, physical and mental health, flood alleviation, etc will require very careful creation *and* curation.

Pooled public engagement results are shown in Figure 24. While this obscures variations between individual events, it highlights the overall preferences of those who participated at public events. Further discussion of the conversations had about reasons for the choices is given after the data on the wider landscape images is presented.

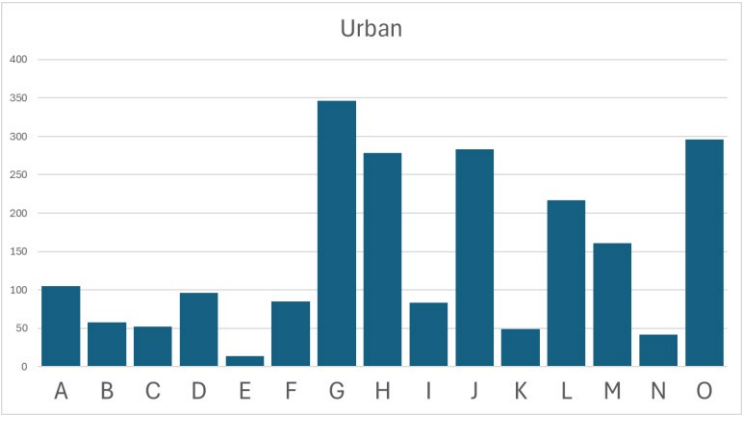


Figure 24. pooled public engagement results for urban images

7.3.2. Wider landscape image choices

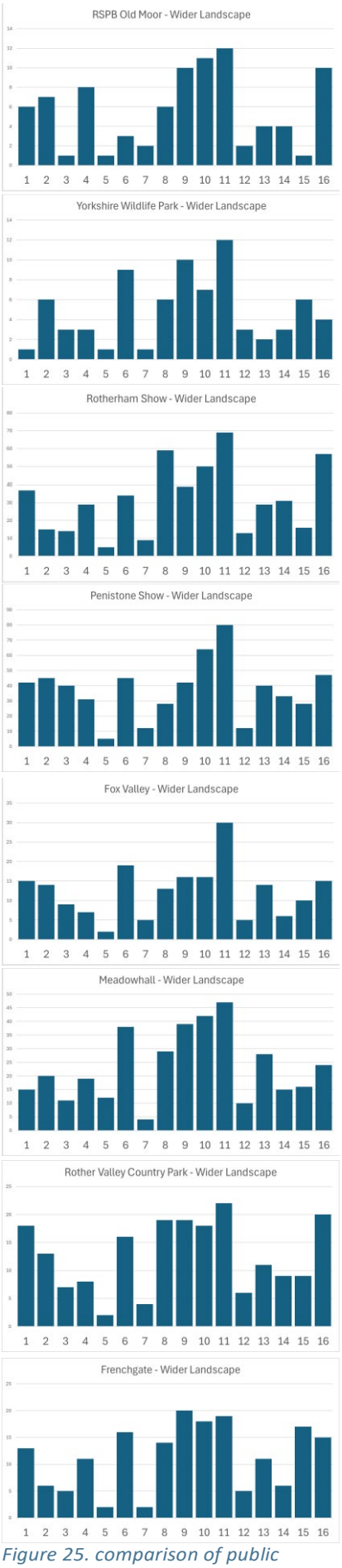


Figure 25. comparison of public engagement choices for wider landscape images

In contrast to the urban landscape results, the wider landscape results elicited a significantly more diverse range of responses. Nevertheless, image **11** stood out to be the most popular selection amongst participants. This image of a bluebell wood elicited universally positive responses. Following this, there was a real variety of choices, with images **10**, **9**, **16** and **6** also being very popular. These images each represent different aspects of the wider landscape – image **6**, reflects a traditional British farming scene, image **9** emphasises accessibility to green spaces while images **10** and **16** depict perceived more 'natural' environments. Indeed, image 9 was often described as having the best combination of greenery, water and accessibility.

Images **5**, **7** and **12** consistently received the fewest votes by far. 7 was sometimes avoided as people said it was too 'scummy'.

The results highlight some interesting variations among participants. For instance, image 6 was a was a popular choice at all public events except RSPB Old Moor, where it was selected only a handful of times. However, it is important to note that participant responses varied across public events, with some, like at the Rotherham and Penistone shows, seeing significantly higher engagement than others. There were only 22 participants at Old Moor, so the shape of the graph should be interpreted cautiously.

Pooled public engagement results are shown in Figure 26. While this obscures variations between individual events, it highlights the overall preferences of those who participated at public events.

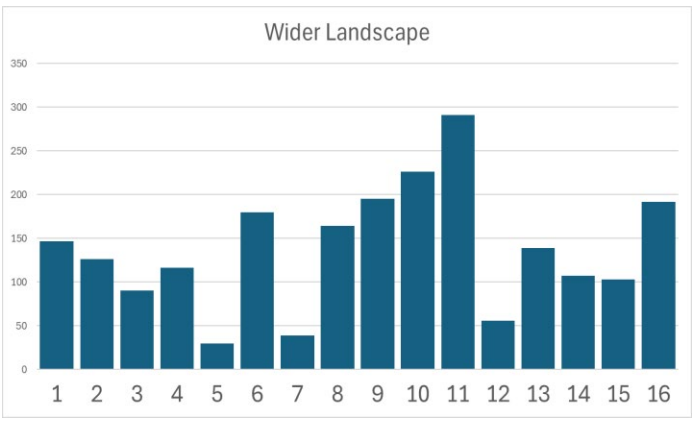


Figure 26. pooled public engagement results for wider landscape images

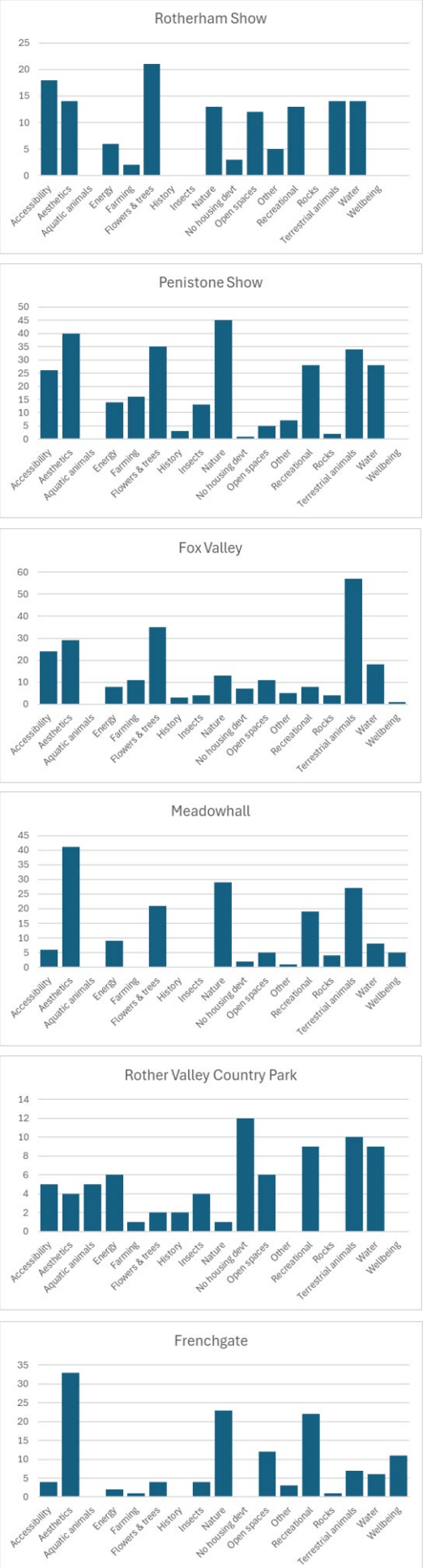


Figure 27. comparison of themes identified across each public engagement event

Reasons given

Key points from conversations with the participants regarding their image selections were recorded as a tally count and categorised into 17 different themes.

There is significant variation in the reasons people selected certain images at public events. Interestingly, while top images chosen were similar across events, the reasons behind these choices differed. This highlights the diverse interpretations and values people assign to the images.

Interestingly the multiple competing priorities and land-use demands discussed in Section 5.3.5, are also reflected here, although the dominant reasons were **aesthetics, animals, water, nature, recreational opportunities and access**.

Preference for images like **G** and **J** represent the many conversations that we had about places that looked well-maintained. Image G was often described as a lovely place for fish and other wildlife, but where it was also **easily accessible**. When contrasted with image **L**, which is also a water feature close to housing (in fact a SUDS installation), G was preferred as it was seen as easier to get to and look in.

4Nature and **terrestrial animals** were the second and third most popular themes. While many participants may have lacked technical knowledge of nature recovery, aside from those at RSPB Old Moor who expressed a good level of ecological knowledge, their selections – such as the popularity of the bluebell woods in image **11** – show they still value its importance. This is supported by a participant's quote highlighting their desire for the landscapes to be *"wild but not too wild"*, underscoring the need to strike a balance between natural preservation, visual appeal and accessibility.

Some interesting similarities and differences can be drawn out from the results. **Terrestrial animals** ranked among the top three themes across all public engagement events except at Frenchgate shopping centre, where reasons behind image selections were more focused on aesthetics, nature and recreational use. Notice also the higher prevalence of **wellbeing** mentioned at Frenchgate. Many people we spoke to were living in very urban areas and valued green spaces (particularly local ones) very highly for their mental and physical wellbeing and also wanted those spaces to be well-maintained to keep them safe and beautiful. Phrases such as *"no potholes", "no pollution", "chill/relaxing", "hills to roll down", "no houses", "peaceful"* were used at Frenchgate.

Returning the animals theme, it should be noted that people did not usually distinguish between wild and domestic animals – they said they just liked images with animals in them. In conversations that followed when either the beaver dam or lynx images were chosen, we pointed out to people that the lynx was suggested to be a wild, not zoo animal. Even with that clarification, many people were quite happy with the idea of lynx reintroduction. They mostly drew the line at wolves and bears, though, except for one Polish lady who was relaxed about the full range (as exists in Poland). **Accessibility** has been a recurring theme throughout this report and has again been reinforced through these data, particularly from the Rotherham show, the Penistone agricultural show and Fox Valley shopping centre, where it was mentioned 18-26 times. Discussions at the Penistone agricultural show highlighted a desire not just for access to green spaces but for them to be equipped with amenities like benches, shelters and with good public transport to these spaces so they can be useable.

Farming was not a dominant theme, except in the Penistone agricultural show, where it was moderately popular. Participants highlighted a *"need for agriculture"* with one expressing support for *"intensive agriculture"* – unsurprising given the event's rural, agricultural focus. Despite this, the results suggest that even farmers (and those interested in attending farming focused events) recognise the multiple demands on land use given that **nature** was the leading reason for image selections, which is perhaps surprising given the often-perceived tension between farming and nature conservation. However, as there were families with children that attended the show, these results are reflective of all participants, not exclusively farmers. The lack of farming as a dominant explicit conversation theme is surprising, especially given the popularity of image **6** in Section 7.3.1. However, participants were drawn to the image primarily because they liked the highland cows rather than mentioning farming explicitly. Discussions reinforced this, with many expressing a preference for seeing animals roam freely rather than conversations focusing on agriculture *per se*.

Also at Penistone, there were some detailed conversations: about importing wheat from Russia because of the UK's worst harvest year, *"how much rewilding can we afford – we need a balance",* and frequent worries about too much house-building. Also, some who were understandably absolutely against beaver and lynx reintroduction. But again, accessibility came through strongly in many conversations for both the urban and landscape images.

The Rotherham show, held in a residential area park, presented a different demographic audience which represented a wide cross-section of society, including many from Black, Asian and Minority Ethnic backgrounds. There was a strong desire for **open spaces** at this event, mainly for children, with one participant stating, *"we just need somewhere to play".* But here, too, there was a great deal of ecological literacy. A group of men in their 20s talked loudly to their mother about the importance of predators and functioning food chains. It was clear that almost everyone we spoke to over all of the events has a very good understanding of ecological integrity, even if not using scientific terms.

It is clear across these outputs that there are many commonalities across different public events, but interestingly some stark differences can also be seen highlighting the benefits of engaging with diverse groups of individuals all with different positionalities in society.

7.4. Key findings and relevance for the LNRS

The overall findings from the public events show that wherever we went, and whoever we spoke to, almost without exception everyone had a thoughtful, balanced and well-informed view of what they would like, and how it relates to nature recovery for its own sake as well as for their own benefit. These findings contrast with the view emerging elsewhere in this report, where many involved in nature conservation believe that everyone else doesn't care or needs educating, as the majority of people we spoke to seem to already be on board. They may not be able to identify and name

species, or even always distinguish between which rural landscapes are 'natural' (as much as any are in the UK) and which are highly managed for whatever reason, but similar to the workshop outputs, they do want 'wild' and beautiful areas full of wildlife (that they can also access), and they desire clean, safe, nature-rich areas close to their homes as well, as long as they are clean, safe and well-maintained.

A central theme that emerged across all demographics and locations is the importance of access and inclusivity, with participants highlighting the need for green spaces that are easily reachable for everyone, including those with mobility challenges or limited transport options. Safe and well-maintained pathways, cycle routes, and better public transport connections to nature-rich areas were frequently mentioned as priorities.

Key points from public events

- Citizens may not always be able to identify species, or distinguish between 'natural' or highly managed unfarmed landscapes, but they do want 'wild' and beautiful areas full of wildlife.
- Accessibility is crucial: safe and well-maintained pathways, cycle routes, and better public transport connections to nature-rich areas were frequently mentioned as priorities.
- Everyone had a thoughtful, balanced and well-informed view of what they would like, and how it relates to nature recovery for its own sake as well as for the benefit of people. Conversations often demonstrated an appreciation for diverse, functioning ecosystems.
- There was also a strong recognition of the need to balance different land uses, such as supporting food production and the generation of clean energy.
- People desire clean, safe, nature-rich areas close to their homes, as long as they are well-maintained and accessible for all, including those with mobility challenges.

In some senses, images G, H and D (even though D wasn't always a top image choice) sum up many of the frequent conversation topics for 'local' green spaces: wild (but not too wild), pretty, good for bees and butterflies and other wildlife, obviously well-managed and looked after, with water, and accessible.

The wider landscape results, were much more varied between and across the public events. However, there was still a desire for 'natural, untouched' landscapes but also with the concept of those areas being accessible for recreation, whether walking, climbing on rocks or *"rolling down hills"*. However, there was also a strong recognition of the need to balance different land uses, such as supporting food production and the generation of clean energy. Interestingly, people often took much longer deliberating over their landscape image choices than the urban ones, declaring that it was much harder to choose, and they wished they had more than four counters.

When considering the reasons behind participants' image selections, there was significant variation, which is somewhat unsurprising given the different demographic backgrounds we engaged with as well as the competing priorities and land-use demands that exist. Aesthetics was the primary factor influencing choices, with nature and terrestrial animals also ranking highly. While many lacked technical knowledge of nature recovery, their image selections and subsequent conversations often demonstrated an appreciation for diverse, functioning ecosystems. Accessibility has been a recurring theme throughout this report and emerged again in this analysis.

These data are important for understanding public values and priorities, and it is important for the LNRS to be designed in a way that strikes a balance between aesthetic appeal, accessibility and ecological benefits.

What this also illustrates is the level of broad general agreement. People may have different ways of articulating what they want, and state different personal priorities and reasons for their choices, but what people want the future to look like is broadly similar, whoever you ask.

Online survey

7.5. Survey design

7.5.1. Survey questions

The online survey aimed to gather comprehensive insights into public perceptions, usage patterns, and preferences regarding 'local' green spaces and the wider landscape. The survey combined both closed and open-ended questions to allow for quantitative analysis and qualitative feedback. The closed-ended questions, such as the image choice questions, were designed to provide easily comparable quantitative data, while open-ended questions provided respondents with the opportunity to elaborate on their choices and opinions. The survey questions closely aligned with those used in workshops to allow comparisons between different stakeholder groups.

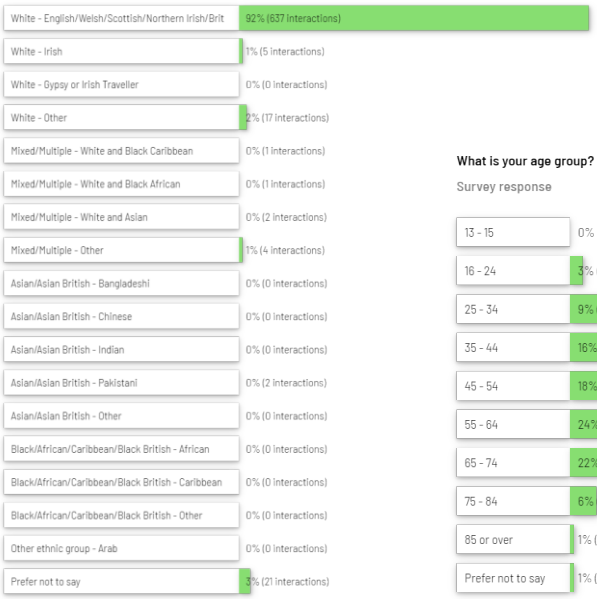
As the survey was online, access was available by the SYMCA website and via QR codes on postcards that were distributed at public engagement events in both urban and rural settings. Data analysis involved both descriptive statistics to summarize quantitative data and thematic analysis for qualitative responses, facilitating a well-rounded understanding of public views on the management and design of green spaces and the countryside. With the large number (and length) of text responses, we have presented analysis by emerging themes with quotes selected to represent the range of responses within each theme.

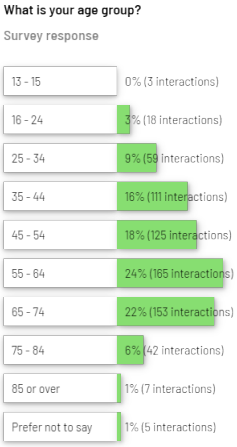
7.5.2. Mapped responses

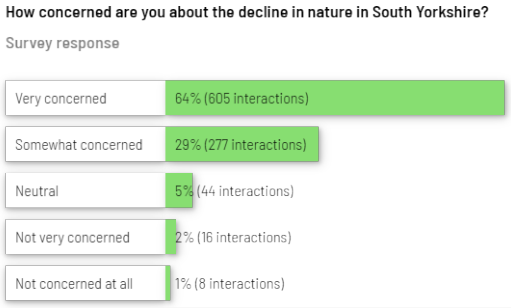
The Participatr platform used allows for map-based inputs. This allowed respondents to mark a point on a map and then write some notes on why they have 'dropped their pin' at that location, and to upload images. This information is more difficult to summarise as it is by definition very site-specific and often elicited quite long text responses. However, the main points will be described below and the full responses are in appendices.

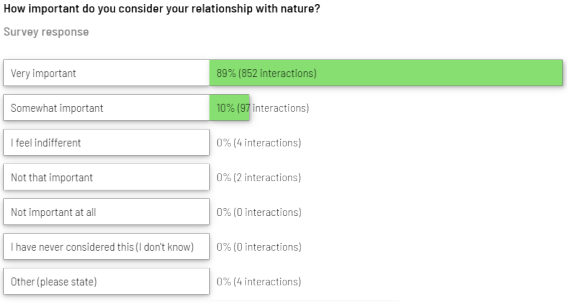
7.6. Outputs and analysis – survey questions

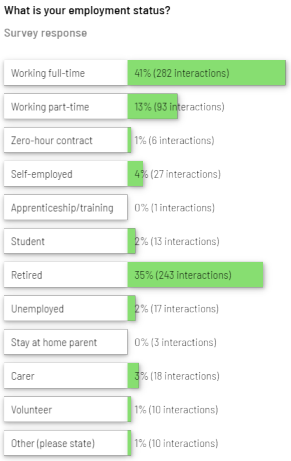
963 responses were received. Firstly, it is important for context to understand the cohort of respondents, as this will influence the responses given. Respondents are predominantly white, middle-aged or older and are concerned or very concerned about the decline of nature in South Yorkshire. They also consider themselves to have a very important relationship with nature. The vast majority of respondents described themselves as 'individuals', with 11 responding as farmers, 6 as community groups, 3 elected officials, 2 as town or parish councils and 3 as NGOs. 60% (420) were women, 36% (254) men, 8 non binary and 13 preferring not to say.

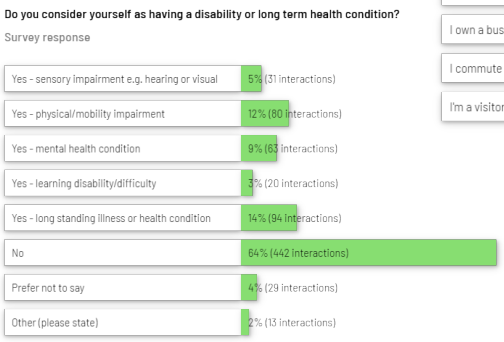


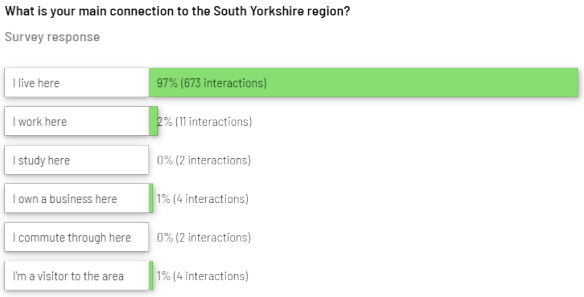












Several key themes emerged from the text responses to the 'other' category on '**relationship with nature**':

Mental and physical wellbeing was mentioned over 230 times:

"It is crucial to my wellbeing and health."

"Fresh air and open spaces are vital to wellbeing and mental health."

"I rely on it for my physical and mental health and well-being. I cannot exist without it."

"We are all part of one ecosystem which is essential to our physical (financial), emotional and social wellbeing"

"Mental health suffers without open spaces and greenery."

Related to that, connection with nature was mentioned explicitly 19 times, with many people seeing nature as an intrinsic part of their lives and identities.

"We are all part of nature whether we realise it or not. Disconnection from nature results in many problems for us and the world."

"we are part of nature, we have a symbiotic relationship with it."

"I feel I am part of nature and notice I feel and perform much better when I can get outside."

"I am part of nature and I feel content when I am amongst nature, like I'm safe and at home."

Survival and existence was mentioned over 180 times:

"We need to look after the earth for the survival of the human race."

"Our existence depends upon living in harmony with nature."

"Nature and the environment are an important part of our lives. Without us all co-existing we have nothing."

"We cannot survive without a healthy natural world."

Enjoyment and recreation was mentioned over 80 times:

"I love watching and learning about nature and spend a good deal of time in it."

"I walk in the local area with 2 different groups and very much appreciate the areas around Sheffield for this activity.

"Walking in natural places is the thing I choose to do most when I am not working."

Biodiversity and conservation was mentioned over 45 times:

"Extremely important for biodiversity"

"Without nature and biodiversity, our world is poorer and in danger"

"Because without green spaces, bees and insects our biodiversity will suffer"

"because a positive relationship with nature is important for protecting our planet its diversity"

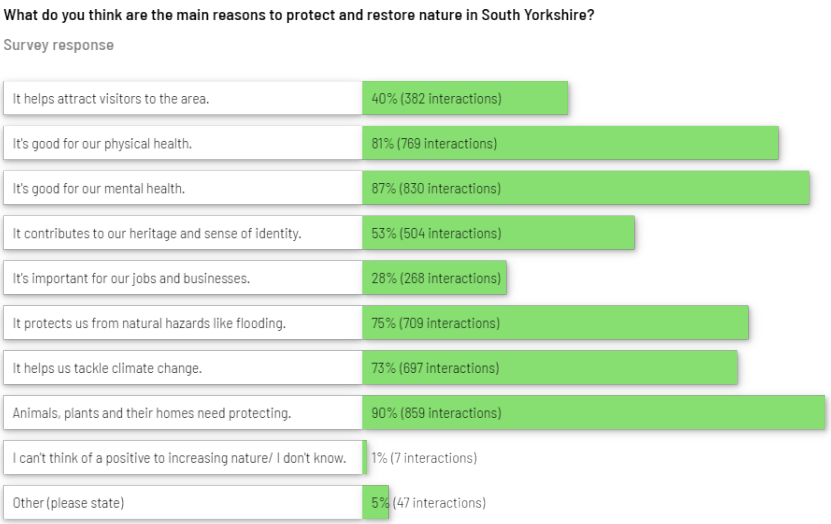
"Without nature we would have no biodiversity and no food"

Aesthetic and spiritual value, the concept of **environmental responsibility** and the **impact of urbanisation** were each also mentioned more than ten times.

Respondents report visiting green spaces very frequently: 70% visit local parks at least weekly (23% almost every day); with frequent visits to woodland (57% at least weekly) and water bodies (52% at least weekly). National Parks, Nature Reserves and Country Parks are more occasional visits, with peak responses at 'a few times a year'. This highlights the importance of locally accessible quality green spaces.

All of these responses indicate that the majority of survey respondents are already extremely well-connected to nature and probably deeply involved. So, they are not a representative sample of the population of South Yorkshire, but are probably committed advocates for nature recovery.

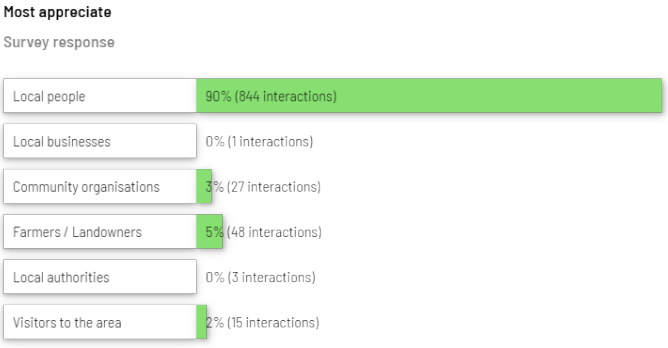
7.6.1. What are the main reasons to protect and restore nature in South Yorkshire?

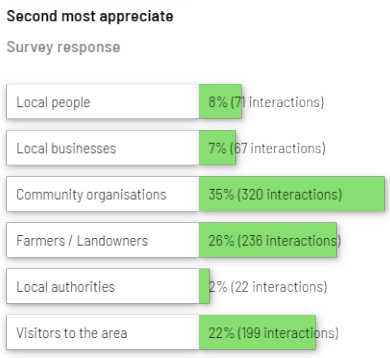


The responses to this question corroborate the extra thoughts above – there are many reasons to protect and restore nature, but biodiversity conservation and mental and physical health benefits come out top, closely followed by the co-benefits of mitigating flooding and climate change.

In the 'other' category people mostly expanded on these themes, but **food security** a **moral responsibility** and **economic benefits** were also added.

7.6.2. "Who do you think would most appreciate an increase in nature in South Yorkshire?"





It was considered that local people would most appreciate an increase in nature. This was followed by community organisations, farmers and visitors. With six options, people could assign groups from 'most appreciate' all the way to '6th most appreciate' (i.e. least appreciate).

'Sixth most appreciate' highlighted local authorities and local businesses, which indicates that the respondents perceived a lack of interest or focus on nature restoration from these actors.

When asked why they chose in this order, the overwhelming majority of respondents (over 320 comments) said that local people would benefit the most, and the same themes emerged strongly:

"Because nature on our doorstep is what we see and experience everyday, so any improvement to it will directly impact the quality of our lives and our sense of place and connection to where we live and what surrounds us."

"More wildlife & biodiversity makes an area better to live, take leisure & work in & so local people would be the greatest beneficiaries of it."

"It is important for local people to invest in our areas and feel proud of them. It creates a sense of worth and pride. It's a good example to our younger population and helps schools help children to understand the significance of nature and green spaces."

Biodiversity, community engagement, aesthetics, quality of life, climate change and environmental protection, mental and physical wellbeing were all discussed at length, as were the economic and tourism benefits.

7.6.3. When might nature conflict with other priorities, or even be a nuisance, in South Yorkshire?

62 responses simply stated '**never'**. There is a strong feeling among at least part of this cohort that nature should aways take precedence, and that people and development are the problem.

"We need to work with nature not against it."

"Never!! Our natural environment and nature is something we have to nurture and learn to live and love. Neat, highly cultivated areas are a disaster for nature and our wellbeing."

"Never. Restoring nature is a necessity and obligation, not an option."

Nevertheless, people wrote a length about other potential conflicts. **Housing and urban development** was the top one, mentioned over 250 times:

"Building of much needed homes. House building should not be allowed on green spaces, allotments etc. there should be a way to build on brown field sites, which are often closer to amenities that people need."

"Building housing is probably a challenge when rare flora or fauna are discovered on the land in question."

"The housing crisis especially in west Sheffield: we need to build far more homes for the city to grow and succeed economically, while maintaining and improving access to green space."

"There is a conflict between nature and building affordable housing."

Maintenance and management was also a common theme with over 100 mentions such as:

"When grass verges, trees and bushes are not cared for properly, ie pruning and trimming so the view of road users is not obstructed."

"Overhanging branches on pavements can be a problem. Wildflower meadows need to be managed to avoid becoming traps for litter."

"When plants are overgrown and block paths and views and signposts."

"Nature is not a nuisance if managed correctly. When the councils do not mow the grass and it dries there have been instances where this dried grass has been set on fire and spread. This is not nature's fault but bad management and lack of punishment/deterrent."

"I can see that overgrown hedges can affect pavements, and nettles and brambles, which are great for wildlife can be very annoying, and trees can shred.. so yes, some aspects of nature need to be controlled in certain areas."

"Footways being made narrower by vegetation not being cut back (narrow pavements made even narrower). Sight lines at road junctions being obstructed. Damage to drystone walls by rampaging weeds. Overgrown footways are a danger to the blind or partially sighted, to parents with double buggies, and toddlers, wheelchairs etc."

"Adjacent to footpaths and road junctions. If hedges and verges are to be left uncut, there needs to be signage to explain why to avoid the constant moaning of council cutbacks."

"When wild flower planting areas on footpaths are left to become a muddy mess. Gives the impression that the wild flower meadow is just a cost cutting exercise rather than a true environmental scheme. Also when nature protection is used as an excuse not to properly clear waterways of silt and weeds which causes mass flooding of farmers fields, roads and homes."

And '**economic priorities vs nature**' also came up over 120 times:

"We need to balance the costs incurred by maintaining these spaces. For small businesses it is already hard to keep the business running."

"Financial choices and pressures Eg looking after parks as opposed to funding social services."

"When short-term profit or political gain are prioritised over nature."

"If the money was needed for other priorities and could not be spent on making Doncaster more nature and wildlife friendly."

"Planning when 'money talks', because in general butterflies don't make a profit!!!"

Policy decisions and competing priorities for both local and national authorities was a further theme:

"The problems will come when the Government starts to concrete over every green space we have. The conflict will be with the Council/MPs/Government not nature. This is when the electorate will see whether the Council/MPs/Local Authorities really care about this area or not."

"I believe the only conflict is due to costs and budgets of Councils and local authorities. I appreciate that for this reason people may not see nature as a priority. Money is tight and improvements or changes in nature are not always viewed favourably when people need other services on a day to day basis to exist."

As was **Agricultural and other land use**:

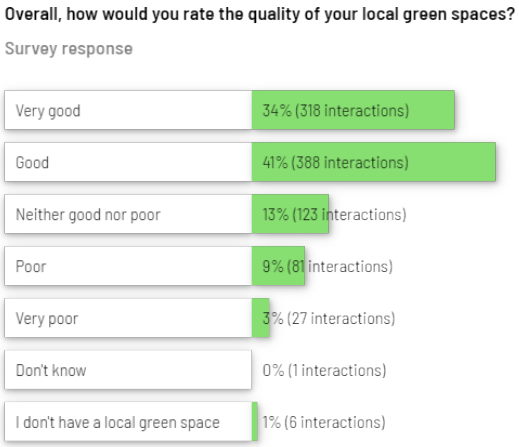
"For some kinds of farming, some wildlife can be destructive."

"Intensive agriculture, which eliminates nature as far as possible to maximise yields."

"When arable or grazing land is rewilded."

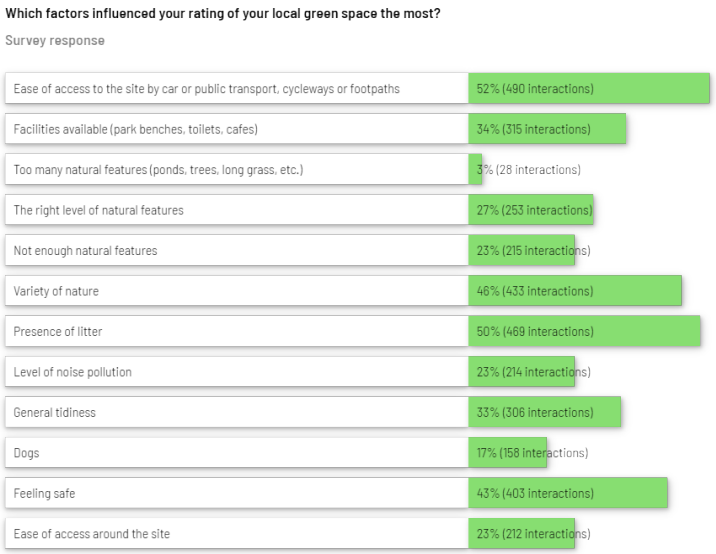
In summary, people do realise that there are many, possibly competing priorities on how finite resources and land are used – but often feel that plans are not integrated enough, that priorities are 'wrong' and that management and maintenance can be perceived to be neglected.

7.6.4. Overall, how would you rate the quality of your local green spaces?



Even though respondents have written at length in previous questions, often negatively, overall they rate the quality of *their* local green spaces as good or very good.

However, when asked to clarify or expand on their response, they mostly wrote about the negatives. Respondents expressed deep frustration about litter, fly-tipping, and insufficient maintenance. Specifically raised was a lack of bins, inadequate enforcement, and poor upkeep, making green spaces less inviting and damaging their natural beauty. This could also impact fauna.



Litter and fly tipping got 36 mentions

"Litter, broken glass and unruly teenagers. This puts me off visiting my local park which was beautiful when I was a kid."

"Flytipping on the Roman Ridge pathway is a problem. I live next to the Roman Ridge and am disheartened when I see rubbish strewn about, and worse yet is the quantity of flytipping."

"I'm doing the litter picking with others, but some places are left to rot. They are not visited at all by the council so we have broken glass, fly-tipping, food waste. Some has been ignored for over a year now."

"In the last few years I have noticed a reduction in the maintenance work from local authorities in our local green spaces. There's also been an increase in fly tipping and litter in these areas."

Dog fouling was close behind with 30 comments:

"People don't respect the nature, leave litter and dog poop behind. Everything smells like dog urine on a hot day."

dog owners leaving poo bags."

"Dogs off their leads can be scary and disturb wildlife and sadly there's always a lot of dog poo in my local wood."

"Dog fouling is horrific and this habit of leaving dog poo bags hanging from trees."

Access and facilities was mentioned around 30 times: sometimes positively:

"Ease of access is good but the upkeep and maintenance needs to be done daily to keep open spaces safe."

"I am lucky to have Loxley and Wadsley Common just around the corner from me. There is also a small park for children to play and outdoor space for the sports center. When travelling to other nature sites things like facilities and ease of access around the site are top considerations for me and my family."

"Somewhere my kids can explore and feel safe. Also toilets are a must!! They are not good at wild wees!!"

"I am fortunate to live near a park which I can access."

The lake near my home has free access to all."

And some more critically:

"Needs a safer crossing / access between wharncliffe and Greno woods."

"We live two minutes from football field/park…footpath is too overgrown to see, impossible access for disabled like me."

"My nearest green space is an old pit site - it feels unloved and very little information about the site - it could be so much more."

"Paths need to be usable all year round and upgraded to better quality so all can walk and cycle (or mobility scooter) all year round."

"Some parks lack toilets and cafes, which are essential for family visits."

"A toilet in Meersbrook park would be great!

"No benches make it hard for seniors to rest while walking."

"Facilities like Wharncliffe and Grenoside woods need parking and better infrastructure."

Antisocial behaviour and safety concerns also had over 30 comments, including mentions of drug use, vandalism, and off-road biking. These activities make some green spaces feel unsafe, particularly for women, children, and vulnerable groups:

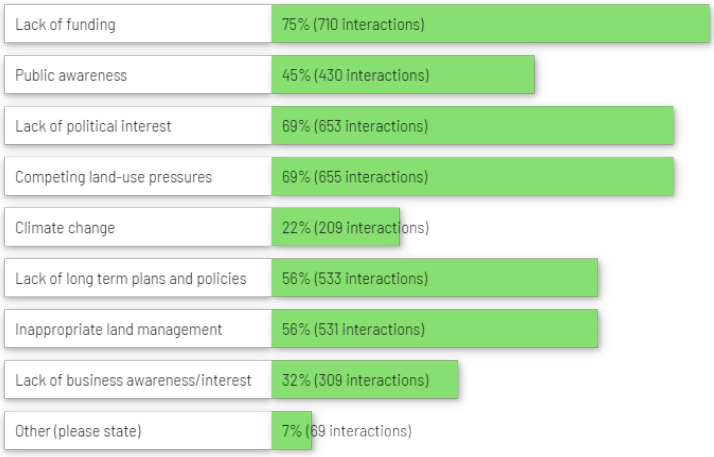
"Some people even do drugs and weed on parks on broad daylight."

"We travel to nature reserves as our local green spaces are not clean or patrolled by police so are a hotspot for drug use and vandalism."

"Anti social behaviour unfortunately. Lots of shooting in our local woodlands, as well as off road bikes and quads active in the area."

"I don't feel safe visiting green spaces alone."

7.6.5. What do you think are the main barriers to increasing nature in South Yorkshire?



People could select multiple options to answer this question, and many used the 'other' category to expand on the given themes or just make a general complaint about their perceived state of things. However, a few barriers stood out:

Housing and other development was mentioned 23 times:

"The need for additional housing is putting increasing pressures on maintaining green spaces. Developers are choosing to purchase green sites

instead of brownfield sites as it is cheaper to develop on untouched land then to potentially deal with contaminants on brownfield sites."

"The significant development and building on green space and removal of natural habitats under the Local Plan."

"New housing been built ...that is one main concern for me where I live...new houses are taking up crop fields , green land etc and this is totally not right ! I live on a flood plain and with increase building of houses and the huge plans on the A635 in this area will only make it flood more and more ..nothing is taken into consideration . only the £ signs ! no thoughts to nature ,wildlife or residents already living in a built up area."

"Building projects that promise enhancements in local facilities in later stages and then once houses done they run out of money for the promised improvements. Ie they get the houses and profits but community is left under pressure with no improved infrastructure eg drs/ schools or enhanced green spaces etc."

Level with **policy and political will** (also 23 mentions). Respondents cited government policies, lack of enforcement, and insufficient funding at both local and national levels as hindering efforts to protect nature. Responses also expressed that political will often prioritises economic interests, sidelining environmental concerns:

"Insufficient national policy to support it and insufficient resources to enact locally (not just money but trained people too)."

"Given the Labour Party dominates the South Yorkshire political landscape, I think lack of political interest is a concern but I think lack of interest among the electorate is also a concern."

"Fundamentally it is a lack of political will and capitulation to short-sighted special interest lobbies with investments in the status quo, as well as rank mismanagement like the shameful tree cutting debacle."

"We need the political will to preserve the environment, stop selling of green spaces, stop cutting flowering plants in the summer to aid pollinators and deal with people who fly-tip or drop litter."

"Council. Only taking note as and when it suits them."

"Local authorities being more concerned about financial gain. No matter how hard conservation groups battle, when money is involved they don't stand a chance. Everyone who cares is fighting a losing battle against local authorities and the central government."

A perceived **lack of awareness, understanding and interest** also came through again (14 comments):

"Total disinterest from local people to get involved."

"Public Ignorance, small mindedness and self interest."

"Public ignorance about how serious the threats of climate change and loss of nature (eg. loss of pollinators) is."

"I think sometimes, people's ignorance of how important nature is and their lack of willingness to look after it is a major hurdle (e.g. people not taking their litter home with them when visiting these places (or picking up their dog's mess) and people who fly tip in fields/woodlands)."

"lack of volunteers interested."

"Lack of education."

"People in charge making the decisions with little information or education of the countryside or how it works."

"Skills gap - less and less people have the knowledge that conservation groups have."

Farming and land management was explicitly mentioned 7 times, often combined with the general theme of **pollution and environmental damage** (8 mentions). These are not strictly barriers to nature recovery, but are nonetheless issues which respondents feel strongly about in this context, and are at least competing priorities or ways of doing things:

"National policy, particularly in relation to agriculture, pesticides, peat use and game shooting."

"I think regionally for me the biggest barrier/issue is retaining a predominant monoculture of heathland with annual peatland burning by landowners for a tiny wealthy minority to practice bloodsports e.g. driven grouse shooting."

"Farming practices have seriously reduced the number of insects and small animals and reduced the amount of hedgerows and trees, and used chemicals which have affected water quality. all of which have which have a had a knock on effect."

"Government, landowners and farmers prioritising blood sports, industrial farming and pastureland over nature restoration, climate change and biodiversity."

"Poor farming practices e.g. cutting grass for silage before ground nesting birds can raise a brood. Hedge flailing instead of traditional laying. etc."

"I am particularly concerned about the river and lake pollution and the impact on wildlife and humans."

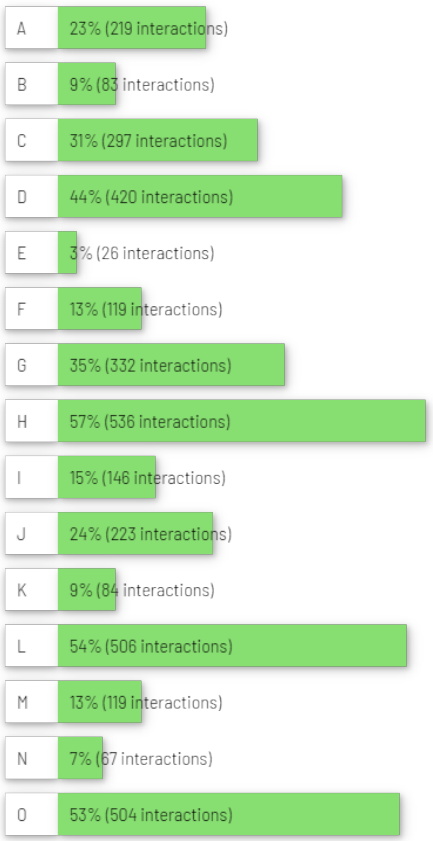
"Agricultural and industrial exploitation of nature leaves it in a poor state in the area. Our rivers and countryside are polluted from current and especially historical dumping (legal and illegal). See recent reports on toxic forever chemicals in waterways and soil across the country."

7.6.6. Who do you think is responsible for increasing nature in South Yorkshire?

	level of percieved responsibility				
	not at all	not very	neutral	somewhat	very
local people	13	51	124	510	264
local businesses	24	82	147	472	237
community organisations	8	38	153	536	228
farmers/landowners	11	31	82	333	507
local authorities	11	25	35	150	742
visitors to the area	83	163	354	260	10
conservation organisations	4	11	84	352	514
central government	21	26	71	188	660
National Park Authorities	8	12	68	257	620
statutory bodies (e.g. EA, FC, NE)	4	11	56	192	703

Summing the last two columns shows really that everyone is felt to have responsibility for increasing nature except visitors to the area, but it suggests that most people feel that local and national government and other authorities bear the most responsibility, followed by farmers and conservation organisations. Local people, businesses and community organisations are willing actors, but this suggests that they look to the authorities to take the lead.

7.6.7. Choose four images that represent what you feel the future of your city/town/village local green space should be.



Images **H**, **L**, **O** and **D** were the most frequently chosen, definitely favouring the wilder images.

G, **C**, **J** and **A** were the next most frequently chosen:

which feature more managed 'nature' images in an urban context.

When asked why they had chosen those images, some strong themes emerged, which corroborate that, although in most cases the responses were integrated, i.e. a response mentioning a balance between all of these themes, such as: *"A balance of green and blue features alongside modern builds and infrastructure, easily accessible, clean and good for wildlife"* and *"Urban green spaces should contain as many natural features and different habitats as possible to create biodiversity and opportunities for people to connect with nature (H, L), while still having accessible pathways (N) for those with mobility issues and to make it less muddy. There should still be lawned areas (F) for people to play football and rougher open spaces (N) for people to safely walk their dogs without disturbing nature too much."*

"Green spaces need to be part of the living environment. Not separate to it. Tree lined streets, places for kids to play sports, ponds for birds, insects and amphibians to thrive. Flowers for bees and butterflies."

However, some themes were more frequently referred to in these responses than others:

Natural, less managed spaces received over 280 references:

"They're the closest to wild nature and seem more biodiverse"

"They are more natural, they look nicer, they provide a better habitat for nature."

"The more natural/ wilder ones are more appealing to me."

"They are the most natural and not man made or manufactured. This brings wildlife together over time."

"I would like as much natural - looking greenery in the local environment as is possible."

Closely followed by mentions of **biodiversity and wildlife** (over 260 mentions):

"I chose the images with highest levels of biodiversity and range of habitats."

"Because they look the most natural and appear to have the best habitat for wildlife."

"Naturalisation is good, native wildflowers and wildlife."

"Wildflowers for insects and bees and look beautiful."

"Wildflower and space for insects and animals to feed / live."

Integration of nature into an urban setting, or **'urban greening'** got 140 comments:

"Nature should dovetail with housing and business. There should be green spaces available for children to play close to their homes."

"Bringing green spaces to urban areas."

"I like A because in the very heart of a city it's important to have some greenery and planting that makes people happy and in a small area available like this it's not going to be popular to put a few wild flowers, it needs to look attractive too."

"We are almost certainly going to always create more urban developments than nature reserves, so the inclusion of nature friendly measures in these developments is crucial.."

"I chose two that illustrate housing and nature integrated in harmony."

Water was also a strong theme, with over 100 comments, most of them mention water being calming:

"Ponds will help produce pond life and help with flooding."

"water is always calming."

"G. Water features to attract wildlife as well as beautifying the area."

"Water is usually restful and attracts wildlife."

"water in the form of rivers or streams already present and creating ponds and scrapes in parks."

"Parks with relaxing water features."

And **trees and vegetation** were another key feature of comments (over 90 mentions):

"We need more trees, green lungs."

"Trees are an important part of improving the environment. They can reduce heat by up to 4% in urban areas."

"Trees improve air quality and provide homes for many species."

"Trees for urban cooling and green island effects to help us survive a bit better as we continue to heat the climate."

"Having trees and indigenous wild flowers on the doorstep."

"There needs to be more trees, verges left to flower for insects, areas need to look semi wild and not pristine."

"Trees improve the air quality but there needs to be sufficient daylight and sun both of which are good for our mental health."

"Too many trees have been allowed to become too large on council land. The council just does not care about the loss of light to homes or impact on houses. It is time for the council to manage trees and not let them become too big."

Accessibility and recreational use was commented on over 90 times:

"Key is for areas with access to walk, run, cycle and play, especially where the pathways are an integral part of the transport/movement through a community. Ie. Routes with a purpose."

"Attractive spaces with a good balance of wildflowers and smartly designed and accessible walking/cycling spaces suitable for a city and for locals and visitors to enjoy."

"Maintained walkways with wild flowers to attract wildlife and natural marsh lands where you can enjoy the landscape and wildlife."

"Some well maintained areas with paths that cater for pushchairs and wheelchairs."

"Being able to take grandchildren walking and talk/ show them plants, insects, birds, animals."

"Accessible paths with green spaces away from busy roads and housing."

"nature allowed to flourish but still accessible to humans of all abilities."

"Safe, flat areas with seating for older people and those with disabilities."

"Parks should be inclusive for wheelchair users, pushchairs, and families.

"Spaces with good lighting and clear pathways feel safe and inviting."

62 comments specifically called for a **managed, balanced approach**:

"Green spaces need a balance of careful management/restoration and the ability for them to just be... Native plant species are crucial."

"Natural but not too wild in urban spaces."

"A balance between useable space for people living in the area, and for wildlife to grow and flourish."

"We need a balance of wild areas and water for wildlife and insects but also safe, well paved walking areas to take us through green areas."

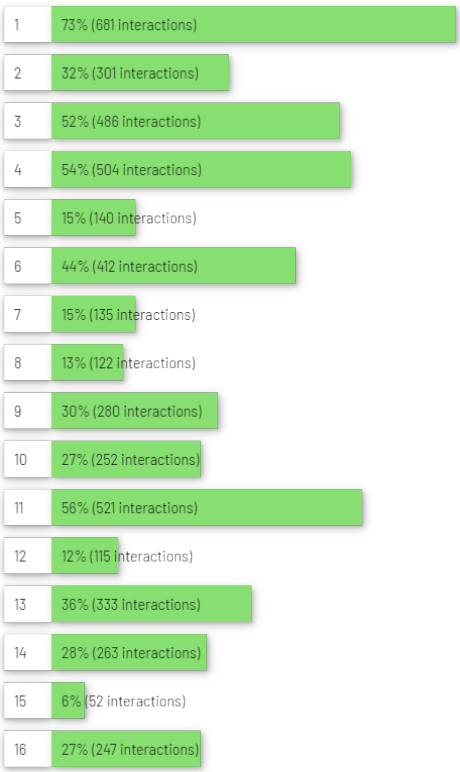
"Because they provide a balance to connecting with nature and providing communities with outdoor spaces to do outdoor activities. Large grasses areas with lots of trees where you can walk or play and enjoy a picnic in the shade. Parks with relaxing water features, maintained walkways with wild flowers to attract wildlife and natural marsh lands where you can enjoy the landscape and wildlife."

"Need to balance accessibility whilst giving nature space to flourish. Mix of managed areas and wild. In the last year I feel the move towards this has been very visible in certain areas such as Manor Fields Park and Wincobank Hillfort area."

"A balance between protecting nature and providing affordable housing."

"They all appear natural - strike a balance between natural and urban environment."

7.6.8. Choose four images that represent what you feel the future of the wider landscape of South Yorkshire should be.



Images **1**, **11**, **4** and **3** were top choices showing an understanding of balancing land use for wildlife (including beavers), with green energy generation and farming.

These were closely followed by **6**, **13** and **2**.

then **16**, **14** and **9**.

As with much of this engagement work, this shows a very thoughtful and balanced approach, even from a cohort of people who otherwise have been expressing quite strong views about wild nature taking priority.

Many responses were, as above, sentences integrating many themes, such as:

> *"Mixture of uplifting attractive spaces with different types of natural wildlife without being harshly managed grazing land or bleak lifeless moorland. Lots of woodland. Good use of pylons and landscaping to enhance the use of the land and its accessibility to visitors."*
>
> *"More ponds and leaky dams help protect against floods and offers water and homes for wildlife in a natural way. Ancient temperate rainforest woodland is unique and should be retained and allowed to spread I chose the lynx as a symbol of species reintroduction though it needs to be the right species in the right landscape with the right protections And controversially perhaps i chose wind farms. We need energy. It has to be somewhere but should not impact migration routes for birds and not destroy the land itself. But its a balance and we need green energy."*
>
> *"To keep nature accessible to those wishing to visit it. Use it where possible to create energy that is better for the climate. To keep our rivers and waterways clean and unpolluted and allow wild flowers and natural habitat for wild animals to flourish."*
>
> *"Because I think allowing sites to regenerate by taking away grazing pressure, slowing the flow of rivers, planting trees and reducing moor burning will allow nature to do its thing and create good habitats and growth. Also green energy harvesting and allowing people access to the outdoors are equally important."*

However, seven major themes emerged:

240 respondents stressed the need for **rewilding and natural landscapes**. The responses showed a desire for a clear partition between agricultural land and natural areas. Reintroduction of species like beavers and lynx (even though the lynx image (8) wasn't so frequently chosen), and the restoration of wetlands and forests were seen as a step towards ecological balance.

> *"Lots of lovely images to choose from. I picked those that represent rewilding, bringing back previously extinct creatures to help manage habitats and flood defences."*
>
> *"Nature should be allowed to recover as it would have been without human intervention in order to halt and reverse the accelerating decline of nature (which will only impact us in future). We need to stop pretending that our present countryside is at all natural, and move away from celebrating 'natural areas' which are managed for sheep and pheasant shooting, rather than nature. Given, these areas need to be managed for several communities/ activities- but right now nature is being exploited and the balance is severely off."*
>
> *"Natural habitats for local wildlife and nice to look at too!"*
>
> *"I would love native species like beavers to be reintroduced and nature to be able to thrive with less human interference."*
>
> *"Having Lynx in South Yorkshire would be a dream but who knows? Pine marten, beaver and wild boar could and should be here already."*

Over 180 respondents emphasised the importance of **biodiversity and wildlife**. Key priorities detailed preserving and enhancing the natural beauty and biodiversity of South Yorkshire including ancient woodlands, wildflower meadows, and wildlife habitats.

> *"Wild native bluebell woods, peaks that encourage biodiversity, no persecution of birds of prey and badgers and foxes."*
>
> *"Diversity of plants and landscape including lots of green to capture carbon and reduce flooding."*
>
> *"Preserved but not manicured nature."*
>
> *"we need wildflower areas for the insects and wildlife."*
>
> *"Ancient woodlands and wet woodland/rainforest are precious habitats and need protection."*
>
> *"Water is always relaxing and brings in wildlife from frogs and toads to dragonflies, damselflies and all other kinds of life."*

Water management and flood prevention featured 178 times:

> *"Wild flowers, sympathetic pathways, natural water management."*
>
> *"I felt that the managed water drainage was something we would need to consider for increased rainfall in the future. These are already in place in lady cannings plantation I also selected pictures with natural woodlands, which also ensure water is absorbed and prevents flooding."*
>
> *"The natural rivers spoke to me of good ideas to avoid flooding."*

"beaver reintroduction would help with flood management."

"Allowing nature to help with climate change - flooding risk."

119 respondents emphasised **accessibility and public enjoyment**. People valued footpaths, boardwalks, and initiatives that help the public engage with and learn about biodiversity and conservation.

"Ensuring access for anyone, regardless of ability, to nature in open spaces."

"Nature should be enjoyable but work for the locals too."

"Access and purpose are key reasons."

"The natural scene with a wooden boardwalk spoke to me about ensuring access for anyone, regardless of ability, to nature in open spaces."

"landscaping to enhance the use of the land and its accessibility to visitors."

"Accessible footpaths to allow everyone to use the outdoors Access to natural waterways, safely managed."

The Preservation of **Woodlands and Green Spaces** occurred over 110 times. Respondents expressed a desire to see more natural woodlands, not just forestry.

"Woodlands should be protected and moorlands should be left to re-wild"

"Woodland and waterways"

"Ancient woodlands need to be protected as we have lost too many."

90 mentions were made of **Renewable energy and climate change** as a key theme:

"coexisting priorities (renewables and nature)."

"Using the landscape in a way that addresses the impact of climate change."

"Wind farms necessary, confined walking areas to protect certain landscapes."

"farmers need to still be able to make a living from the land but we need to create more renewable energy on the land."

"Would be nice to see wind turbines as it is more ecological."

"think we need more wind turbines locally to help with sustainable energy production."

"The biggest eyesore is from climate change driven by fossil fuels, so we have to act to protect nature (and ourselves in it) by ensuring we have a clean, secure, inclusive generation capacity. This means wind, solar, hydro. Nuclear can get in the bin."

"Have not chosen the wind turbines as they do not look attractive but think they are better than pylons and we may have to accept these in terms of measures to combat climate change."

67 responses included the theme of **Farming and food production**. Respondents emphasised the need for sustainable, local food production and a more resilient food system in their local area.

"Farming is essential to local people's well being. Local people should have easy access to locally produced produce through local farmers, and local privately owned greengrocers, butchers, fishmongers. The prevalence of supermarkets sprawling across our local communities, facilitated by local authorities, meanings our consumption is mainly imported foods, to the detriment of local producers."

"A farmed landscape - continuing to grow some food for our densely populated island, but using farming practices which allow wildlife to thrive and soil health to be the main priority. This will require a more holistic mindset from everyone involved, a shift in consumer and retailer behaviour, and local authority leadership. Grazing livestock used as a land management tool where possible - less focus on methane and cows, which is part of the biogenic cycle, and more focus on reduction of fossil fuel usage, which is meant to stay underground and is the real driver of climate change. An abundant, rich, diverse landscape with growing plants, just edges and paths mown in parks, then hay making at the end of the summer, so that floral diversity increases over time. This is starting to happen in some local authorities, e.g. Stockport."

"return to previous higher standards including more land returned to farming as we need to be more self-sufficient."

"A hard choice, but these four show diverse areas and a link to farming which is where a real balance is needed."

"we should be supporting local farmers and enabling them to continue growing food while minimising their environmental impact. Likely to need funding to help them transition to greener farming practices."

In summary, people's responses were generally very balanced and well-informed, understanding the various pressures on the landscape and the choices to be made.

7.6.9. Do you currently do anything to help nature?

As would be expected from this cohort of people who have answered an online survey about nature, they are already extremely active.

450 responses talked about **wildlife gardening** with great enthusiasm:

"I have created a wildlife garden with multiple ponds. This year, I put a tank on my front wall with some frogspawn in it in a properly created ecosystem so passers by could watch the tadpoles develop and then local children who engaged helped me release the froglets back into my wildlife garden once they had all four legs. Not only did I get to know lots of neighbours, a number have now added container ponds and bog areas to there own gardens."

"I have planted bee and butterfly-friendly plants in our garden and left wild spaces for pollinators."

"My garden has areas of wildflowers, a pond, and insect hotels."

"We've created a hedgehog highway and bird feeders."

"No mow May and native hedges have transformed my garden into a haven for wildlife."

"My garden won a nature award last year due to my pond, native hedging, fruit trees, and completely wild areas."

"Provide nest boxes, feed the birds, installed a wildlife pond, have wildflowers and patches of overgrown grass in the garden, lots of native, pollinator friendly plants and flowers."

With appropriate support, this is cohort of very willing nature advocates to support the awareness of and rollout of a Local Nature Recovery Strategy.

Over 110 talked about **supporting environmental organisations**, through membership, donating and volunteering:

"I'm a member of the RSPB & YWT"

"Member of a Bird club, RSPB volunteer, member of the BTO, bird survey organiser for the BTO"

"Member of Councils Climate Change group"

"Record Nature for several nature databases. Donate a bit of money, sometimes, to appeals to conserve the natural world"

"I am a member of (and donor to) Sheffield and Rotherham Wildlife Trust, and occasionally do visits or volunteering with them"

"Am a member of the RSPB, Woodland Trust, WWF, Â Sheffield and Rotherham Wildlife Trust, Rivelin Valley Conservation Group and Friends of Loxley Valley"

"Member RSPB and Butterfly Conservation and monitoring local nature spotting to be reported back too"

In fact, **volunteering** was mentioned 100 times:

"I volunteer in my local woodland twice a week, doing physical work and promoting the benefits of working within natural settings with natural materials"

"Volunteer for the Yorkshire wildlife trust"

"Volunteer for Don Gorge Community Group and YWT at Sprotborough Flash and associated woodland and meadows. Work includes tree planting, hedge laying, path clearing using brush-cutters, clearing of non-native invasive species, installation of benches, and some restoration of stone walls as well as litter picking"

"Volunteer at Potteric Carr Nature Reserve and at Flourish Walled Garden, Balby"

"Volunteer at local nature reserve"

More than 100 people mentioned **litter picking**, more than 80 **reducing their carbon footprint**, around 50 each of **reducing waste** and other aspects of **sustainable living**, and around 20 mentioning advocacy and activism. All in all, this is a very committed groups of individuals.

7.6.10. If you would like to do more for nature, what support would help you?

Given the answers to the question above, it's interesting that most people still want to do even more. The responses are less easy to categorise but there was a general request for **funding** to support efforts by community groups and farmers that are currently voluntary:

"As a tenant farmer every acre needs to return a rent, although a lot of my wildlife management is self funded the majority is funded by Higher Tier schemes etc so funding is my priority, whether per hectare or access to items such as free hedge plants, wild flower seeds etc"

"Funding for farmer cluster groups which is easy to access, flexible and not too much administrative burden"

"Financial support from local authorities and businesses, and listening to stakeholders needs"

"More environment focused jobs. Funding for local communities"

"More funding for green spaces"

There is also a plea for **more awareness about groups and schemes to join**

"Knowing what schemes and opportunities there are to get involved. Perhaps a dedicated south Yorkshire social media account highlighting opportunities and creating educational content. Information on any citizen science projects (butterfly counts etc) and groups doing seasonal wildlife support like toads across the road etc."

"Knowing what organisations do to be able to tap in for support & inspiration."

"Greater awareness on small things I can do to help."

"More clearly advertised opportunities on the council website."

People would also like to be supported by **local authority action aligned with nature recovery**:

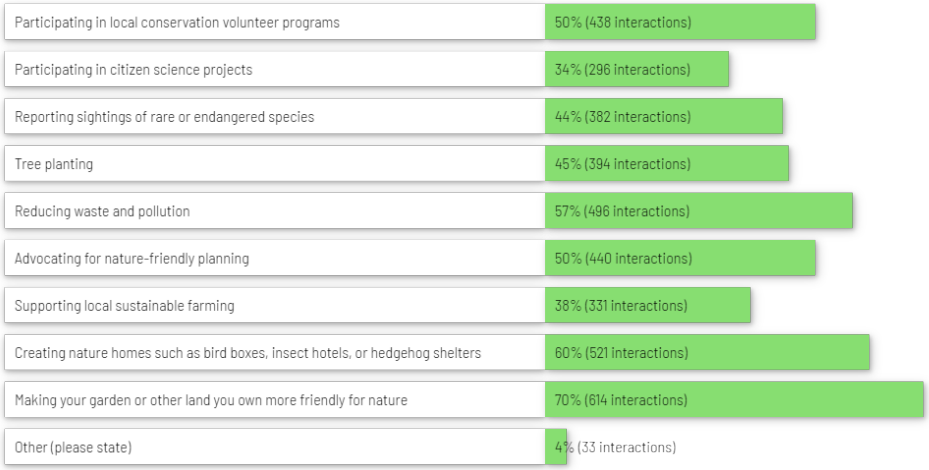
"I think there are plenty of opportunities within the wider South Yorkshire region but I'm not sure about any council led initiatives within the city."

"Hearing the government and LA stand up for nature and prioritise it in policies. Better recycling provision. Pressure on businesses to reduce their negative environmental impact. Better public transport (less vehicles and pollution) improving access to nature for all."

"Dog fouling enforced. Littering laws enforced."

"Be receptive - 2-3 years ago I put together a proposal to replace non-native housing estate planting with native species which would have required less maintenance, and was told that couldn't be done because the council couldn't commit to maintaining it. I rather gave up trying to engage at that point, apart from to report a new stand of Japanese knotweed on council land which was also ignored. Then I really did give up."

7.6.11. Which of the following might you be interested in taking part in to help nature in South Yorkshire?



And it's to be expected that this group of people have said that they'd generally like to take part in everything! Responses to 'other' were mostly clustered around people saying that they already do all of those things. Additional suggestions, however, included:

- "Contributing to local consultations on environmental projects & management schemes"
- "Delivering training"
- "We would be happy to have more public engagement with environmental projects on the farm"
- "Persuading local and national government to provide more resources, stop relying on local community groups where there is no funding"

- “Introducing the concept of Agrovoltaics to the council as a planning condition for solar farms”

7.6.12. Is there anything preventing you helping with nature recovery activities within your community/area?

Over 230 people simply said **time constraints**: volunteering activities often clash with their schedules, particularly when they occur during working hours. Single parents, caregivers, and individuals with multiple responsibilities felt especially stretched for time, making it hard to participate in community-led nature recovery activities.

A further 88 mentioned **limited physical capacity** due to health, age, disability or mobility issues.

A **lack of awareness** of local programmes of activities to join in with was mentioned by 60 people.

"I'm not aware of what is happening locally."

"Lack of awareness of any such activities in our area."

"No idea what is happening and when; no one seems to consider reaching people who aren't on social media."

"Not knowing who to go to or how to get involved."

Lack of funding (and local authority support) was an issue for 45 people:

"Lack of support or funding from local council."

"Supporting staff in council. Jon Dallow and rangers are tremendous help but deserve more resources. So much for volunteers to do to manage big areas of green spaces."

"Competition for funding (whether from grants or membership) is a barrier to collaboration."

"Council help, their resources are too thinly spread."

Also a **lack of community engagement** (and support) was an issue for 27 respondents:

"[The] Council will not work with community groups to manage land better for nature."

"I have worked with residents groups and local authorities for many years but find that there's a lack of interest from other residents and local councillors."

"I will continue to do my best in isolation. There is a general community apathy towards actually doing anything positive, all talk no action."

"Apathy and inaction generally from local government departments."

"Lack of defined community groups with a focus on nature action in my area."

Finally, over 30 people just expressed general **disillusionment with their local authority**:

"Yes, the council. They are intent on building on every green space we have till there isn't any left. No one is listened to. When the planning permission documents were displayed it was in the middle of Covid 19 and it was the first lockdown so no one could view the notices as we were all stuck in our houses. We have written to tell them about owls and bats and deers, we have squirrels, badgers and foxes and hedgehogs. We have kestrels as well. But we are not listened to. At all."

"Lack of genuine interest from the Council."

"I was part of a friends of park group, but this became political and although I have recommended improvements to the local council which would improve the park for all and reduce ASB, the council are not interested."

"Not personally, just a wider battle against local authorities and central government who place nature at the bottom of their priorities."

"Local parish Council not open to public suggestion."

"People in charge pushing the council/governments agenda rather than actually understanding nature and the countryside."

"The attitude of my local authority, Barnsley. Plenty of virtue signalling but little action. Facing a brick wall of self-serving cabinet members."

"Feeling disillusioned that our local authority wants farmers to support nature recovery, but the local authority won't support farmers by buying the food they produce. Asking what they can purchase from farmers for the city's School meals would be a good relationship starting point."

7.6.13. What would help you engage with nature more?

The vast majority of answers to this question were along the lines of already being very engaged with nature or mentioning things outside of our control *("more hours in the day", "Not working as much", "Curing arthritis!"*)

But there were some coherent themes too:

Nearly 60 people wanted **better access**:

"Better (more bus services) & more affordable public transport (especially rail fares - I have stopped using trains for anything other than a small number of short journeys because rail fares are too high)."

"Better linked paths. Ease of access."

"Improved public transport to access sites."

"More access at times to help clean nature sites up."

"Improved public transport for example limited stop bus services that go into the peak district."

"Increased public transport access to local sites."

Increased and better publicised **community/volunteering schemes** to join in with (over 50):

"Better information on what is going on locally, with the environment, if volunteers are needed for example. We need a central information site where people can look to see if they can help in anyway."

"Link with employers to do volunteer days."

"Knowledge of local nature groups."

42 comments about more and better (and better cared for) **public green spaces:**

"Having more green spaces in the area. Town centre is sorely lacking in this."

"More open spaces but green spaces, not all needs to be woodland, or left to wild, local fields in the community I enjoy as I'm still in the community but it's open land so cut and maintained but encouraged designated spaces for wildflowers, small woodland, cameras and lighting so we can enjoy it as a women as winter is a lonely time as we work in the day light so cannot enjoy an autumn winter walk before/ after work through fear of it being dark."

"To feel safe in the green spaces and the area to be clean and well maintained."

"I engage with nature all the time, but it would be nicer if it wasn't reducing around us and if the green spaces we have were preserved, protected and looked after better than they are."

More **local authority support** (38 responses):

"More funding and signposting from local authorities and others to local conservation charities and groups."

"System change and support, help to be effective and collective, policy and legal changes to convert individual willing into a movement."

"The Council needs to listen to the local community and sort out the existing problems before work and improvements can be made and implemented to the benefit of all."

"I feel that groups and local councils don't do enough to help with nature, some turn a blind eye to such things as INNS issues in the UK."

"Support from local authority but they just can't. no money no staff."

"A point I'd like to make about Sheffield - The people that the council use to manage the green spaces apparently have NO training in horticulture or anything even close. Contractors or whoever come in and just hack at things. Trees are massacred, not pruned. Planted, then never watered. Local park 'maintenance' of shrub beds means running a chainsaw over the top of everything, then leaving. No weeding, no attempt to prune individual shrubs to help them do their best, no aesthetic consideration. Just roll up, butcher everything, then go. There is NO CARE!"

"A present local authority who view nature restoration as a priority. Theres a feeling that if you improve areas, a week later its trashed anyway."

"Support from our local MPs and Councillors, businesses and schools - I think a lot of people can feel disheartened when they don't see action being taken more broadly."

"That the Authorities responsible are making this a priority. Instil some confidence in our communities about this. Seems to be a lack of understanding by policy makers of what local communities need and more importantly need. Imposing their ideas on Communities without no awareness."

Personal safety was mentioned 14 times:

"As a female solo walker in the Doncaster area, I no longer feel safe, and this has severely impacted on me engaging with nature in the local area."

"To feel safe in the green spaces and the area to be clean and well maintained."

"If I felt I could go out more on my own, feeling safe."

"Designated spaces for wildflowers, small woodland, cameras and lighting so we can enjoy it as a woman as winter is a lonely time as we work in the day light so cannot enjoy an autumn winter walk before/ after work through fear of it being dark."

"Feeling safer in more lonely places."

"If the green spaces were safer - less off-road bikers in our parks/woodland."

7.6.14. Finally, is there anything else you would like to add?

Many responses are making a point personal to them, or reiterating other things that they would have said earlier:

"Please introduce a policy banning use of glyphosate, and petrol mowers. Do not chop down any more mature trees."

"Please help me find a job locally to help with nature, We have a big green area full of litter and junk/scrap (big job) no one cares for it, has a pond with ducks, waterlogged grass and trees just covered in litter."

"Having been involved with nature conservation for nearly 40 years and seen money wasted on schemes like biodiversity Action Plans achieve virtually nothing I remain very sceptical about this project. Planting trees and dodgy wildflower meadows will not restore the nature I remember in the past."

"Please ask the SY Mayor to ensure he is sighted on large-scale projects that impact directly on nature, and residents, such as the huge solar farm proposed for Cudworth / Grimethorpe."

"Please do all you possibly can to address Nature Decline before it's too late. Humans need nature to survive. I want my grandchildren to experience nature at its finest and themselves understand how to care and protect it."

22 mentioned **the survey** in particular:

Some positively:

"Cracking survey, SYMCA!"

"Thank you for creating this survey, I look forward to seeing some positive results from this work."

"Detailed survey, thank you!"

"Encouraging to see SYCMA doing this. More public engagement on this and other topics please!"

"I'm pleased to see the existence of a survey like this suggesting more care and attention will be paid to nature and climate change initiatives in South Yorkshire going forward it's a critically important issue! Thank you."

"Thank you for this survey. please do the work well so it makes a real difference."

"I'm grateful that you are carrying out a survey such as this and really hope you can make a positive impact on nature in South Yorkshire."

"Thanks for doing this survey."

"I am encouraged that you are consulting please make the most of opportunities Do not neglect the most deprived areas. Do work with schools and offenders to engage the disaffected and provide opportunities."

Others less so:

"Your questionnaire is not the easiest to navigate!"

"Think this questionnaire is too long/ complex for the 'casual' nature lover."

"I'd like to know what this survey has cost and what value the council perceives it has."

"Don't use this survey as an excuse for the council to neglect their duty to maintain open areas under guise of re wilding. Our parks have been in decline for decades."

"I feel this survey is merely a box ticking exercise and nothing will genuinely be done to help nature and increase i.t"

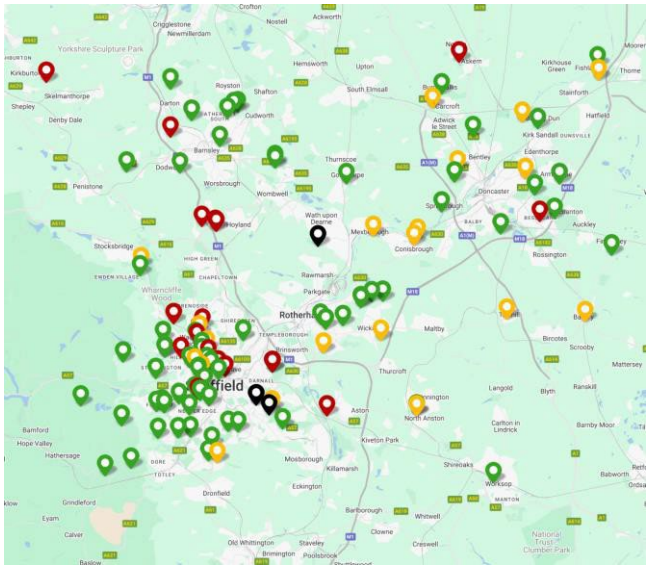
"The way this questionnaire reads comes across as a total lack of understanding of the farmed environment, and it's potential to support biodiversity, we would be happy to host a farm walk for you to illustrate the potential. Not all environmental gain needs to be on nature reserves, which although excellent, don't have a great deal of potential for increasing habitat, because they are managed to provide to their maximum potential…. I am concerned that this questionnaire does not address the need for Nature Recovery so much as asking what compromises people might be prepared to accept."

"I feel that I am a lone voice. I have more time to reply to surveys such as this since retiring. Few others have such a privilege. These surveys are an indulgence and should be recognised as such. Most mere mortals are too busy trying to

eke out an existence and have a family life to engage with such. Plenty of words, plenty of questions, we did a survey and we engaged. Pah! Recognise what you are doing. Engaging for engaging's sake. We did a survey. Tick the box. The system is broken and needs to change. Please, when you publish the results of this survey, recognise that you are doing something that won't engage with the vast majority of South Yorkshire residents' views."

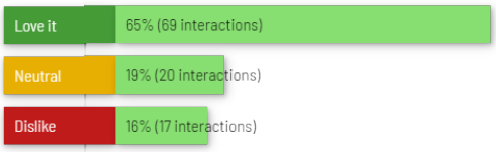
And there were reiterated views on **litter and waste management**, and **concerns about urban development**.

7.7. Map-based inputs



The other online engagement opportunity was to drop a pin on a map and then describe something about it. This gathered 106 interactions from 74 unique participants.

Most said that they loved the location, 19% were neutral, 16% disliked the location.



The fact that these are specific location-based comments means that they are less readily summarised, and these need to be dealt with individually by each authority and considered at the mapping stage. In most cases people were pinpointing areas local to them, or with which they are involved, and many of them saying that they were worried about the location. The results are available as appendices to this report.

7.8. Key findings and relevance for the LNRS

The overwhelming message from this group of people is that they are citizens committed to wildlife and nature, and ought to be strong advocates for a Local Nature Recovery Strategy. They hold strong views, but also (like other groups engaged through this process) generally take a balanced view of what is required of finite land resources. They already do a great deal for nature recovery, but don't feel listened to or supported.

There is strong opposition to housing and industrial development destroying green spaces, and a general view that local green spaces are not looked after properly.

Key points from online surveys

- These citizens are committed to wildlife and nature, and ought to be strong advocates for a Local Nature Recovery Strategy.
- They hold strong views, but generally take a balanced view of what is required of finite land.
- They already do a great deal for nature recovery, but don't feel listened to or supported.
- There is strong opposition to housing and industrial development destroying green spaces, and a general view that local green spaces are not looked after.

There is huge opportunity here; this is a cohort of potential supporters and advocates and there will be many more like them across South Yorkshire. A well publicised Local Nature Recovery Strategy, linked and dovetailed with other plans for accommodating housing, infrastructure and food production, has the potential to harness this energy and help to bring about meaningful nature recovery across South Yorkshire.

8. Similarities and differences across stakeholder groups

Across the three modes of engagement - workshops (including with farmers), public events and the online survey - we collected a diverse set of data that will help inform the final LNRS for South Yorkshire. The workshops targeted specific stakeholder groups, while public events and the online survey were open to anyone who wanted to contribute. When people are focusing on one issue, in this case nature recovery, there is a tendency not to think about the wider consequences and other potentially competing priorities. Therefore, the techniques and questions used encouraged responses that did focus on nature recovery, but in the context of many other issues and points of view. Despite the range of groups involved, summarised above, a core of commonly agreed themes emerged.

It was clear to see that people across the region, regardless of different intersectionalities, want to see nature recovery. Image selection showed strong overall preferences for wild, biodiverse landscapes across both urban and rural landscapes. This was often closely followed by images that support accessibility and recreational opportunities. The public engagement events in particular emphasised that areas need to appear 'tidy' and looked after. Images that appeared too wild were less desirable and therefore striking the balance between natural, manicured and accessible landscapes really clearly came through from this group of people. Unlike other groups, farmers have a very large influence how they manage large areas of land, coupled with their work also being a lifestyle. It was not unsurprising to find that farmers had shown much greater support for images that strongly supported traditional agricultural practices across the wider landscape. However, they also showed an appreciation of broader land-use needs. This is not to say that other groups overlooked these, as workshop and online survey results revealed moderate support for reintroductions of predators, renewable energy, food production and beaver dams, for example.

Key points overall

A core of common themes emerged throughout:

- strong preferences for 'wild', biodiverse landscapes across both urban and rural landscapes;
- water as an important feature in both;
- urban green spaces that are well-maintained, appear 'looked after' and feel safe;
- accessibility, both to and within nature-rich spaces;
- access to the wider landscape planned and managed so that people can access nature, but that it is not damaged by that access;
- a wider landscape balancing the needs of nature and wildlife, food production, renewable energy generation and recreational access.
- broad support for nature recovery as guided by expert knowledge for both urban and landscape spaces, as long as it takes into account those other demands on land-use.
- Many helpful plans and policies already in place at all levels of governance and across organisations, but it will take time and collaboration to align them for mutual benefit, using the LNRS as an organising framework.
- A recurring theme was that those involved in nature conservation often view other sections of society as needing to be educated on the importance of nature.
- These engagement findings challenge that perception. Wider society seems to be remarkably thoughtful and knowledgeable about nature and wildlife in broad terms; there is a general understanding of the importance of nature and other green spaces, and the need for this to be balanced by other demands.
- It appears that most people we heard from in South Yorkshire broadly agree on what is required and what they want. The focus now needs to be on communicating that shared vision to aid collaboration, and then co-developing and championing the legal, practical and financial frameworks to enable that shared nature-rich future to be realised.

Despite broad agreement in image selections, the reasonings behind these choices varied across the engagement modes. From workshops (not including farmers) and the online survey, selections were primarily driven by an ecological focus on wildlife, nature, biodiversity and water. Following this there was some acknowledgement of accessibility and recreational use. Many comments from the online survey alluded to the idea of a balance between the themes, recognising that they are all important and need to be considered together. In contrast, public engagement image selections were heavily influenced by aesthetics, though other high-scoring themes - such as terrestrial animals, nature and water - also played a role. As expected, farmer choices were typically centred around the need for the landscape to accommodate food production.

When considering who might not prioritise nature recovery, developers were the most cited group across all engagement modes and stakeholder groups. This was followed by farmers, who even voted for themselves with particular emphasis on 'intensive farmers', as well as governments, politicians and businesses. The drive for profit and financial motive was the leading reason followed by a general lack of awareness around the importance of nature. However, as stated above, this report suggests that it is incorrect and counterproductive to dismiss entire sectors as ignorant and short-sighted is less likely to support effective collaboration.

In exploring the barriers and enablers for nature recovery in South Yorkshire, there was a great deal of synergy between the workshops and online survey outputs. Funding was the leading example of both a barrier and enabler – and if it to be an enabler it needs to be secure long-term, sustainable funding. The other barrier and enabler was the perceived need for improved societal knowledge and education around nature and biodiversity. This was a recurring theme throughout the report and needs to be paid attention to; our findings indicate that while people may not have the technical knowledge around nature recovery, most individuals do have a good level of understanding around what is good for nature and what is bad. Other barriers mentioned include: public and stakeholder support, political will, farming, land ownership and management and pollution and environmental damage. A main enabler mentioned was the need for partnership, collaboration and a joined-up approach.

To conclude, there is a great deal of broad agreement across the various modes of engagement and stakeholder groups, and a strong desire for nature recovery in South Yorkshire. While there are already some helpful plans and policies in place and there is a lot of great work happening in the region, it is clear that there are many other considerations that will need to be integrated into the LNRS and as such, it'll need to be a well thought out process taking in account the needs of those that are living and working there. Successful implementation will depend on strong collaboration, effective communication, and cross-sector coordination. Although this report has primarily focused on gathering insights into people's perceptions, needs and aspirations for nature recovery across the region to help inform the LNRS, our engagement also provided opportunity to understand how the LNRS could be designed for optimal usability across diverse user groups. It was clear that the LNRS will need to be designed so that it becomes part of the everyday work of local authorities across the board, particularly for planners. It should be user-friendly, widely accessible, and compatible with existing systems, especially mapping software. Additionally, it must provide the right level of detail to be practical for various stakeholders and fit naturally into their workflows. Not only is the design itself important, but considerations of how it will align with LNRSs in neighbouring counties to support a coherent regional approach. There are a lot of moving parts to consider when devising and designing the LNRS, but there are plenty of individuals and groups that are supportive.

9. Next steps

The appropriate outputs from this engagement work have been fed into the parallel process focused on writing the statement of Priorities and Measures for the LNRS. Some aspects will also inform the mapping of those Priorities and Measures. When these have been done, a draft LNRS and set of supporting documents will go through statutory public consultation. Feedback from that process will inform the final version which will be published.

Some of the content of this engagement report should be helpful in both shaping the format of the published LNRS and may help to influence the way that it is communicated and rolled out. We believe that it is important to raise awareness that there is general understanding and agreement on what is required for nature recovery, a high degree of alignment on what the future might look like (even if people have different frames of reference for articulating that), and that what is required is a unifying strategy to harnesses and enable that shared vision to be brought about.

10. Appendices

10.1. Map-based submissions

When people placed a pin on the online map, they were asked to rate it as: 'love it', 'neutral' or 'dislike it'. The following locations were identified in those categories. Further comments and even images were submitted about each of these locations, and that detail will be taken into account for both the LNRS mapping process and to understand if any authorities need to take action or to understand the thoughts and opinions of people for whom these locations are important.

10.1.1. Map-based responses to 'love it'

Brecks Community Orchard	It's my local green space; I am concerned about this area;
On a lovely area of flora and fauna	I am concerned about this area;
Rivelin Valley	It's my local green space;
Herringthorpe Playing Fields	It's my local green space; I travel to this place to access nature; I am concerned about this area;
The woodland and marsh area where Carlton beck flows.	Other (please state);
Black Carr Plantation	It's my local green space;
Rose Hill	I travel to this place to access nature; I am concerned about this area;
Rossington	It's my local green space;
On the farm land to the rear of my property	Other
Whirlow Brook Park	It's my local green space; I travel to this place to access nature; We are already doing nature recovery work here; I work/volunteer here;
Ecclesall Woods	It's my local green space; I travel to this place to access nature; We are already doing nature recovery work here;
Blacka Moor Nature reserve	It's my local green space; I travel to this place to access nature; We are already doing nature recovery work here; I work/volunteer here;
Mount Pleasant Park	It's my local green space;
Millhouses Park	I travel to this place to access nature;
Loxley Valley	It's my local green space; I travel to this place to access nature; I am concerned about this area; We are already doing nature recovery work here; I work/volunteer here;
Gell Street Park	It's my local green space;
Porter Valley	I travel to this place to access nature;
Love Square	It's my local green space;
fishlake Wetlands	It's my local green space; I travel to this place to access nature; I am concerned about this area;
Chelsea Park	It's my local green space; We are already doing nature recovery work here;
Wincobank Hill Fort	I travel to this place to access nature;
The Wantley Dragon	I travel to this place to access nature;
Sheffield General Center	It's my local green space; We are already doing nature recovery work here; I work/volunteer here; Other (please state);
Longshaw	I travel to this place to access nature;
Ringinglow	I travel to this place to access nature;
Ball Streer	I travel to this place to access nature;
Lees Hall Wood	It's my local green space;
Rollestone Woods	It's my local green space;
A pond off barkston road. There is also another pond at the end of St Helens way monk bretton, and in monk bretton park.	I travel to this place to access nature; I am concerned about this area;
flood plain between Smithies and Mapplewell. Lowest point of runoff for river Dearne and Redbrook link for canal .	It's my local green space; I travel to this place to access nature; I am concerned about this area; Other (please state);
Darfield quarry and farmers field	It's my local green space;
This is a vital wildlife corridor for the estate and there are plans to develop on this land	I am concerned about this area;
Near blackergreen lane	Other (please state);
Carlton/Monk Bretton fields	It's my local green space;
Birley Spa Wood and adjacent wood/fields	I am concerned about this area;
In a field	It's my local green space;
This is a general pin for all the places that have annual plants planted	I am concerned about this area;
On the grouse moors	I travel to this place to access nature; I am concerned about this area;
Graves Park Sheffield	It's my local green space;
Kirk Sandall Glass Park	It's my local green space; I travel to this place to access nature; I am concerned about this area; I work/volunteer here;
Wadsley and Loxley Commons	It's my local green space; I travel to this place to access nature; We are already doing nature recovery work here; I work/volunteer here;
Potteric Carr nature reserve	I travel to this place to access nature; I work/volunteer here;
Linden Walk Woodland	We are already doing nature recovery work here;
Crossfield Lane	We are already doing nature recovery work here;
Husband Wood, Woolley Colliery Village. Public footpaths in this vicinity lead to Windhill Lane, Staincross.	I travel to this place to access nature;
Loxley Valley	It's my local green space; I am concerned about this area; I work/volunteer here;
Nursery Lane, Sprotbrough	Flood risk
Ponderosa Orchard	It's my local green space; I travel to this place to access nature; We are already doing nature recovery work here; I work/volunteer here;
Ponderosa pond	It's my local green space; We are already doing nature recovery work here; I work/volunteer here;
Silverwood lake, Rotherham	It's my local green space; I travel to this place to access nature; I am concerned about this area;

Ravenfield woods	It's my local green space;
Green space off Moor Lane North ravenfield	I am concerned about this area;
Cusworth Hall Country Park	It's my local green space;
Next to the mighty Porter.	It's my local green space; I am concerned about this area;
Greenlands Park	I travel to this place to access nature;
Finningley	It's my local green space;
The Groves	We are already doing nature recovery work here; Other (please state);
Endcliffe Park	I travel to this place to access nature;
Silverwood Colliery Woodland	It's my local green space;
Dearne Valley Country Park	It's my local green space;
Farmers field's	I am concerned about this area;
Old Darfield quarry	I travel to this place to access nature; I am concerned about this area;
Nature pond built by Our Cow Molly & Sheffield Wildlife Trust	I am a farmer/own this land; We are already doing nature recovery work here;
South Road Green Space	It's my local green space;
River Don bank and adjoining brownfield site between Steel Bank Weir and Rutland Road	I am concerned about this area; I work/volunteer here;
Former Old Park Silver Mill, Club Mill Road	I am concerned about this area; We are already doing nature recovery work here; I work/volunteer here;
Former Neepsend Power Station, Club Mill Road	I travel to this place to access nature; I am concerned about this area; I work/volunteer here; Other (please state);
Toad Hole Dyke and adjoining woodland	I am concerned about this area; We are already doing nature recovery work here; I work/volunteer here; Other (please state);

10.1.2. Map-based responses to 'neutral'

Whiston Meadows	I am concerned about this area;
Ruskin Park	It's my local green space;
Playing fields Scawsby	It's my local green space;
Cookson Park	It's my local green space;
The old landfill site	It's my local green space;
Old Coal spoil hills	I travel to this place to access nature;
Richmond area	I am concerned about this area;
Bitholmes Wood	I travel to this place to access nature;
Greenland Park and the green corridor that should run from Little Mester Pub (back of Dinnington Woodland)	I am concerned about this area;
Dyche Lane Jordanthorpe	It's my local green space;
Wickersley Woods	It's my local green space; I travel to this place to access nature; I am concerned about this area;
Gainsborough Road, Bawtry	Flood risk
Ferry Boat Lane, Old Denaby	Flood risk
Low Road, Conisbrough	Flood risk
Intake	Flood risk
Tickhill	Flood risk
Fordstead Lane	Flood risk
Ponderosa park	It's my local green space; I am concerned about this area; We are already doing nature recovery work here; I work/volunteer here;
Duftons Close	Flood risk
Bentley Mill Stream Catchment	Flood risk
Richmond hill rd	I am concerned about this area;
Nature reserve near tinsley golf club	It's my local green space; I travel to this place to access nature; I am concerned about this area;
Green Street/Alma Street	I work/volunteer here;

10.1.3. Map-based responses to 'dislike'

Campsall Country Park	It's my local green space;
Bottom of rock street where there are woods leading down to Derek Dooley highway	I am concerned about this area;
Potterholes Plantation	I am concerned about this area;
Rose Hill	I am concerned about this area;
Where there once was 17 agricultural fields.	I am concerned about this area;
The Maggie Field	It's my local green space; I am concerned about this area;
Green space adjacent to B6200 - RB2023/1323 Battery Storage Site	It's my local green space; I am concerned about this area; I work/volunteer here; Other (please state);
Malin bridge one way system and Holme lane	I am concerned about this area
Southern edge of Beeley Woods	I travel to this place to access nature; I am concerned about this area;
The massive blue EVRi depot at Hoyland Common	Other (please state);
Sheffield Ski Slopes	I am concerned about this area;
Upper Don Trail - Toad Hole Dyke	I travel to this place to access nature; I am concerned about this area;
higham barugh green	I am concerned about this area;
Ecclesall Road	I am concerned about this area;

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