Barriers and Enablers to Local Nature Recovery Strategy development and their contribution to nature recovery commitments

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Office for Environmental Protection

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Glossary of Terms

Term	Acronym	Meaning
Areas of Particular Importance for Biodiversity	APIB	Areas recognised as being of particular importance for biodiversity (nationally designated sites, local nature reserves, local wildlife sites and irreplaceable habitats).
Areas that Could Become of particular importance for Biodiversity	ACIB	Where the responsible authority and local partners propose that effort should be concentrated to restore habitat, to achieve the most for biodiversity and the wider environment.
Biodiversity Action Plan	BAP	A strategy outlining actions to conserve and enhance biodiversity at local or national levels.
Environment Act 2021[1]	EA2021	Primary Legislation providing the basis for EIP and LNRS
Environment Improvement Plan[2]	EIP	Specific measurable plan and targets related to achieving environmental goals for England.
Environmental Land Management Schemes	ELMS	UK government schemes that reward farmers and land managers for delivering environmental benefits, such as biodiversity, water quality, and carbon storage.
Geographic Information Systems	GIS	Systems for capturing, storing, analysing, and displaying spatial or geographic data to support mapping and decision-making.
Local Environmental Records Centre	LERC	Regional centres that collect, manage, and share biodiversity and geodiversity data to support conservation and planning.
Local Planning Authority	LPA	Local government body responsible for managing land use and development through planning decisions and policies.
Local Nature Partnership	LNP	Collaborative groups of local organisations working to improve and protect natural environments and support sustainable development.
Local Nature Recovery Strategy	LNRS	Local Nature Recovery Strategies were introduced by the UK Government as part of the Environment Act 2021. LNRS are spatial plans designed to identify priorities and actions for nature recovery at a local level while supporting national biodiversity goals.
Local Wildlife Site	LWS	Areas identified locally for their high wildlife value, protecting important habitats and species outside statutory sites.
Natural Capital and Ecosystem	NCEA	UK programme assessing natural assets and ecosystem services to inform

[1] Environment Act 2021 2021.
[2] Defra, 'Environmental Improvement Plan 2023' (HM Government 2023) <https://assets.publishing.service.gov.uk/media/64a6d9c1c531eb000c64fffa/environmental-improvement-plan-2023.pdf>.

Assessment programme		environmental policy and decision-making.
Nature Improvement Area	NIA	Designated areas aimed at restoring and connecting habitats to enhance biodiversity and ecosystem services.
National Nature Recovery Commitments	General catch all term for the TPW and other EIP goal areas as well as other relevant legally-binding targets for nature recovery	
Nature Recovery Network	NRN	A UK-wide initiative to restore and connect habitats, boosting biodiversity and ecosystem resilience.
Ministry for Housing, Communities and Local Government	MHCLG	UK government department responsible for housing, local government, and community development
Office for Environmental Protection	OEP	Independent UK body overseeing government environmental laws and holding public authorities accountable.
Planning Advisory Service	PAS	Provides guidance and support to local authorities in England on planning policy and practice. Part of Local Government Association.
Priorities	Taken from the Statutory Guidance on LNRS and defined as 'the priorities for recovering or enhancing biodiversity (taking into account the contribution that this can also make to other environmental benefits)'	
Priority Habitats Inventory	PHI	A dataset identifying habitats in England considered most important for biodiversity conservation.
Protected Site Strategies	PSS	Plans guiding conservation and management of protected areas to maintain or enhance their natural value.
Responsible Authority	RA	The Local Authority responsible for producing an LNRS
Rural Payments Agency	RPA	UK government agency administering agricultural and environmental payments to farmers and land managers.
Supporting Authority	SA	Another Authority responsible for supporting LNRS (may be local authorities, local planning authorities, Natural England)
Sustainable Drainage System	SuDS	Techniques managing surface water runoff to reduce flooding and improve water quality sustainably.
Systematic Conservation Planning	SCP[3]	A scientific approach that uses data-driven models to identify and prioritise areas for conservation for maximum effect.
Thriving Plants and Wildlife	TPW	'Apex' Goal 1 of the EIP which includes a range of specific commitments to habitat creation, woodland/tree cover expansion, reversing species decline, improving protected site condition, etc

[3] CR Margules and RL Pressey, 'Systematic Conservation Planning' (2000) 405 Nature 243 <https://www.nature.com/articles/35012251> accessed 12 January 2025.

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Executive Summary

This report synthesises insights from Responsible Authorities (RAs) and strategic stakeholders on the key barriers and enablers to the development and implementation of Local Nature Recovery Strategies (LNRS). Drawing on a programme of engagement - workshops, webinars, surveys, and direct correspondence - the research aimed to identify challenges and opportunities that influence both the process of developing LNRS and their ability to deliver positive outcomes for nature.

Barriers were defined as obstacles impeding progress, ranging from structural and bureaucratic constraints to social and economic limitations. Enablers were the factors that supported success, including stakeholder collaboration, adequate resources, and clear communication. The objectives of the analysis were to:

- Facilitate knowledge sharing around common barriers and enablers to LNRS development.
- Identify the extent to which these factors can be addressed through collaboration, best practice and policy alignment.
- Explore the implications for LNRS in contributing to the Environment Improvement Plan's (EIP) goal of thriving plants and wildlife (TPW), and the species abundance targets set under the Environment Act (2021) (EA2021) (referred to more generally as 'national nature recovery commitments').

The study distinguishes between:

- Process-level barriers and enablers affecting the creation and publication of LNRS.
- Outcome-level barriers and enablers influencing the potential for LNRS to drive meaningful nature recovery.

The methodology combined a rapid evidence assessment and a multi-stage stakeholder engagement strategy. Key activities included:

- Literature review to ensure grounding of the work in ecological systems thinking and the legislative context.
- Three core RA workshops and a follow-up focus group, engaging over 75% of RAs.
- A webinar and survey targeting strategic stakeholders, attracting broad sectoral input.
- Advisory input from the Office for Environmental Protection's (OEP) College of Experts.

This report highlights the thematic findings from these engagements and offers insight into where various forms of support, policy development, and shared learning could help strengthen the role of LNRS in delivering on the UK government's statutory nature recovery commitments. There are five main themes around the barriers and enablers:

Guidance and Advice - Unclear and evolving guidance led to inefficiencies, inconsistencies across RAs, and uncertainty around how LNRS should align with other strategies such as planning and agri-environment schemes. The absence of future-facing guidance on monitoring and target-setting was seen as a major gap. However, the flexibility in guidance enabled regional tailoring of approach to suit the very different contexts of each LNRS area, albeit with trade-offs for national consistency.

Data and Evidence - Access to reliable ecological data was uneven and data was often subject to significant gaps - particularly for species and habitat condition data - which limited some RAs' ability to make evidence-based decisions in the formulation of Priorities and Measures. Despite this, many RAs benefited from local partnerships for example with Local Environmental Records Centres (LERCs) and datasets, supporting a basic functional evidence base for strategy development.

Mapping Approaches - Technical challenges and lack of clarity on mapping requirements contributed to inconsistencies across LNRS areas. While flexibility allowed RAs to align maps with local priorities, in the future it may complicate integration at the national level. Use of established ecological frameworks helped some RAs identify priority areas effectively.

Resources, Funding and Timescales - Resource intensity, skills gaps, and uncertainty over long-term funding and monitoring responsibilities were cited as key constraints. The short development timeline compressed some engagement activities, potentially limiting the inclusivity and depth of input. Initial funding allocations did support key tasks such as mapping and engagement but concerns remain around delivery-phase funding.

Stakeholder Engagement - Effective stakeholder engagement was essential but demanding, with particular challenges around engaging landowners and farmers. Where relationships and trust were built, engagement was more successful. Strong partnerships with organisations like LERCs and Natural England provided valuable support, while voluntary contributions from expert stakeholders significantly enhanced the quality of some strategies.

Introduction

The OEP is a public body whose mission is to protect and improve the environment by holding government and other public authorities to account. The body was legally created in November 2021, under EA2021. The OEP's work covers England and Northern Ireland, and also reserved matters across the UK (a matter on which only the UK Parliament can make legislation). This report complements the OEP's work to monitor and report on the implementation of environmental law and will support its work in respect of the EIP TPW goal and its associated legally-binding targets, specifically those relating to species abundance.

Treligan were commissioned to investigate and report on the early development and implementation of LNRS. LNRS were also introduced by EA2021 and further developed via 'The Environment (Local Nature Recovery Strategies) (Procedure) Regulations 2023'. LNRS are spatial strategies for nature - a form of systematic conservation planning - and are intended to work alongside connected instruments pertaining to nature and biodiversity such as Biodiversity Gain in Planning (BNG) and new conservation approaches such as Protected Site Strategies (PSS), as well as a range of other plans and strategies such as Agri-Environment incentives and schemes. The OEP, in this commission, are specifically concerned with judging the performance of LNRS in relation to national nature recovery commitments within 'The Environmental Targets (Biodiversity) (England) Regulations 2023'.

The purpose of this report is to synthesise feedback and insights from RAs and strategic stakeholders gathered through a series of workshops, webinars, surveys and direct email correspondence, with a specific focus on the main 'barriers and enablers' to developing and implementing effective LNRS.

For the purposes of this report, we consider barriers to be any obstacles that hinder progress. These could be structural (like bureaucracy), social (like public resistance), or economic (like lack of funding). In the context of LNRS, our focus has been on barriers to the development and publication of the strategies themselves, but also developmental obstacles which may have affected the prospects for the LNRS outputs to achieve positive outcomes for nature.

We consider enablers to be the factors that accelerate or support success, for example stakeholder buy-in, adequate resources, or effective communication. In our engagement with RAs and other stakeholders we have sought to understand the factors which have most contributed to successful development of strategies in order to identify ways to amplify these.

The objectives of this analysis are to:

- Gather and facilitate the sharing of information about the barriers and enablers to effective LNRS, and the extent to which these can be addressed through collaboration, knowledge exchange and the application of best practice guidance.
- Understand the implications for LNRS and their contribution to national nature recovery commitments.

For both, the goal is to promote the success of LNRS, in order that these strategies stand the best chance of contributing meaningfully to the UK government's legal nature recovery targets. As such, in our analysis we have attempted to distinguish between barriers and enablers to the development of the strategy (barriers and enablers to process), and barriers and enablers to achieving the intended nature recovery effect (barriers and enablers to outcome).

Research Methodology

Literature review

The research approach was based on preliminary desk based research and literature review followed by direct engagement with a range of stakeholders, principally RA representatives directly involved in LNRS development.

The literature review aimed to develop a conceptual grounding for the research into LNRS, to ensure that it is well positioned in recognised ecological systems thinking and in England's specific legal and policy context for nature recovery. This was conducted in line with the NERC 'How to Guide' on Quick Evidence Assessments[4] and the OEP were provided with the opportunity to review search protocol including aims, question framework (PICOS), eligibility criteria and search terms.

Throughout the commission, we continued to gather and incorporate information from relevant publications, briefings and reports that were made available during the project timeline, reflecting the changing landscape around LNRS as these strategies have been developed.

Stakeholder Engagement

We developed a Stakeholder Engagement Strategy which included:

- High level objectives
- Stakeholder groups and approach (describing the key stakeholder groups, the engagement purposes that related to them, their engagement needs and our approach to each group)
- Separate engagement process flows for RA stakeholder engagement, strategic stakeholders and wider stakeholders.

Stakeholder engagement was then undertaken through online workshops for RAs with direct follow up via email, and a webinar, surveys and direct email correspondence for Strategic Stakeholders.

We identified, mapped and recruited stakeholders with direct experience of, or interest in, LNRS, chiefly within RAs but also in terms of other stakeholder groups. The OEP contributed additional contacts and had visibility of the developing stakeholder matrix and rates of engagement throughout the project. The engagement summary is provided at **Appendix A**.

Overall, RA engagement rates were good, with 38 of 48 RAs having at least one point of engagement, and workshops having attendance of between 15 and 28 individuals and RA representation ranging from 12 to 17. Wider stakeholder engagement 41 attendees from 33 different organisations.

Responsible Authority Workshops

Three online workshops were held with RAs in August, September and October to gather direct input on the barriers and enablers experienced during LNRS development, and anticipated for implementation. Each workshop was four hours long. Using the digital whiteboard Miro, each session followed a consistent structure where RAs explored barriers and enablers at each of the 5 key stages of LNRS development, as well as participants' hopes and fears for the future. The 5 stages, taken from the LNRS statutory guidance, are:

[4] Alexandra Collins and others, 'The Production of Quick Scoping Reviews and Rapid Evidence Assessments A How to Guide' (2015) <https://assets.publishing.service.gov.uk/media/5a7f3a76ed915d74e33f5206/Production_of_quick_scoping_reviews_and_rapid_evidence_assessments.pdf> accessed 5 June 2024.

1. Map areas of particular importance for biodiversity
2. Map areas where nature recovery action has been taken (note: only covered from an anticipatory point of view, as this stage did not apply in the first iteration of LNRS)
3. Describe the strategy area, its biodiversity and opportunities for recovery
4. Agree priorities and identify potential measures
5. Map areas that could become of particular importance

As an additional objective, the workshops were used to get a view from RAs on aspects of our emerging LNRS Assessment Framework.

A shorter workshop session for RAs was held in November to provide a final opportunity for RAs who had been unable to attend any of the full workshops to express their views in relation to barriers and enablers to LNRS development. Additionally, the format of the session was designed as a simpler round table discussion which some participants found more accessible.

These workshops aimed to engage very broadly, collect a significant volume of evidence and allow for initial thematic analysis. Further detail was provided by follow up email submissions by workshop participants who wished to say more, and these contributions were also accepted into the analysis (with care taken not to provide greater weight to the perspectives of these RAs).

In December, a final RA 'Focus Group' session was held once more detailed thematic analysis of barriers and enablers had been carried out. This session specifically engaged with RAs who had been particularly engaged in the main workshops (attending multiple sessions sometimes with multiple attendees), and those who had been identified as being further ahead in the LNRS development process, being close to or having reached public consultation. The intention of this session was to deepen our understanding of some of the common barriers and enablers faced in the LNRS process, and to clarify some specific points of detail or ensure our understanding of particular barriers or enablers was correct. Insights from this session are referred to in the report as 'frontrunner focus group insight', which distinguishes it as being more recent and also helpful in establishing which barriers have been overcome through the LNRS process, and which remain.

Wider Strategic Stakeholder Engagement

'Strategic stakeholders' were defined as those who did not have a particular focus on any one LNRS, but who had an interest in the broader LNRS process and outcomes. The organisations consulted are described in **Appendix A**. Depending on the stakeholder, this interest may have been at a national level, or it may have been regional. Represented organisations had a range of interests, some covering many or all aspects of the LNRS, some focused on a key part such as having a species taxonomic focus, habitat focus, a particular intersection with policy, or an interest in what LNRS means for a particular community.

The session was offered on an 'open invitation' basis and reasonable endeavours were made to ensure this was communicated broadly to attract a wide range of perspectives.

Insights provided by these stakeholders during the webinar were noted and cross-checked with those captured via a feedback survey after the session, as well as direct submissions (emailed) outlining their thoughts. We undertook thematic analysis of all these sources. Links between these themes and those which emerged from the analysis of the three RA workshops have been highlighted.

Sample: Stakeholders with any involvement or interest in LNRS were invited to participate. Having a broad approach to attendance ensured a wide diversity of expertise and perspectives. The analysis

took account of participants' role and relationship with regards to LNRS to ensure we do not present the findings as representative of all stakeholders.

Engagement Overview: The webinar provided participants with a project briefing and an opportunity for Q&A for those who had not previously engaged with the OEP or this project, as well as an introduction to our emerging LNRS Assessment Framework. The last half of the webinar session was focused on stakeholder input and discussion around the barriers and enablers to LNRS implementation, with further input generated through a follow-up survey and email correspondence.

Survey Content: The post-webinar survey included the following questions:

1. What do you see as the main challenges and barriers to RAs for delivering an effective LNRS?
2. What do you see as the main opportunities and enablers to RAs for delivering an effective LNRS?
3. Is there anything else you would like to share, or provide additional insight into regarding the development or delivery of the LNRS that hasn't been covered in the previous questions?
4. Are there any other stakeholders you recommend we send this survey to? Please provide their names and contact details if possible.

OEP Advisory Group

At various points throughout the project, the team also had the benefit of advice from an Advisory Group convened by the OEP from their College of Experts. These short sessions provided opportunities to sense check various aspects of the emerging barriers and enablers themes, and some specific points of particular complexity.

Barriers and enablers to LNRS development and implementation

Our preliminary research on how spatial plans for nature are expected to contribute towards nature recovery goals provided a model for understanding how LNRS should work. The following is a summary of how LNRS can effectively contribute towards meeting national nature recovery commitments:

We consider that LNRS, as a spatial plan for nature, should reduce conflict in processes leading up to the 'decisions to' and 'implementation of' changes to land use and land management. It should provide an evidence-based framework and broad agreement for 'what should be done where' to halt and reverse biodiversity and species abundance loss. The key aspects of this framework that are important to its success are:

- Targeting and supporting the join up of local actors, in particular those who have significant relevant power (planners and land owners).
    - Breaking down siloed working.
    - Creation of a shared mission / vision for the area.
    - Coordination of the activities of disparate groups against that mission.
- Setting priorities for nature recovery in a local area and obtaining broad buy-in on these.
    - Clarity (and evidence) for opportunities, making it clear which species and habitats are right to focus on in that area.
    - Clarity (and evidence) for priority locations for nature restoration based on individual habitat adequacy / suitability of land for habitat restoration, consideration of other relevant plans / initiatives (either already underway or well developed), and the overall distributions and connectivity of sites and functionally-linked land (including cross-border). Prioritisation also needs to factor in the practical concerns of those with decision making power over land in relation to current or intended future economic or other uses.
    - A clear idea of the 'efficiency' of different options. LNRS should have a strong focus on realising the potential of multifunctionality or 'stacked land uses' and to do this well it cannot ignore land-use conflicts, or the fact that land owners/managers may see risk in allocating their land to management or use changes for long periods. LNRS cannot resolve these alone but can contribute.
- Bridging the gap between landscape level understanding of priorities and opportunities, and site-level understanding (closer focus) and national level understanding (broader focus). Informing action at different scales and institutional levels and coordinating the organisations which work at those levels.
    - Identifying and filling in data gaps at all scales.
    - Coordinating landscape-level understanding between different organisational forms - well understood administrative regions (unitary authorities, districts, protected landscapes, national parks) as well as private land holdings (if sufficiently large).

In our analysis of barriers and enablers these key aspects have informed our focus, interpretation and framing.

Five clear themes in relation to barriers and enablers to LNRS development emerged from workshops and other engagement held with RAs, and these themes were further enriched by input from strategic stakeholders. The themes observed were:

- Guidance and Advice
- Data
- Mapping
- Resources & Timescales
- Engagement

These themes are strongly interlinked and interactive, and to an extent the separation in this report is arbitrary and made for reasons of structure and clarity. In particular, data and mapping might be considered to be so closely linked as to be a single theme, but they remain separate in this report in order to highlight some differences of emphasis.

Guidance and advice

Context

RAs were issued with LNRS statutory guidance in March 2023[5] which included broad instructions on how to develop an LNRS and what it should contain. Subsequent non-statutory guidance covering various aspects of LNRS development in more detail has been provided to RAs, such as '*Data standards for Local Nature Recovery Strategies - Advice for Responsible Authorities*' which became available in February 2024. A timeline of other guidance we have become aware of is provided at Appendix B. Some guidance which had been indicated by government departments was yet to become available at the time of consulting with RAs, including guidance from the Ministry of Housing, Communities and Local Government (MHCLG) on the status of LNRS in the planning system - some also mentioned awaiting guidance which appeared to have already been provided such as Natural England guidance on engagement with landowners[6], suggesting confusion over what is available or possibly whether further clarification will be forthcoming. Guidance and resources on how LNRS will be delivered, and their role in this delivery, are much anticipated by RAs who are seeking clarity

Beyond the guidance documentation, Natural England in their role as a Supporting Authority (SA) provided advisory functions as outlined in the statutory guidance. An LNRS senior advisor was appointed for each area, acting as the single point of contact for each responsible authority, pulling in advice from their local teams as well as from national experts, Defra and other Defra arms-length bodies where relevant.[7] Further advice has been available through organisations such as the Planning Advisory Service (PAS)

Clear and complete guidance, and sound timely advice to go with it, are essential for the effective development of LNRS and for consistent development between RA areas. Guidance provides the framework within which RAs can identify, describe and map priorities and opportunities, and create coherent strategies that are well aligned with broader environmental goals such as those in the EIP. Beyond that, it ensures consistency of all these processes and outputs across different LNRS areas which is important for longer term development of a functioning national Nature Recovery Network (NRN).

[5] Defra, 'Local Nature Recovery Strategy Statutory Guidance' (n 3).
[6] PAS, 'Local Nature Recovery Strategy Frequently Asked Questions (FAQs) - August 2023' (2023) <https://www.local.gov.uk/pas/topics/environment/nature-recovery-local-authorities/local-nature-recovery-strategies/FAQs-August_2023#funding-and-resourcing> accessed 7 December 2024.
[7] ibid.

Guidance as an enabler - balancing flexibility in LNRS development

When guidance was expressed as an enabler by RAs, this was sometimes in the context of allowing significant room for interpretation on how to approach a given part of the LNRS development process, which is helpful and necessary to a degree given the varied physical nature of RA areas, the data that is available, variability in regional stakeholders, and so on.

Conversely, more specific enablers were rooted in obtaining clarity and direction from guidance. For example, some RAs found the instructions for mapping priorities and measures helpfully clear in terms of the broad habitat types to use and what sites to include, without 'overcomplication'. Simplification of these parameters enabled efficient development of the LNRS by removing some decision making on structure and approach.

Based on the nature of the specific guidance barriers identified and the numbers of RAs who provided comments on these, it is reasonable to assert that in general the balance of flexibility vs. mandated clarity could be improved, in the pursuit of greater standardisation and LNRS development efficiency. Some mitigation for this was provided through the provision of advice by Natural England and other organisations, which is covered below.

Guidance as a barrier - confusion and disagreement with the guidance

Guidance as a broad barrier topic was the most commented upon in RA workshops, with multiple RAs conveying significant frustration with several elements. While having some flexibility in the approach RAs could take with their LNRS was appreciated, RA workshop participants collectively felt that clearer, earlier guidance and the standardisation of LNRS stages would have avoided the burden of decision making, and revision and rework. Some even felt there was a missed opportunity from Defra to mandate specific standard tools for consistency, especially associated with mapping procedures.

> *'Too many variables and not enough clarity on what to include.'*

Confusion with the guidance resulted from unclear expectations and interchangeable terminology. For example, terminology such as 'APIB (Areas of Particular Importance for Biodiversity)', 'mapped measures' and 'actions' created misunderstandings during stakeholder engagement as their definitions and expectations were not clearly outlined in the guidance and therefore RAs struggled with how best to apply them in practice.

> *'Lack of clarity on what a 'mapped measure' means in terms of deliverability'*

This appears to have remained a challenge until quite late in the development process, with feedback from the latest engagement with RAs on the 12th December 2024:

> *'It took us until very recently to fully understand the difference between mapping of actions and the areas that could become important - feels like an unnecessary additional step which only is needed because of the strict rules of the terminology.'*

Workarounds that were mentioned by the frontrunner focus group were clarification through repetition - consistent use of simple language and regular clarification in presentations, documents, and stakeholder meetings - and interpretation support by Natural England, with some RAs having close support on definitions and clarity in messaging. Some, however, opted for localised terms which they felt would be better understood and accepted.

Largely these appear to have been barriers to process in LNRS development and it may not be a particular priority to focus on 'solving' terminology problems, as a collective shared understanding of

meaning is likely to emerge. Overall, although RAs themselves (and their closely supporting collaborators) seem by now to have largely navigated the complexity of terminology and have a common understanding of terms, this knowledge remains relatively specialised and perhaps an ongoing barrier to understanding for those outside the relatively small pool of LNRS practitioners - especially as it appears that not all RAs are using the prescribed terminology in exactly the way it is intended in the official guidance.

Some RAs wanted more prescriptive or non-conflicting guidance on a range of matters including the degree of specificity required for actions, whether to pursue a site-based versus landscape scale mapping approach, whether to prioritise single measures or not, and the proper treatment of irreplaceable habitats. This last point attracted numerous comments, and was focused on explaining what is irreplaceable, why the definition does not include priority habitats, and a general lack of satisfaction that the definition reflected what local stakeholders felt counted as irreplaceable.

> '*The Defra definition of irreplaceable habitats doesn't include chalk streams and others, or the ability to determine these at a local level if not recognised by the National Planning Policy Framework.*'

One RA mentioned that the current definition might be updated in the future.

Some stakeholders went as far as to disagree with certain points of guidance. These instances were few but highlighted a disconnect between Defra expectations, and the views of local stakeholders, which meant RAs had to consider and make a decision on which approach to take. For example, the guidance on the process of creating a long list of priorities from local stakeholders then aligning evidence to these was considered inappropriate by one RA, because this places a decision before evidence, as opposed to decisions being based on evidence. Others highlighted that the needs of local stakeholders differed from Defra requirements in relation to some elements of the mapping display format.

> *'Mapping display format is challenging because stakeholder expectations and Defra advice don't align'.*

Other comments on this suggested mapping measures at all wasn't the right approach - more than one RA proposed that mapping should have been for priorities only, and then 'measures' (activities) could be determined locally but not mapped.

It is likely there are several aspects to this and some variation by RA, but one more detailed insight that was provided by the frontrunner focus group was that the mapping guidance was causing friction in relation to local stakeholders trying to engage with both LNRS and BNG. Land managers were frustrated over the need for their land to be in the final LNRS map and deliver a specific measure to be able to achieve 'high strategic significance' for BNG, when in reality the mapping for LNRS is not perfect, and measures often require on-the-ground feasibility assessment. Local stakeholders would much prefer multiple measures to be displayed in the mapping to allow for this, but some RAs are receiving push-back on this point at the LNRS panel review stage (a Natural England checkpoint stage in the process prior to LNRS publication, which we became aware of later in the project).

Other specific disagreements include site-level APIBs being considered '*at odds with LNRS being a strategic document*', and some elements of the guidance being too delivery focused for a strategy - an understood requirement for partners to know which locations they want to work in over a long time period, in terms of the overall emphasis on identifying priority areas for delivery. One RA highlighted that there needed to be a tighter focus on core priorities, and that there is a risk of trying to address

too many issues—such as pollution or design guides—at the expense of the primary objectives of LNRS (nature recovery).

Guidance as a barrier - delayed, incomplete or missing guidance

The consistency of LNRS development was further hampered by the '*unclear pipeline and timetable of non-statutory guidance*' and delays to this. Additionally, some RAs commented that the status of guidance was unclear, with some aspects of non-statutory guidance being communicated as essentially mandatory by Defra/Natural England in LNRS review panels, or other advice and review sessions.

A large number of RAs expressed frustration with late non-statutory guidance, with many referring to it as 'drip-fed' and indicating that it arrived too late to align with ongoing workstreams. For example, some RAs had already completed a substantial part of the mapping stage in 2023 prior to measures mapping guidance being released in March 2024 and therefore revisions to methodology, scope and outputs were required to meet the advised standards.

> *'Mapping guidance was provided far too late. It should have been more specific as the feedback from Defra is that they now want us to follow a specific format which wasn't highlighted until mapping had been completed. The guidance has also changed throughout the process.'*
>
> *'Very late guidance from Natural England on mapped measures'*

Stakeholders from the frontrunners focus group in December, perhaps with more attention on the future implications of missing guidance, expressed a need for clearer guidance on how mapping will align across RAs and how LNRS will integrate into the NRN, especially for cross-border initiatives. They also highlighted that there remain varied perspectives among RAs on what the mapped measures should look like which is a barrier to achieving standardisation.

Stakeholders also felt that the guidance did not address important elements. Several mentioned a gap in understanding how LNRS will integrate with local planning (referring to MHCLG guidance to Local Planning Authorities (LPA) on LNRS, due January 2025), and other areas where alignment with other schemes was unclear include agri-environment scheme targeting, and links to the EIP. This connects to another 'missing guidance' theme on a lack of clarity on monitoring and measurement of success. At the latest point of project engagement with RAs (the frontrunners focus group session in December 2024), these remained as barriers with lack of clarity on LNRS future use seen as creating challenges for engagement and monitoring, and a lack of guidance on LNRS integration with Environmental Land Management Schemes (ELMS) hindering farmer participation and engagement. Planning links were also referenced as an ongoing concern:

> *'We have kept planners informed as much as possible about the LNRS and they have input in our steering group. But a complete workaround isn't possible without the guidance. We are right at the end of the process and still no clarity over what "have regard to the LNRS" actually means.'*

A number of similar barriers were highlighted by Strategic Stakeholders who collectively alluded to the same lack of clarity expressed by several RAs on how LNRS will actually interface with, and achieve results through, other *'conservation & conservation-adjacent*' schemes. Key ones mentioned were agri-environment schemes and a formal, structured role for LNRS in the planning system, which is entirely consistent with the main delivery mechanisms that RAs highlighted.

There is no requirement in the statutory guidance for LNRS to include quantifiable targets or measurable outcomes for nature recovery, and this coupled with the lack of guidance on monitoring delivery, setting criteria to review outcomes or measure success, is concerning to a number of RAs on the basis of creating uncertainty on what good looks like or how this will later be judged. Where most guidance barriers relayed by RAs focus on barriers to process, this area is a significant potential barrier to successful outcomes and, therefore, we consider worthy of prioritised mitigation or further examination.

Another particularly significant gap was the fact that more detailed guidance on how to meet the requirement to consider species was added later (August 2023), and a small number of RAs commented that this was then difficult to integrate with the work already done. There is therefore a risk that RAs which were further ahead on development may have a 'weaker' approach to developing measures based on species priorities (as opposed to just habitat priorities). The status of the guidance (optional vs. mandatory) was also unclear, causing confusion. Some RAs were able to navigate this better than others due to having already integrated species prioritisation into their LNRS, using public and partner surveys to identify key species early on, or by securing quick support (often from LERCs, but sometimes from past research partnerships which had focused on species priority work) to integrate species information. Others were left with specialist resource gaps and new species data challenges that were hard to fill.

Other specific guidance gaps included specific mapping format expectations (e.g. polygon formatting vs field boundaries and other approaches), lack of up-front guidance on sources of data, lack of guidance for the role of SAs, and less guidance being available for species work than was provided in other areas. Some stakeholders from the frontrunners focus group even advocated for species recovery to have its own strategy, rather than being 'tagged onto' the LNRS, which is more habitat-focused - though from the perspective of this commission and the OEP's focus on achieving species abundance through effective spatial planning, and in the absence of an equivalent separate statutory instrument for species recovery, it would seem that working to better integrate a species approach in LNRS is a more expedient path.

All of these challenges contribute to a general risk of inconsistency across LNRS, which could mean it is difficult to aggregate the strategies to present a national picture. It may also introduce friction into collaborative processes between neighbouring RAs or for third party organisations seeking to work across several RA boundaries.

Impacts and mitigation

RAs relied heavily on the guidance while developing their LNRS and reported being significantly affected by delays to additional non-statutory guidance. While a lack of prescriptive instruction in the guidance allowed RAs to adapt their strategies to local context to some extent, this also caused confusion and inconsistencies across LNRS areas which is likely to impact on standardisation necessary for broader regional and national coherence. The barriers discussed above have created uncertainty among RAs and in some instances caused the rework of strategy areas due to guidance changes.

Some RAs were able to successfully mitigate some of these barriers by maintaining open dialogue between stakeholders, which filled in gaps of understanding for RAs in what the LNRS can and cannot do - essentially, they used a balance of perspectives at local level to make a decision and move forwards. While this may have addressed the barrier to process, a local approach alone may not help with national consistency - however other RAs described how they worked closely with neighbouring RAs to achieve consistent mapping and cross-boundary habitat priority modelling.

Additionally, the ability to view draft LNRS provided RAs with valuable insights for structuring and improving their strategies, and this may also have contributed to increased consistency.

Collaboration between RAs, particularly those at different stages of development, is needed to align priorities and share good practices, and should continue to be encouraged.

Another key mitigating factor for guidance barriers is likely to have been the provision of advice. Although 'advice' did not attract as many comments as guidance (in terms of being either an enabler or a barrier), the advice network provided by Natural England has clearly been important. Some described support from Natural England as excellent, with others mentioning that the technical quality of the support (on habitat network modelling, for instance) was good, but slow. A small number of stakeholders expressed disappointment in the level of advice and guidance support from Natural England and Defra, and that sometimes this conflicted. There were examples of variability of advisor availability, which is accepted as a feature of any service provided at national scale but nevertheless contributes to instances of reduced access. Concern with advisory support was not a strong theme but the comments made suggest that support was not consistent for all RAs.

Key points

- Drip fed guidance has resulted in rework, which may have wasted valuable resource and left teams unsure of how to best proceed at key points (*barrier to process*)
- Different experiences of RAs with Defra and NE advisors contributed to an uneven playing field when engaging with guidance (*barrier to process*)
- Guidance on links to other key plans and strategies is missing (notably planning, but also agri-environment incentive schemes / ELMS) which leaves RAs uncertain how to create strong connections with them in the strategy (*barrier to successful outcomes*)
- There is no guidance on future monitoring and evaluation and no requirement to set targets (*barrier to successful outcomes*)
- Collaboration across RAs (enabled through flexible guidance) supported alignment across LNRS boundary areas (*enabler to successful outcomes)*
- Flexibility in the guidance also allowed for regionally tailored approaches but also caused inconsistencies in strategies to produce national cohesion (*enabler to process, possible barrier to successful outcomes)*
- There is a clear point of contention in relation to mapping single measures to locations (apparent Natural England preference) vs mapping multiple measures (preferred by some RAs and landowner and other local stakeholders) (*barrier to successful outcomes*).

Data and evidence

Context

Responsible authorities require a significant amount of data to inform their LNRS, and it is important that the data is both accurate and comprehensive to form evidence-led strategies. Such data includes information around species distributions, protected sites, habitat types, condition, land-use, ecosystem services and connectivity. Data and insights from other domains are also important such as land parcel structure, land ownership information, and broader environmental data such as water resources, soil types, geology, flood risk, air quality and more.

Data from multiple domains is essential to the development of LNRS as it provides the evidence base required to identify priorities, map opportunities and inform decision making locally - to ensure the strategy reflects the unique biodiversity and habitats of that area - and strategically - to contribute to broader objectives and ensure local actions align with national goals, such as those set out in the EIP and long-term targets.

The statutory guidance requires all existing local wildlife sites, areas of irreplaceable habitat and other areas identified by the Secretary of State as being of particular importance to be included. Sources of data were not mandated other than 'reports published by public authorities as part of their duty to conserve and enhance biodiversity'; 'the biodiversity gain site register'; and 'other government data', but several key data sources such as the LNRS Data Viewer (and guidance for how to use it[8]) were signposted and encouraged, and various other data sources from Natural England such as Priority Habitats Inventory (PHI) and Habitat Networks, as well as non-governmental open data sets such as National Biodiversity Network Atlas. Local Authorities own sources of data, and Local Wildlife Site (LWS) data managed by LERCs, were also important in the process.

It was noted that in the government's response to last years OEP EIP monitoring report 'Progress in improving the natural environment in England 2023 to 2024'[9] Defra indicated the following data and products published by Natural Capital and Ecosystem Assessment programme (NCEA) to inform decision making on spatial prioritisation of interventions: Living England map, green infrastructure map, ancient woodland inventory, botanical value and heat maps, LNRS national habitat map and data viewer, PHI. RAs were steered towards these in terms of advice to refer to the LNRS Data Viewer which includes Ancient Woodland Inventory layer, Priority Habitat layer, and the Living England data. It does not appear to include the Green Infrastructure Map but that is not a layer or data set itself, just a collection of other layers much as the LNRS Data Viewer is (and the data viewer overlaps with it a lot / includes much the same data on green infrastructure assets).

By enabling evidence-based strategies, robust data supports targeted actions to increase species abundance, biodiversity, the restoration of degraded habitat and improved habitat connectivity. This section explores the role of data, the challenges faced by RAs, and enabling mechanisms that have supported LNRS development in this regard.

Data as an enabler - existing data and data sources

RAs frequently commented on how LERCs and other data centres have provided them with good baseline data. Through good, established relationships between RAs and LERCs, accessing and building on existing data sets reduces duplication of work and promotes consistency at a national level.

The LNRS data viewer was recognised in particular by several RAs as a powerful resource for providing an extensive range of datasets, especially when used in collaboration with LERC data. However, some did comment that it has been underutilised by RAs due to lack of expertise on when and how to leverage specific datasets effectively, especially when local data may be perceived as being higher quality than national data (due to being more detailed, and ground-truthed as opposed to probability modelled or remote survey based, or simply due to the local data being better understood).

As well as national datasets, data from previous local projects such as Nature Improvement Areas (NIA), Natural Capital, and Green Infrastructure plans has enabled RAs to draw from existing insights, knowledge and mapping frameworks, allowing for better integration and alignment of previous plans with LNRS objectives.

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[8] Defra, 'Data Viewer Help A Simple Users Guide to How to Navigate the Pages and Tools of the Data Viewer' <https://experience.arcgis.com/experience/7c5242fdec7f433aa4ee4510383e3909/page/Help/> accessed 9 January 2025.

[9] Office for Environmental Protection, 'Progress in Improving the Natural Environment in England 2023/2024' (2025) <https://www.theoep.org.uk/sites/default/files/reports-files/Progress%20in%20improving%20the%20natural%20environment%20in%20England%202023-2024.pdf> accessed 14 March 2025.

RAs commented on the usefulness of having already conducted Biodiversity Opportunity Mapping and natural capital assessments which aided in LNRS planning, provided essential background knowledge, and readily available data, though not all RAs had the benefit of this prior work. Resources such as county habitat inventories, natural capital mapping contributed to a useful baseline for authorities. Stakeholders also highlighted the value of existing reports such as the State of Nature, Biodiversity Action Plans (BAP) and numerous reports related to the NRN in providing insights and preventing duplication of effort, particularly where such reports are comparatively recent. Local plans and shared strategies/documents provided by supporting authorities have also aided with aligning LNRS priorities through utilising and building on established frameworks.

Essentially, some RAs had something of a 'headstart' on baseline data - though some were able to employ innovative workarounds such as switching from the national Habitat Network model to their own ecological network model, which they found more suitable for local habitats and data availability context. It is not possible to conclude from our evidence gathering, partly due to the scope of our commission and partly due to the different stages of the various LNRS, whether baseline data 'headstarts' have translated, or will translate into different quality LNRS.

Data as a barrier - data gaps and data quality

Data gaps and quality issues were identified as a significant barrier to the LNRS process, creating timeframe and resource challenges for development. Some RAs noted that the time required to locate, validate and interpret data was consuming, particularly where there were significant gaps in ecological data, resulting in delays to mapping processes and affecting how accurate and effective the strategies can be. Data handling is also covered in the section on resourcing below.

Another barrier was the quality of species data available to RAs. For example, some highlighted that species data provided by LERCs was often incomplete and based largely on volunteer-reported sighting, providing an indication of species presence but falling short of absolute species distribution and abundance, and in the frontrunners focus group further challenges were discussed in relation to volunteer species recording (which underpin much LERC held and other species data). Many species experts are volunteers with limited time, which creates challenges in gathering sufficient and timely species data, and the seasonal nature of data collection and the limited availability of recorders presents a barrier to consistently gathering species information. Providing better support and recognition for volunteer species experts would help improve the quantity and quality of species data gathered - but the effort required for comprehensive species recording over wide areas remains an enormous resourcing challenge without easy solutions, further compounded by variable access to relevant species expertise across different RA areas.

This barrier is particularly applicable to areas with less recorded taxa and under surveyed areas, demonstrating a level of species/habitat bias. This challenge was further compounded for some RAs by the later guidance on how to consider species in LNRS (discussed in the Guidance section above), with some considering the integration of species data into the LNRS process to have been handled poorly.

> *'Species prioritisation was challenging when we have access to limited evidence on distribution, movement and abundance of species - much of the evidence is anecdotal rather than systematic / absolute.'*

Strategic stakeholders, many of which represented species-focused eNGOs or interest groups, were also focused on perceived barriers to the effective incorporation of species data into LNRS. One example relates to taxonomic biases in data created by undersurveying certain groups (e.g

invertebrates). The implied effect of data gaps is that LNRS may not adequately provide recovery measures for certain taxa, lacking either evidence to support their prioritisation, and / or lacking evidence to guide appropriate action. The OEP Advisory Group highlighted that taxonomic coverage by RAs is based on the availability and interest of sufficiently diverse experts, meaning that some measures that benefit particular taxa may be omitted in some LNRS.

Another prominent data gap referred to by stakeholders was the limited information on habitat condition (referring to the broad concept of habitat, as opposed to more narrowly defined protected site condition), and changes to habitats and species trends over time, which seems to still be a concern into the future for frontrunner RAs with more developed strategies. The local data on the state of nature is unreliable, incomplete or unavailable for the entire LNRS area; this has made it difficult to establish comprehensive or trustworthy baseline data. Another specific data gap is Local Wildlife Site data. RAs could generally access this data from LERCs for their strategy development, however, some found it difficult to incorporate the data into public facing maps. This is related to data licensing barriers explained in the next section.

The use of anecdotal evidence has been used by some RAs as a way of overcoming data gaps, providing localised insights and filling in where species and habitat data are lacking during the ecological modelling process. RAs within the frontrunners focus group indicated that the sources of this evidence have been quite varied. These range from specialists within university research teams with expertise in species distribution models and habitat suitability, to local volunteer species experts helping to identify target areas for species recovery intervention based on their individual experience and knowledge. Many RAs also referenced working with biological recorders / LERCs to access additional local species data, enhancing the quality and coverage of species information.

Where data was available, RAs found some areas where the quality of data made its use problematic, with issues of both data accuracy, and aged data. In particular, flaws in Natural England's PHI were referenced, in that it is considered a key data set but is not always up to date, missing areas (Priority Habit exists but is not mapped) with some mapped areas lacking habitat data (e.g coded as 'No main habitat but additional habitats present' without further details). The frontrunners focus group described a number of workarounds employed - screening processes to filter out data that did not meet requirements, multiple detailed meetings and stakeholder input to reach final decisions about PHI data, and the physical verification of PHI data. However, this group stressed that there remained a need for funding to conduct local assessments and improve data quality for PHI, which was seen as important for enhancing the effectiveness and targeting of future LNRS efforts. This would also have the effect of using the LNRS process to enhance the national PHI dataset, which has begun to occur to a degree.

Data as a barrier - data accessibility and licensing issues

Ecological data accessibility is a fairly well appreciated barrier within the environmental public policy and strategy space in England.

RAs have faced challenges with accessing valuable data due to restrictions on its availability for a variety of reasons - either licensing issues, permissions, late supply by data owners, or stakeholder unwillingness or inability to share. Strategic stakeholders (some of whom are themselves baseline data providers) also referenced the limitations and variability of baseline data as a key barrier, echoing the perspectives of the RAs. Some RAs have access to detailed habitat mapping, but some do not (or do not have it for all areas they need to cover). The root causes of this variability are complex, and data limitations affect RAs unevenly.

By far the most prominent barrier in this area mentioned by many RAs, and also supported by strategic stakeholders, was the difficulty in obtaining and using data from LERCs, which typically own data on LWS, act as repositories for species recording data, and other valuable data. The commercial nature of LERC data conflicts with the requirement for LNRS outputs to be published under an Open Government License (enabling use and re-use of such information freely and flexibly). Some RAs were able to negotiate access to data from their LERCs for LNRS development, however they were unable to publish it in full due to concerns from LERCs that this would undermine its commercial value. The additional complexity of navigating this led to administrative burdens and delays. In the frontrunners focus group there was significant ongoing focus on this issue and the group collectively would like to see a concerted strategy and action for ensuring this issue is resolved, as it is seen as having an ongoing impact on further LNRS development.

> '*Local partnerships have had to work at finding local solutions, which will all vary up and down the country*'

One of the clearest examples is that in some areas, LERC-owned LWS data has not been made available for LNRS, which means '*LNRS may not adequately provision recovery measures for certain taxa, lacking either evidence to support their prioritisation, and / or lacking evidence to guide appropriate action*'

Stakeholders also highlighted challenges to accessing data from the Rural Payments Agency (RPA) on ELMS and Environmental Stewardship programs - the data took time to obtain or it lacked sufficient detail to be useful, and some data could not be provided due to data sharing limitations, such as landowner contact details - as well as from other organisations such as the Ordnance Survey. Stakeholders also commented on incomplete species datasets arriving late from Natural England.

Collectively these access challenges relied on RAs leaning heavily only on open source data (governmental and otherwise). Although many significant data sets for LNRS are open source, the gaps left by the access challenges described above hindered informed decision making and the development of a comprehensive strategy, potentially weakening the evidence base used to develop the map and priorities.

RAs felt there was a missed opportunity by Defra and Natural England to reach a national consensus on data-sharing protocols with key mapping and data organisations, and for more effective collaborations and knowledge sharing generally. It is likely that this relates to a more fundamental systemic problem with ecological data management across a complex stakeholder environment in England, though within the scope constraints of this project it has not been possible to conduct detailed root cause analysis of all barriers, nor to determine with which Defra arms-length body responsibility lies for developing such protocols, what currently exists or might be being developed to address this - though from other work we are aware of significant related efforts within the NCEA programme to fill some of these gaps.

Using the data - data processes, tools and methods

Beyond sources of data, RAs provided examples of useful tools and methods for driving value from that data, that have enabled more effective, evidence-based development of their LNRS. For example, using decision support tools such as Marxan – a set of tools developed to assist decision-makers in identifying solutions for conservation planning problems[10] – with a Systematic Conservation Planning (SCP) approach to enable sophisticated spatial modelling. Additionally, using

[10] Marxan, 'WHY MARXAN?' <https://marxansolutions.org/#:~:text=Marxan%20is%20a%20suite%20of,framework%20for%20approaching%20conservation%20planning.> accessed 10 January 2025.

the existing NRN mapping alongside existing resources like Natural Capital Assessments have further supported evidence-based decision-making. Tools such as consultation maps and platforms for stakeholders to upload their contributions have ensured that local knowledge and inputs were effectively captured.

In other areas, obtaining value from data was more problematic. There was uncertainty around the required level of detail and the types of information needed for mapping, habitat and species data, and priorities and measures. Although this predominantly reflects challenges with guidance, it also relates to data standardisation. Inconsistencies in data formats shared by multiple stakeholder organisations complicated an already difficult job, and varying technical abilities across RA organisations added further challenges for some.

Most of these concerns are barriers to process, but a key theme in this area was the uncertainty raised by several RAs on the data processes and requirements related to any future monitoring and success measurement, which is a potential barrier to successful outcomes. RAs expressed uncertainty around what should be measured – whether condition, scale, impact or other indicators – and how best to quantify those actions, with a lack of clarity on how to determine what has been implemented from the strategy. RAs also fear a lack of investment in monitoring post strategy implementation resulting in no capacity to carry this out. These remained concerns in the frontrunners' stakeholder group in December, when it was again highlighted that there is little clarity on the data processes, requirements and design, and future capacity for developing and delivering systematic monitoring schemes for species and habitats in connection with LNRS.

These concerns were reinforced by strategic stakeholders. Monitoring was highlighted as an enabler by this group in the context of ensuring it is considered early and clear success criteria set. One stakeholder mentioned a feedback loop, implying the use of ‘in progress’ monitoring to steer actions and continuously improve. This was echoed by other contributions which described an ‘*evaluation and review process that enables LNRS guidance to be updated as we go’.* Stakeholders saw the LNRS as an imperfect start of a long term journey, and framed a long-term funding and resourcing commitment to monitoring and reviewing progress, and updating strategies accordingly, as a key enabler for delivery success.

Other procedural issues were raised by RAs such as how to distinguish between public versions of the map and a ‘back office’ detailed version (which relates to protection of commercial data from LERCs), as well as concerns that certain data sets would become fixed once incorporated into LNRS - a concern over ongoing data maintenance.

Impacts and mitigation

The LNRS process has highlighted both challenges and opportunities in utilising data for nature recovery strategies in England. Data gaps and accessibility constraints have delayed the development process, and variability in access to high quality data and the lack of standardisation have resulted in some concerns about the long-term utility of LNRS - in particular that when it comes to review, RAs have no clear route to establish success measurement and monitoring, and then use this data to design improvements and inform future reviews of LNRS.

Despite these obstacles, many RAs found practical solutions. Relationships with LERCs and data from previous work have provided many RAs with a strong baseline for LNRS development; Tools such as Marxan and Natural Capital Assessments improved decision making, providing a more streamlined method of identifying priority area; and the integration of local data provided by LERCs can be integrated alongside national frameworks such as biodiversity action plans ensuring that plans align with both local ambition but also national objectives.

Data and evidence (and the nature recovery decisions made on these) are foundational elements for LNRS in supporting national nature recovery commitments. Systematic improvements in data governance, a coordinated approach to data access and sharing protocols and continued investment for monitoring is essential. Addressing these barriers would ensure that LNRS outputs are based on the best evidence, and that this is consistent nationally.

The challenges posed by data gaps and variability in data quality demonstrate many nuances that RAs face in developing effective strategies, such as the practical constraints on time to access and acquire data, as well as time to address gaps within existing data sets. However, the use of established relationships, tools and utilising existing data sets, have helped mitigate some of the data challenges. RAs have had to demonstrate a high level of resourcefulness to target many of the data-related barriers.

Engagement with strategic stakeholders reinforced the idea that while variability of data availability, quality and access may not be an insurmountable barrier for the development of LNRS per se, as LNRS teams have developed appropriate workarounds to get to an end goal, this creates an obvious challenge of integrating the outputs of the different LNRS at a broader regional or national scale. Even within each LNRS boundary, the point was made that certain organisations and partnerships will continue to rely on certain data (e.g. LERC data), whereas a different evidence base (e.g without LERC data) may be used in LNRS '*to set local, regional or national priorities/target action or funding*'.

It is difficult to predict how pronounced an impact this might have. However, it contradicts one of the key principles of spatial planning for nature, which is to encourage the close integration and priority alignment of nature recovery actors working at different spatial scales.

> '*There is a missed opportunity if Responsible Authorities are not encouraged to ensure that habitat and baseline data are…collected in an exchangeable and consistent format. If there are different classifications and definitions used, monitoring outcomes on a national scale will be almost impossible.*'

Key points

- The data access landscape for nature recovery planning in England is very challenging, with numerous barriers to data access, and a number of issues with data gaps and data quality which affect RAs unevenly. This has impeded strategy development and may call into question the evidence base for priorities and measures (*barrier to process and barrier to successful outcomes)*
- Some LNRS will be based on data with gaps and potential inaccuracies, in particular in relation to species, and/or quality issues, which have been filled on a best endeavours basis (*barrier to successful outcomes*)
- Data gaps, particularly in species distributions and habitat conditions are compounded by inconsistent quality and accessibility, creating significant challenges for RAs (*barrier to the process)*
- Concern about the lack of clear data standards and uncertainties around data requirements for future monitoring affecting long-term utility of the strategy (*barrier to the process and successful outcomes).*
- Although there are many data challenges, there was also consistent feedback from multiple RAs that LERCs, and a range of previous studies and projects, have created the data baseline conditions to support LNRS development. This further suggests an uneven experience of data barriers, but perhaps also that overall there is an imperfect but functional data foundation for LNRS (*enabler to process, enabler to successful outcomes*).

Mapping

Note. Mapping might be considered to be a subtheme within the previous discussion on barriers and enablers for LNRS data. It is certainly the case that LNRS mapping in one sense is a visual spatial expression of the wealth of data which LNRS are built on.

As LNRS are spatial plans, mapping holds a lot of weight in the process, and so barriers and enablers to this key output have been considered separately. It is true that barriers to development of mapping are closely linked to data, but many are also closely linked to guidance on the mapping approach, and some to skills and resource availability. For example, when discussing mapping barriers, RAs pointed to not being able to include priority habitat data which was challenging in protected landscapes without local wildlife site systems (guidance related) - others referred to difficulty in including county wildlife sites and local wildlife site data (a data access barrier described above). Some RAs mapped more habitats as 'irreplaceable' than others, which was confusing and might contribute to inconsistency across RA areas. This is rooted in a lack of clarity on the definition of certain terms, covered in the section on guidance above.

Context

The primary LNRS legislation (EA21), and LNRS statutory guidance requires RAs to develop spatial outputs that identify existing habitats and habitat networks, and highlight opportunities for habitat creation or restoration, increased connectivity, as well as identification of potential nature recovery measures based on input from diverse stakeholders.

The guidance offers a significant amount of flexibility when it comes to RAs determining the scope, scale and level of detail of mapping outputs. This flexibility has empowered some RAs to tailor their approaches based on regional needs. Balancing the level of granularity and flexibility provides many of the challenges and opportunities RAs experienced within the mapping process. For example, some RAs focused on broad landscape-scale perspectives, while others adopted more site-specific insights. This introduces variability in how maps are produced and interpreted, representing challenges on how best to integrate each LNRS area's maps into a cohesive national picture. This section demonstrates how spatial outputs contribute to the development of an effective LNRS, and the associated challenges and opportunities.

Mapping as an enabler

Having flexibility in mapping methodology has been beneficial, with many RAs adopting multi-layered mapping approaches, integrating ecological networks, ecosystem services, and land use, to identify areas with the greatest restoration potential and pull out areas of high opportunity. Theoretical methodologies such as the Lawton principles, (bigger, better and more joined up)[11] have guided RAs in identifying and prioritising sites to ensure targeted areas contribute to broader landscape resilience. Tools such as the Beetle index table and value index tables provided quantitative scoring systems, making it easier to allocate resources to areas that would deliver higher ecological benefits.

As well as LNRS mapping being an outcome, the mapping workstream has been helpful in the development of other elements of the broader strategy, as a form of feedback loop tool. RAs described development of interactive digital maps to enhance stakeholder engagement and decision

[11] John Lawton, 'Making Space for Nature: A Review of England's Wildlife Sites and Ecological Network' (*UK Government Web Archive*, 2010) <https://webarchive.nationalarchives.gov.uk/ukgwa/20130402151656/http:/archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf> accessed 26 July 2024.

making. For example, some RAs created online, public-facing maps where stakeholders could input constraints and opportunities. This serves as an enabler as they provide engagement and transparency in the LNRS process. By allowing stakeholders (such as local communities, landowners, and environmental groups) to view, input, and explore data directly, these maps facilitate data sharing and support decision making. This may require RAs to take a cautious approach to these contributions when determining whether land that is seen as important at a neighbourhood level should be mapped as strategically important.

Mapping as a barrier - scope and scale of mapping

Determining the appropriate scope and scale of mapping was a key decision point for RAs, mentioned by several workshop participants, but does not appear to be supported by clear guidance. While some appreciated the flexibility to determine the level of focus, they found setting the ‘right’ spatial granularity for priority areas and measures to be largely guesswork. A more detailed fine scale for mapping actions is considered more comprehensive and might better support site specific planning, but it represents a huge undertaking, whereas some RAs preferred a landscape perspective as it provides greater flexibility and fewer complexities. This decision was further complicated by the breadth of practical actions, some of which apply at site-scale and some landscape-scale, which was a challenge to convey. In the frontrunner focus group, some further details emerged in relation to disagreements around whether to use field boundaries or hexagons for mapping, which causes confusion and difficulties for local implementation.

The extent to which these differences will translate into ongoing barriers to using the mapping outputs, for example cross boundary or to achieve coordination of action at different scales, was not established during this research but there are grounds to be conscious of this as a potential risk. LNRS which have focused on mappable measures that operate at different scales might result in difficulties in comparing LNRS between RA areas, or when integrating these into a national nature recovery network, even if consistent technical data and mapping standards have been followed. This could make coordination of effort challenging across wider regions, though it is hard to say how pronounced an impact this might have in practice. Some RAs pointed out that BNG may require more specific mapping of potential measures, which suggests a possible interoperability conflict with the broader approach preferred by RAs.

Measures also presented issues of scale for some RAs, who found it difficult to distinguish between mapping of measures and mapping of potential opportunities at certain levels of resolution. Some found the definition of a mappable measure problematic, and would prefer to have been considering 'principles’ or ‘objectives' rather than anything more specific.

> *‘Definition of a mappable measure - to be honest I think they should be 'principles/objectives' NOT specifics’*
>
> *‘If LNRS is a 'guide/steer' not a prescription and it shouldn't replace detailed project/land management plans for individual land parcels, then mapping potential measures raises challenges of how prescriptive or detailed they need to be.’*

RAs also found difficulties in incorporating wider environmental benefits of nature recovery in mapping, such as adding map layers for aspects like flood risk management and air-quality, which would deliver multi-functional outcomes, but risks taking focus (and development resource) from what some considered to be the primary nature recovery objectives. Some clearly felt this interfered with the main purpose of the maps.

Availability of technical mapping skills and resources

Having skilled Geographic Information System (GIS) professionals to produce high-quality maps was seen as a key enabler for RAs. Utilising in-house professionals, or outsourcing qualified GIS consultants has enabled RAs to produce complex maps in alignment with the guidance, and prioritising specific habitats effectively. Having highly-capable staff to navigate the mapping process frees up time and resources to be spent elsewhere.

Conversely, some RAs had limited expertise in mapping tools such as QGIS and ArcGIS, and this was seen as a barrier to the development of their LNRS. Teams lacking in technical ability meant that it was harder to produce accurate and usable mapping outputs, particularly when determining the appropriate format and level of detail required due to lacking available guidance. Some RAs hired GIS consultants to overcome this barrier, reducing their overall budget for LRNS production.

Some RAs referenced specific practical barriers they faced which included simply finding mapping solutions and appropriate software that met all their needs, and sometimes not being able to meet all these needs - one RA said they had no ability to create downloadable maps within their authority.

Impacts and mitigation

The challenges faced by RAs in mapping highlight the difficulty of meeting both strategic aims and practical requirements within the LNRS guidance. The need for maps to guide broad strategic objectives while providing enough detail to inform potential measures has resulted in trade-offs. Broad-scale maps offer flexibility and simplicity but lack granularity, and are better for conveying strategic vision but may be less useful for practical implementation. Limited in-house technical mapping skills and software capabilities further complicated the process for some RAs, with some relying on external support, or hiring consultants to overcome these barriers. As with data and evidence above, some RAs found themselves with a headstart in capability.

The relative openness of guidance on scale and scope of mapping outputs is both an enabler and a barrier. Without overly prescriptive guidance, RAs were free to determine mapping outputs which served local needs and incorporate specific spatial prioritisation and decision making tools which worked for them, but some were also hampered by debate and disagreement about elements which might have been a settled matter had there been more specific instruction for RAs. The broader, longer term concern is one of possible reduced standardisation when considering a regional and national nature recovery action planning picture.

Overall, it is difficult to predict whether this longer term integration risk will outweigh the benefit in the development process, and beyond, of creating maps that are based on what local stakeholders wanted to see. Mapping was used by RAs to gather and consider insights from diverse stakeholders, allowing local communities, landowners and environmental groups to have direct contributions to the mapping process, supporting evidence-led strategies and shared understanding through collaboration.

When considering this in the context of legally-binding nature recovery commitments, mapping helps to visualise ecological networks, priorities and measures as understood by local stakeholders, and it seems reasonable that the scale of mapping should make sense to those stakeholders first and foremost. However, it may then present challenges in terms of being able to comprehensively understand the national picture, and the overall contribution of LNRS to achieving national commitments and ambitions for nature recovery.

It may also be the case that it is entirely legitimate for different RAs to adopt variable approaches to mapping granularity, with larger LNRS areas with greater homogenous habitat areas benefiting from a

less granular approach, where smaller (perhaps urban) LNRS areas might benefit from much more focused mapping. Observing any such patterns in final LNRS outputs will be interesting.

Key points

- A lack of clarity on what the scope and scale of mapping should be contributed additional complexity. Some RAs may have opted for a scale which does not support certain future uses such as site level planning (*barrier to process, barrier to successful outcomes*)
- The statutory requirement to map additional proposals related to wider environmental benefits may detract from what some RAs felt should be the core focus of nature recovery (*barrier to successful outcomes*)
- The need for technical mapping skills or specialist software on the project caused issues for RAs without these, hindering quality map production and/or absorbing more budget than other RAs needed to dedicate to this area (*barrier to process*)
- While flexibility allowed RAs to tailor mapping outputs to regional needs, it also created inconsistencies and challenges in integrating maps into a national picture (*enabler to process, barrier to successful outcomes)*
- Use of established frameworks such as the Lawton principles, value index tables, and digital mapping methodologies enabled some RAs to identify high-priority areas that align local actions with strategic goals (*enabler to successful outcomes)*

Resource, funding and timescales

Context

Resource, funding and timescales have been grouped together in this section because they represent challenges and opportunities which are highly interconnected. Defra allocated £14 million of funding to RAs[12], and the funding for each LNRS area was allocated based on local need and specific factors, aiming to account for variations in geographical complexity and the resources required to develop an effective strategy. The funding provided by Defra has supported critical elements of strategy development, including stakeholder engagement, data collection, and the development of spatial outputs via mapping stages. Although the funding has been vital for strategy production, there are uncertainties regarding the allocation of future funding, raising significant concerns for RAs about the capacity to monitor and adapt their LNRS over time.

Additionally, resource-intensive tasks such as the technical ability required for mapping, and the heavy input required through stakeholder engagement have highlighted numerous challenges around limited capacity, particularly in LNRS areas that require a high level of specialist skills or significant collaboration.

This section explores the barriers associated with resource funding and capacity, alongside some of the enablers that have been identified by RAs to address some of these challenges. It highlights how important sustainable investment and adequate resources are, not just for developing their LNRS', but for sustaining them post implementation and being able to review them in the future.

Resource and funding as an enabler

Funding from Defra, and other sources such as specific grant schemes, has allowed RAs to access resources essential to the development and implementation of LNRS.

The funding provided by Defra has enabled RAs to either recruit in-house staff largely on a fixed-term basis, or employ contractors to provide expertise to different parts of the strategy. For example,

[12] PAS (n 7).

several RAs mentioned hiring GIS experts for the mapping process and graphic facilitators for workshops. Additionally, hiring consultants with specific skillsets has acted as a huge enabler, for example hiring a consultant with expertise in SCP to lead RAs through the process of how best to contribute, and add value to their LNRS. Additionally, funding grants have supported ongoing data collection, and the purchase of equipment that enables habitat monitoring and data recording post implementation. Funding was frequently channelled into Local Nature Partnerships (LNP) (where they existed) to fund the development of LNRS (or parts of it) to benefit from their existing network of public, private and third sector partners.

> 'Our *Local Nature Partnership was a big enabler - a ready-made cross-sector partnership leading the work!*'

Most comments from RAs on funding as an enabler focused on the development of the strategy. In terms of long term funding for delivery, RAs mentioned grants, private investment, and expected funding from BNG. The question of which organisations should be funded in the longer term was touched upon lightly by the strategic stakeholder group. One stakeholder mentioned the conservation sector can step up to deliver when funding is available, and others referred to funding the RAs and LNPs in terms of ongoing coordination.

Some RAs described approaches they had taken to simplify parts of the LNRS development process in order to make the funding go further, and the ability to be efficient with resources were put forward as enablers. For example, having a specific mapping and data working group to overcome challenges together reduced the overall workload, especially as the mapping stage requires a huge amount of local and national data.

Resource and funding as a barrier - future funding landscape concerns

Funding concerns were highlighted as a significant barrier to LNRS by multiple RAs, and this was also acknowledged by strategic stakeholders as having a compounding effect - '*most barriers can be broken down with sufficient funding*', suggesting that most other barriers become more pronounced where funds are scarce. As one stakeholder put it, this can result in a tendency to rely on 'goodwill' which does not always get good results, especially combined with short timescales for strategy development.

Although some of these points related to general lack of funding for LNRS development resources (a number of RAs felt it was insufficient for the task), and some focused on funding processes such as the grant claim window, the main thrust of this collective concern was that a lack of clarity on long term funding actually hampered the development of LNRS. Stakeholders expressed that this affected several areas of their work.

Engagement was made more challenging by a lack of funding clarity on delivery mechanisms, which for some key stakeholders is needed for them to justify investing time and energy in contributing to LNRS. For other stakeholders, knowing that the RA has sufficient funding for maintaining relationships would have improved confidence to get involved and share data. Looking into the future and with a focus on preparing for delivery, the frontrunners focus group expressed an ongoing barrier was uncertainty about how future delivery funding streams (e.g., agri-environment schemes) will be allocated and whether local delivery will have adequate support.

The development of priorities and measures was complicated by a lack of understanding of future funding, both for the RA to maintain the strategy (the more complex or detailed any lists of priorities and measures, the more ongoing maintenance effort), and for setting and sizing measures. It was

hard to determine what amounted to ‘practical’ and realistic action without knowing the amount of funding available, and the focus and detail of funding mechanisms.

Funding for future monitoring and success measurement was a key theme, which perhaps speaks to the RA’s perceived ongoing role as overall coordinators. RAs felt unable to build monitoring designs into the strategy because they have no concept of how much resource for monitoring is appropriate. The broad window for any future review (3 to 10 years) introduces a significant amount of further uncertainty, since the design of any monitoring or success measurement system would be made easier by understanding how long it was to run for. There may be further complexity and uncertainty introduced by proposals in the devolution white paper[13] in terms of the responsibilities new strategic authorities may have for LNRS and wider environmental delivery - this was an emerging picture at the end of this work and RAs had not mentioned it during

The uncertain future funding picture is further compounded by the fixed-term nature of most in-house resources in either RAs or LNPs. Without certainty over ongoing funding for delivery, RA’s have already started to lose this resource and with it some of the expertise of the LNRS process.

Resource and funding as a barrier - workload and timescales

Stakeholders described the development of LNRS as a highly resource-intensive process, especially for areas with complex stakeholder landscapes, such as predominantly urban regions, where engagement with smaller local businesses have been particularly challenging (though landowner engagement was also highlighted by rural RAs). Furthermore, engagement with large and diverse stakeholder groups has required a significant amount of effort to ensure all views and perspectives are captured.

A particular focus for many RAs in terms of workload was the need for highly technical GIS capabilities, with some suggesting that a dedicated team is needed to fully implement mapping, while others noted that even with the technical expertise, it remained challenging to achieve.

The scale of LNRS development overall across many workstreams – such as compiling species priorities, managing consultations, and addressing stakeholder inputs – has led to some RA workers feeling overwhelmed with their workload, particularly when coming up against issues such as data licensing and producing a sufficient evidence base for decisions. Some ‘democratic process’ events (e.g the 2024 general election, and coordination with the democratic process pathways of multiple SAs) might have been expected to have had a further delaying impact but were not specifically mentioned, though some RAs expressed concern about locally-focused timing synchronisation with other plan development (local plans in particular). This was not expressed as having an impact on LNRS development, rather a concern about future coherence.

Some RAs also mentioned the resource burden of LNRS and other schemes on some stakeholder communities resulting in ‘consultation overload’ for them. RA stakeholders emphasised that a great deal of the LNRS development process was reliant on goodwill contributions, and the knowledge and expertise of other staff within the authority, the supporting authority, and in external organisations.

This point was further developed within the frontrunners focus group. Workarounds mentioned included using secondments and relying on the goodwill of stakeholders to support the process without direct compensation. While this approach worked, there was concern that it could lead to disengagement if future projects are not secured, which emphasises the importance of aligning LNRS

[13] ‘English Devolution White Paper’ (*GOV.UK*) <https://www.gov.uk/government/publications/english-devolution-white-paper-power-and-partnership-foundations-for-growth/english-devolution-white-paper> accessed 4 April 2025.

priorities with existing local projects, partner workstreams and ensuring partners can use LNRS to be well positioned for future funding bids.

Single species conservation groups, county recorders, LERCs, volunteer task and finish groups and volunteer experts were mentioned by RAs as stakeholders who were key to the process but who found it difficult to allocate the time to contribute in detail, especially on a voluntary basis. In some instances, this resulted in commitments by volunteers not being met, which created holes in RA project plans and progress set-backs. The strategic stakeholder group also expressed concerns in this area. With regard to insight on resource constraints, lack of 'appropriate personnel' in Responsible Authorities was seen as a barrier - one stakeholder elaborated on one aspect of this, making a specific point about RAs being unlikely to have *'sufficient in-area expertise to assess the species which should be included across the full taxonomic gamut*'. This is quite a specific concern, but it relates to concerns expressed by some of the RAs themselves and the advisory panel that gaps in specialism could result in significant species bias and gaps in the nature recovery strategy. We know from the literature review conducted as part of this project that this is a perennial issue for systematic conservation, with some groups such as arthropods consistently missed or poorly considered.

The frontrunners focus group provided some specific examples of potential workarounds based on extending a citizen science monitoring program across the LNRS area, but without ongoing funding, the rollout of this idea had not been considered feasible by the RA in question (even volunteer resource is associated with management, platform? and other costs).

In general, RAs expressed that the amount of contribution by experts was less than they would have liked - and these other comments from strategic stakeholders highlight a concern that 'patchy' expertise (i.e. experts in particular species or habitat types not being represented at all or only loosely involved) might undermine the overall quality of LNRS priorities and measures, in the sense they may deliver positively for the abundance and diversity of some species groups but ignore or even harm others.

Impacts and mitigation

Dedicated funding has been crucial to the development of LNRS; without it, there would be no strategy. Although some RAs drew attention to the amount of funding they had received through the allocation formula, most comments from RAs on barriers to process were concentrated on how resource-intensive the LNRS has been, as well as the narrow time frame, placing further strain on staff with limited capacity. Certain resource-intensive processes were called out in particular, such as stakeholder engagement and mapping. Additionally, as referenced in the data section, challenges associated with accessing and maintaining high-quality data made it harder for RAs to build the evidence-base necessary to inform the strategy.

This might imply that more RAs felt the main problem was lack of time rather than lack of funding, though in both cases the potential risk is the same - a reduction in quality of outputs. It is worth noting, however, that some RA representatives acknowledged that it may be better to have less comprehensive LNRS earlier, rather than a more complete output much later, especially given the strategies will be reviewed periodically and can be improved over time.

Some RAs were able to partially mitigate funding and resource challenges by accessing additional targeted grant funding, and through careful resource allocation. For example, the recruitment of skilled professionals and high-quality technical support, especially GIS experts (see mapping section) have reduced workload in key areas and seemed to represent an efficient use of funds for some RAs. While there may be some lessons learned with wider applicability in these, it is perhaps challenging to

transfer these to other RAs given the pace they are working on strategy development, and the fact that the particular funding and resourcing circumstances of each RA is different.

Most RAs who raised concerns about funding were focused on the long term. Although each RA has been allocated funding for the development of their LNRS, there are many concerns about the future funding picture and longevity of the strategy outputs after publication.

Multiple strategic stakeholders also stressed the importance of long-term funding for resources, which reinforces the feedback from RAs on the lack of certainty and what this means for the permanency of LNRS coordination and development roles. The frontrunners focus group expressed this succinctly as a “2025 cliff edge,” where delivery could falter without sustained investment, and where significant depth of knowledge and understanding of LNRS are lost as fixed-term appointments end.

The impact of losing that expertise is likely to be felt differently across RAs, as the baseline level of ecological expertise varies - for some the impact may be reduced capacity in a knowledge or skills area, for others there may be a more significant or even complete loss of certain skills and expertise.

The frontrunner focus group was also asked specifically to imagine a scenario in which longer term funding was not forthcoming, and how RAs might respond to that scenario. Their collective response indicated this could result in resorting to less robust approaches, such as interactive self-reporting tools, to sustain monitoring efforts. In the absence of dedicated funding, LNRS delivery risks becoming sporadic and opportunistic, driven by grant availability rather than coordinated priorities. Local authorities, already under pressure due to funding constraints, might find it difficult to make a case for prioritising LNRS delivery, monitoring and evaluation without a statutory mandate and accompanying funding. Some RAs might seek contributory funding from partners, but progress would remain heavily reliant on central funding to pump-prime delivery. Without this, local efforts could stall, potentially disengaging key partners like farmers and landowners.

Future funding uncertainty has led to a lack of confidence in the capacity of RAs to maintain, monitor and adapt their strategies when it comes to the review period. The Planning Advisory Service indicates the government have stated that any monitoring and reporting activity in between review cycles would be funded as a ‘new burden’ on RAs relating to LNRS, but the level of this funding is not yet known and is dependent on future spending reviews[14]. Beyond monitoring, RAs may also require resources to maintain strategies in between review cycles to ensure they remain up to date with changing legislation, guidance and evidence - RAs felt that LNRS needs to be adaptive and dynamic. The frontrunners focus group explained that monitoring discussions with partners are focusing on defining the role of the RA in monitoring and delivery. However, many stakeholders are uncertain about the expectations and the potential funding streams, which complicates this process.

The frontrunners focus group added some additional richness to this picture by highlighting that there is similar concern over BNG monitoring resource, and a lack of clarity on how the different bodies (Defra arms length bodies, local planning authorities) will monitor BNG and what exactly will be measured, which perhaps suggests that there is a more generalised ‘who and how is nature recovery monitored’ question which extends beyond LNRS.

Key points

- Lack of clarity over future funding affected the development of LNRS as this information is material to a number of areas; engagement, creation of realistic measures, creating effective monitoring plans - raises concerns about their ability to deliver effective nature recovery outputs post implementation (*barrier to process*)

[14] PAS (n 7).

- The process is very resource-intensive, as mentioned in mapping and stakeholder engagement sections - RAs with strained capacities highlight the need for ongoing investment in technical expertise (*barrier to process)*
- Dependence on volunteer resource, and variable access to specialists and their expertise (species experts in particular), has resulted in mixed levels of commitment and uneven development across LNRS areas (*barrier to process, barrier to successful outcomes)*
- The initial timeframe for LNRS development was perceived as relatively short, so some activities which might have been given more time (such as engagement with key stakeholders) were felt to be compressed, limiting the scope and depth of engagement in LNRS development (*barrier to successful outcomes*)
- Defra's funding allocation was tailored to local needs which have supported important elements of strategy development (mapping, stakeholder engagement) although there are still concerns over delivery funding (*enabler to process, and barrier to successful outcomes)*
- It is not clear which organisations will be responsible for nature recovery monitoring, and whether this should be specific to LNRS or if multi-scheme monitoring may be more appropriate (*barrier to process*)

Stakeholder Engagement

Context

Stakeholder engagement is a fundamental requirement of the LNRS process, as set out in the primary legislation (EA21), Environment (Local Nature Recovery Strategies) (Procedure) Regulations 2023 and the statutory guidance. This emphasises the need to engage with a broad range of stakeholders, including local authorities, land owners, farmers, environmental organisations, and community groups. This is intended to ensure that the strategies developed are inclusive, representative and informed by local expertise. This engagement is necessary to provide local understanding of the specific ecological and social context of LNRS regions, and may offer opportunities to gain buy-in from those who can have more influence on the recovery efforts - stakeholders such as large landowners and estate managers from the public and private sector, but also those actively engaged in recovery work on the ground.

Effective engagement supports consensus building and is important for aligning local action, regional ecological needs and national nature recovery goals. Stakeholder engagement ensures recovery efforts are aligned, collaborative and grounded in local knowledge and expertise, and are also carried out at different organisational and spatial scales in a cohesive way. RAs derived significant value from engagement activities when these were successful, but barriers in particular areas (notably around engaging with landowners and farming groups) suggest that the views of some groups may be underrepresented, or that those groups may not be as active in supporting LNRS through into delivery.

This section explores the barriers and enablers that RAs have experienced related to stakeholder engagement throughout the development of their LNRS.

Engagement as an enabler - broad based support to gather information and insights

The development of LNRS has required a huge amount of collaborative stakeholder input, with contributions made through workshops, surveys, interactive mapping, consultation processes and partnership working. Significant flexibility in how this was carried out was afforded by the statutory guidance which was a positive from the perspective of accommodating very different stakeholder landscapes, but may have resulted in some inconsistencies.

Engaging with expert groups provided technical knowledge throughout the development of the strategy, and were highlighted as particularly beneficial during the identification of lists of priorities, refinement of ideas identified by stakeholders, and writing up sections of the LNRS. Stakeholders' enthusiasm and willingness to participate as well as the quality and level of engagement provided good input for pressures and opportunities, and were key to creating a representative strategy that reflects local ambition.

Many RAs commented on the high level of support they have received from both Natural England, and their LERC; for example Natural England have provided support to RAs on habitat network modelling whereas LERCs have provided the essential ecological data used to inform the mapping process. The frontrunner focus group expressed that for this support to continue, LERCs require consistent funding from LPAs and Arms-Length Bodies - one RA went further and proposed that it should also be mandatory for land managers applying for agri-environment schemes to pay for LERC data searches and grant access for monitoring purposes to ensure data accuracy and accessibility.

Early engagement with SAs to request their data provided opportunities to establish a strong basis for a good working relationship and highlighted which SAs they needed to further engage with.

Beyond these key relationships, partnership working in general was identified as a huge enabler for RAs, who have benefitted from long-standing relationships with LNPs, between local authorities, and having a good mutual understanding with consultants. LNPs and biodiversity partnerships have provided support, expertise and input to steering groups, reducing the workload for RAs.

Local knowledge has been incredibly important to the LNRS process. LERCs were again frequently highlighted as invaluable resources, offering both high quality data, but also support and expertise to inform decision making. Utilising local knowledge from other sources included wildlife trusts, local authority ecologists, and the creation of habitat group leads. Ensuring that the development of the LNRS is embedded in locally relevant knowledge enables the strategy to reflect the specific ecological context of the area. For example, commissioning a thematic habitat group leads to focus on specific habitat types for each broad habitat group ensures the whole ecosystem's complexity while also addressing connectivity.

The frontrunner focus group expressed some of the key aspects of broad engagement that translate into high quality outputs and achieving genuine consensus. Effective LNRS delivery requires a “big tent” approach, involving partners beyond the nature sector to secure broad buy-in and foster shared responsibility. Comments from strategic stakeholders on stakeholder engagement were brief but support an emphasis on collective ambition to "make it work", and ensuring engagement continues beyond the initial strategy development, with land managers specifically highlighted.

Many RAs commissioned experts to undertake parts of their LNRS, ensuring the strategy was informed by high-quality, specialist knowledge. Experts were engaged for a variety of purposes, including editing and supporting the layout of particular sections, to convey the strategy using more accessible language, and conducting thorough strategy reviews as part of a technical review panel. Contributions from stakeholders across sectors provided expert advice which enabled RAs to have a more strategic overview

In terms of specific methods of engagement which delivered good results, hosting a series of workshops were identified as a key method for engaging stakeholders and gathering input for the development of LNRS. Generally RAs indicated that these sessions were well-received and generated valuable ideas from local partners and stakeholders, however some highlighted where there were challenges in workshop engagement - such as securing representation from farmers,

developers and local businesses. Habitat-themed workshops, public consultations and surveys provided opportunities to capture priorities and measures which generated good levels of engagement and insights which were refined and incorporated. Additionally, hosting pre-draft LNRS public consultations gave opportunities for stakeholders to contribute and generate meaningful feedback.

Engagement as a barrier - building consensus with a large and diverse group, working with harder to engage communities

RAs described barriers in relation to engaging large and diverse stakeholder groups in the first instance and getting information from them (a resourcing challenge), and then building consensus among their contributing organisations (a challenge of diplomacy and co-design). A specific example at a foundational level was achieving agreement on descriptions of areas. There was a general sense in RA feedback that understanding what consensus really means in this context, and knowing whether that has been achieved, is challenging. The frontrunner focus group highlighted some particular points related to this, highlighting that guidance to engage "non-usual suspects" came without clarification on who these groups were or support in identifying them (this could have been an area where Natural England provided advice or guidance). It was not always clear how to ensure community engagement was meaningful rather than tokenistic.

Effective stakeholder engagement, especially where stakeholder groups may have contradictory priorities, often requires specialist skills and experience but it may have been difficult for RAs to bring in specialists with many other technical areas such as mapping, data analysis competing for budget.

Stakeholders operating across multiple RA areas faced challenges in aligning priorities and maintaining consistency. This lack of coherence can lead to disagreements and complications in strategy implementation. It was also suggested that engagement with SAs by RAs presents an additional dimension to the overall coordination picture. In some cases, there was frustration with a perceived requirement to duplicate engagement efforts rather than build on established networks with LERCs, LNPs and Catchment Partnerships - though other RAs seemed to have incorporated and built on these existing networks, and some RAs with no strong active partnerships in their area expressed that they felt they were starting from scratch. This may have had the effect of driving collaboration and engagement with nature recovery in areas where this has been lower.

To begin to address some of these challenges the frontrunner focus group proposed solutions including national guidance to fill critical gaps, noting that the absence of a support structure or examples of good practice from Defra or Natural England left RAs without a clear roadmap during LNRS development. Additionally, they stressed the importance of centralised collaboration tools, as the lack of a shared platform for knowledge exchange and coordination (such as that which exists for BNG, e.g. available through CIEEM[15]) was seen as a missed opportunity. It was felt that Defra should have done more to aid sharing of best practice and improve consistency across LNRS.

Some RAs emphasised the difficulty of conducting thorough outreach and extensive consultations with stakeholders within the given timeframe. For example, engaging with farmer groups required a lot of flexibility to fit their busy seasonal schedules. Additionally, the amount of work involved in gathering stakeholder inputs, processing stakeholder feedback and agreeing priority species was significant for some RAs. The iterative, sequential nature of the process has meant that delays in one stage of engagement have generally resulted in a delay overall, as one stage relies on the outputs of another.

[15] ‘Biodiversity Net Gain Resources’ (*CIEEM*) <http://https://cieem.net/i-am/biodiversity-enhancement-approaches/biodiversity-net-gain-resources/> accessed 4 April 2025.

Enthusiasm among many farmers for LNRS was described as low, but their expertise is vital to the LNRS process. The challenges of engaging with farmers and land managers attracted a significant number of comments and was one of the most prominent barrier themes to emerge. Many RAs felt poorly equipped to address challenges from farmers and land managers on the limited information on funding or benefits for farmers, and some expressed that Defra had a lack of understanding about the complexities of engaging with landowners for authorities, so RAs were not supported. Some RAs felt that there was insufficient time and guidance for tailored mechanisms to engage meaningfully with this group, which required a different approach to other communities. Efforts to build trust and improve collaboration require different methods like informal meetings and better alignment with farmers' schedules. Some RAs commented briefly in workshops that farmers and landowners are not a group planning authorities would normally engage with regularly, but this was not as strongly expressed as perhaps might have been expected.

While some RAs described farming representatives as being unwilling to participate or suspicious of the process, there was also some sympathy for this point of view given the lack of clear information on what LNRS delivery looks like. The lack of trust in central processes and concerns that LNRS might lead to unwelcome land designations created resistance to engaging. Strategic stakeholder comment on engagement barriers reinforced the point that engagement with land managers in particular is critical to the actual delivery of LNRS, but that the lack of clarity on how LNRS interacts with ELMS means that it is difficult to have constructive conversations - a major stumbling block for this key delivery route. A specific gap referenced was that 'the Local Nature Recovery part of ELMS' no longer exists[16], referring to the Local Nature Recovery successor to the Countryside Stewardship scheme in England which was subsequently replaced with other ELMS scheme options.

Feedback from the frontrunners focus group underscored that many barriers remain a pressing concern looking ahead to delivery and some aspects may even be worsening. Recent government actions, such as changes to inheritance tax and the withdrawal of capital funds, have heightened distrust and resistance among farmers toward LNRS processes. Additionally, RAs described farmers as increasingly anxious about the implications of being included or excluded from LNRS mapped areas, particularly concerning BNG uplift and eligibility for specific measures. They emphasised the need for clear communication, flexibility, and ground-truthing to address these concerns and build trust.

Despite the challenges, the focus group provided numerous examples of effective strategies for engaging farmers and landowners, demonstrating that productive relationships can be built at the local level. Informal settings, such as "pie and a pint" evenings hosted by pub landlords with strong farming ties, proved successful, as did farm cluster meetings, farm walks, and farmers' markets. Hiring a Farms Liaison Officer with a farming background was particularly impactful, as their credibility and relationships enabled peer-to-peer engagement. Collaboration with intermediaries like the National Farmers Union (NFU), Country Land and Business Association (CLA), and Farming and Wildlife Advisory Group also helped disseminate LNRS messaging and mobilise support. Flexibility in mapping interpretation was highlighted as essential, ensuring mapped areas accommodate ground-truthing and align with farmers' realities. Innovative outreach methods, such as showcasing case studies, peer-to-peer learning, and using trusted local advisors, further built trust and credibility. Additionally, incorporating farm sub-groups within LNPs enabled tailored and effective engagement plans.

[16] 'Local Nature Recovery: More Information on How the Scheme Will Work' (*GOV.UK*) <https://www.gov.uk/government/publications/local-nature-recovery-more-information-on-how-the-scheme-will-work/local-nature-recovery-more-information-on-how-the-scheme-will-work> accessed 4 April 2025.

Impacts and mitigation

Challenges in stakeholder engagement and collaborative working have tested the ability of RAs to develop effective LNRS strategies, including gaps in stakeholder representation, resource demands of engaging at scale, and those without well-established nature partnerships facing further challenges around building trust and working relationships from the ground-up. These barriers to process absorbed a significant amount of LNRS officer time and budget, and so stakeholder engagement is closely tied to barriers and enablers in relation to funding and resources.

The broader implications of engagement challenges (barriers to successful outcomes) are based on uneven representation and gaps in engagement with key groups such as farmers, developers and businesses, alongside constraints and variations in inputs of technical expertise from third parties. These represent challenges in developing comprehensive and inclusive strategies and there is a risk these may translate into poorer outcomes for nature recovery, or more challenging delivery landscapes where a genuine consensus was not reached during LNRS development.

RAs in many cases are able to mitigate these challenges through strong partnerships and innovative approaches to engagement. For example, relationships with organisations such as LERCs and Natural England have provided essential baseline data and LNRS support, whereas longstanding collaborations with LNP and biodiversity groups have supported strategic alignment and provided reduced workloads for RAs. The frontrunner focus group suggested that RAs found most success working with existing partnerships and networks (rather than creating new ones) to capture expertise and align on LNRS goals. Ensuring partners were involved in shaping LNRS processes increased the likelihood of their commitment to delivery. Local knowledge has been utilised through thematic habitat groups, and expert contributions have ensured the strategies reflect regional ecological needs with ecosystem connectivity in mind. Additionally, workshops and consultations further enriched the process by offering insights that balanced local ambition with national objectives.

Engagement and collaboration during LNRS development is fundamental to LNRS contribution to national nature recovery commitments, as consensus building on strategy, priority and approach is an essential precondition of a unified effort to actually implement nature recovery. Although there have been challenges for many RAs, the engagement process has provided a mechanism to identify how actions might be implemented effectively by those with the capacity to do so, such as local authorities, landowners, environmental organisations and developers, who have power and influence to deliver nature recovery initiatives informed by the LNRS. Even understanding where the gaps in engagement have been is not valueless, providing resources are now dedicated to closing these.

Ultimately, effective stakeholder engagement can be utilised by RAs to influence practical approaches to nature recovery, even if direct delivery is outside the scope of the LNRS.

Key points

- Achieving effective stakeholder engagement and consensus building has required significant resources and skillsets, with challenges specifically around engaging with farmers and landowners who often expressed scepticism and lack of clarity on what LNRS means for them (*barrier to process and barrier to successful outcomes)*
- Strong partnerships with organisations such as LERCs and Natural England were key enablers, providing essential data and support which reduced strains on workload, despite some barriers captured by RAs related to working with LERCs over data access (*enabler to process and enabler to successful outcomes)*
- LNRS to a large extent have been based on crowdsourced knowledge, sometimes from the general public but often from a dedicated base of genuine experts, providing their guidance and resources on a voluntary basis (*enabler to process, enabler to successful outcomes*)
- Workshops and consultations hosted by RAs were well received as opportunities to gather

diverse perspectives, identify priorities and refine measures, though some RAs highlighted representation gaps (e.g., farmers, developers) (*enabler to process*)
- Some RAs said that their tailored engagement approaches with landowners and farmers had been successful, which is notable as evidence that barriers to engagement experienced by a greater proportion of RAs can be overcome (*enabler to process, enabler to successful outcomes*).

Reflections

Throughout the report, and in the key points summaries, we have tried to retain the distinction between barriers to process and barriers to successful outcomes, though it should be acknowledged there is a soft boundary between the two. After considering all themes, stepping back to view the bigger picture with an eye on the future of LNRS, it is the barriers to successful outcomes that are of greater interest. Most new policies and strategies are difficult to implement, and although the challenges faced by LNRS practitioners are unique in detail, many of the broad themes might have been expected – the need for timely provision of guidance, availability of funding and resources, time pressures, access to good quality data, etc. The key conclusions we can make from this work are:

- The process has been difficult for RAs, but in different ways. In any new process, we should not expect there to be a total absence of barriers. Collectively, RAs and those supporting their work have demonstrated resilience and creativity in navigating their challenges.
- The LNRS process has highlighted the systemic issue of lack of habitat data (what habitat exists), habitat condition data and species data in England (not a new discovery but the LNRS process represents a very significant demand for this data in that the whole of England, which has shone a light on the scale of the issue. This was a known challenge going into LNRS development.
- The uncertainty around the future funding and resourcing for delivery of LNRS represents the greatest concern for RAs.

These are safe but perhaps unsurprising statements. But what deeper conclusions can be made about the implications of the barriers (and the way in which they were navigated) for the future?

In our final engagement session with RAs, the frontrunners focus group in December, we closed the workshop with a general discussion on ‘the big picture’, which helped inform this forward view, and in which there were parallels with the views provided by some of the strategic stakeholders we engaged with. This additional stakeholder input was considered in the broader context of everything else heard up to that point.

The big picture discussion centred around consistency and coherence across different areas. A key takeaway was the difficulty of achieving true consistency in LNRS approaches due to the varied contexts across regions. Participants acknowledged that while a national framework is essential, the flexibility to adapt to local conditions is also necessary – and getting this balance right is not easy. Local authorities, especially in rural areas, have had to tailor their strategies to specific needs, leading to differences in execution and expectations. There was general consensus that local approaches should complement, rather than mirror, one another. There was also a call for a national review of LNRS to identify commonalities and differences across strategies, ensuring that lessons learned from the first round are used to improve subsequent efforts.

While strategies themselves might retain local variability without severe detrimental effects nationally, the importance of consistent national policy alignment was highlighted, particularly the role of the ELMS schemes in aligning objectives and ensuring coordination across regions. Concerns were

raised about the disconnect between national policies and local implementation, especially in light of changing government priorities and inconsistent messaging. Participants emphasised the need for greater clarity from national bodies like Defra and Natural England on the expectations for LNRS, especially around key issues like mapping, targets, and deliverables.

The strength of future policy integration was also something which multiple strategic stakeholders focused on - this group described aspects of integration with other policies, strategies and plans as a key enabler for the delivery of nature recovery which is entirely consistent with the general view of RAs and indeed with the expectations of the OEP in commissioning this research. This was a strong theme, and the collective argument is that LNRS could act as a cross-boundary 'unifying force' to coordinate a range of different agendas.

> *'Local plans; planning applications, BNG, ELMS, Catchment sensitive farming, Nature recovery targets, species recovery targets, Favourable Conservation Status delivery and reporting, local projects and plans. All of these and more can be informed by LNRS priorities and mapping (and reduce a great deal of duplication in generating the same information).*

This perspective strongly aligns with the important concept of ensuring the coordination of different actors working at different spatial scales and with different focus. As another strategic stakeholder put it:

> *'Everything could be brought together under a single strategy with clear KPIs and an evaluation framework for measuring impact and success.'*

One strategic stakeholder expressed the same perspective but focused on the planning system, putting forward LNRS as helping to address synchronisation issues across multiple LPAs with different local plan cycles, plans and visions - ensuring that for nature recovery planning at least there is '*one overarching piece of work that straddles them all at a point in time'* and results in better alignment in those various instruments over time. It was also rightly pointed out that LNRS is different to previous local conservation plans in that they are statutory.

> *'By far the biggest single opportunity is that this is a mandatory, local-authority-led scheme, so will have the clout that voluntary-only, NGO-led schemes don't have. This also enables meaningful engagement with the planning process, including BNG'*

In the context of proposed planning reform and devolution, there is scope and justification for LNRS to be given even greater weight in local planning, decision making and statutory coordination of local environmental improvement delivery.

We have not considered these aspects in depth within this commission (in part because proposals in relation to planning reform and devolution emerged late in our research process), but would encourage further consideration of these areas alongside these findings.

Acknowledgement

We would like to thank participants from a range of organisations for their support in contributing to this research project through workshop attendance, completing surveys, providing information via email, signposting us to useful resources, and any other support provided - in particular, the time and attention of RA representatives has been enormously helpful and was provided at a time when many RAs were working at pace to hit challenging LNRS development milestones,

We would also like to acknowledge the clear and obvious commitment to meaningful nature recovery. While this report provides constructive critique of policy, processes, systems, funding, ways of working and other areas, there is no doubt that the participants we engaged with at all levels are actively working toward overcoming these barriers wherever possible to deliver improvements to the natural environment for the benefit of all.

Appendix A - Engagement Summary

Table 1 - RA Engagement Summary per RA showing those with at least one point of engagement

Responsible Authority	Project engagement
North of Tyne (01)	Yes
Cumbria (02)	Yes
County Durham (03)	Yes
South of Tyne and Wear (04)	No
Tees Valley (05)	No
Lancashire (06)	Yes
North Yorkshire and York (07)	Yes
West Yorkshire (08)	Yes
Hull and East Yorkshire (09)	Yes
Liverpool City Region (10)	No
Greater Manchester (11)	Yes
South Yorkshire (12)	No
Cheshire (13)	Yes
Derbyshire (14)	Yes
Nottinghamshire and Nottingham (15)	Yes
Greater Lincolnshire (16)	Yes
Shropshire and Telford & Wrekin (17)	Yes
Staffordshire and Stoke-on-Trent (18)	Yes
Leicestershire, Leicester and Rutland (19)	Yes
Herefordshire (20)	Yes
Worcestershire (21)	Yes
West Midlands (22)	No
Warwickshire (23)	Yes
West Northamptonshire (24)	Yes
North Northamptonshire (25)	Yes
Cambridgeshire and Peterborough (26)	No
Norfolk (27)	Yes
Suffolk (28)	Yes
Gloucestershire (29)	No
Oxfordshire (30)	Yes
Buckinghamshire and Milton Keynes (31)	Yes
Bedfordshire (32)	No
Hertfordshire (33)	Yes
Greater Essex (34)	Yes
West of England (35)	Yes
Wiltshire and Swindon (36)	Yes
Berkshire (37)	Yes
Surrey (38)	No
Greater London (39)	Yes
Kent and Medway (40)	Yes
Cornwall and the Isles of Scilly (41)	Yes
Devon (42)	Yes

Somerset (43)	Yes
Dorset (44)	Yes
Hampshire (45)	Yes
Isle of Wight (46)	Yes
West Sussex (47)	No
East Sussex and Brighton & Hove (48)	Yes

Table 2 - RA Engagement Summary per workshop showing participant numbers and RA representation

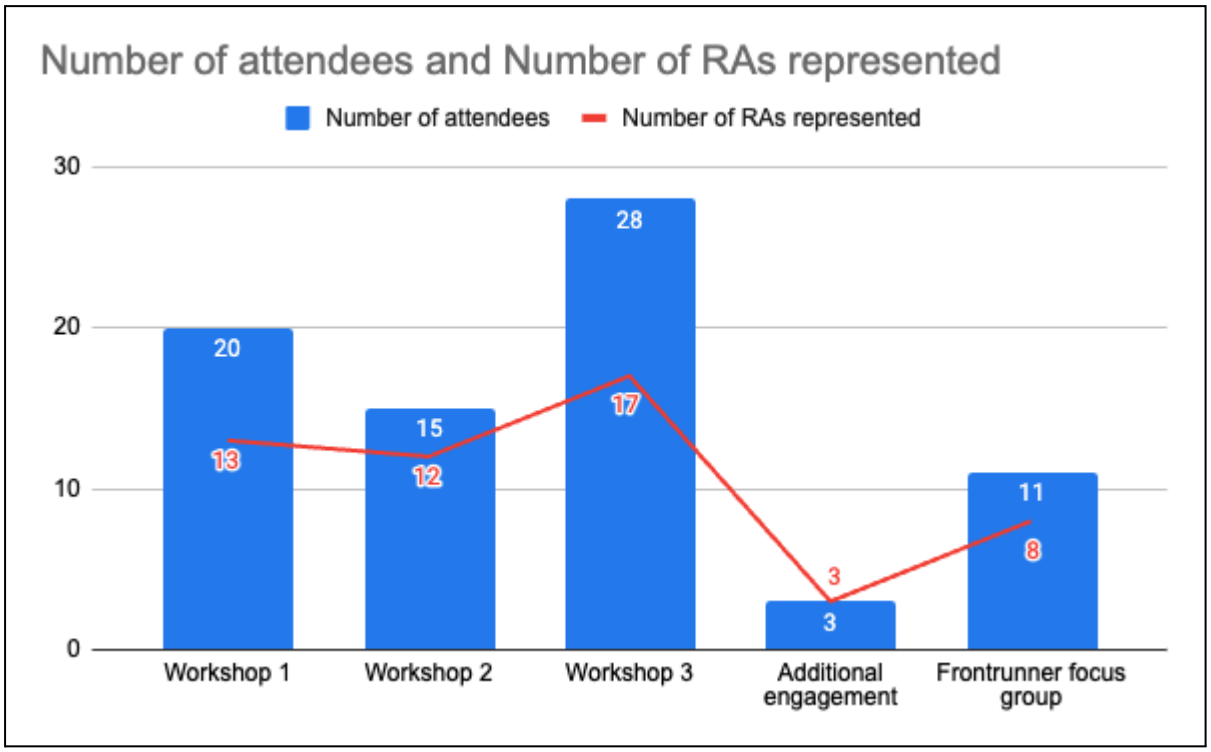

Table 3 - Strategic Stakeholder Engagement Webinar Summary

Organisation	Attendees
Amphibian and Reptile Conservation Trust	1
Bat Conservation Trust	1
Biological Recording Company	1
Bumblebee Conservation Trust	1
Cambridge and Peterborough Environmental Records Centre (CPERC)	1
Chartered Institution of Water and Environmental Management (CIWEM)	1
Cotswold National Landscape	1
Department for Environment, Food & Rural Affairs (DEFRA)	3
Devon Wildlife Trust	1
Enable Leisure and Culture	1
Environment Agency	2
Forestry Commission	1
Gloucestershire County Council	1
Historic England	1

Organisation	Attendees
Local Government Association	1
National Farmers' Union	1
National Infrastructure Commission	1
National Landscapes Association	1
Natural England	3
NatureScot	1
Office for National Statistics	1
People's Trust for Endangered Species (PTES)	2
Plantlife	2
Royal Society for the Protection of Birds (RSPB)	1
South Downs National Park Authority	1
South Oxfordshire & Vale of White Horse District Councils	1
The Rivers Trust	2
The Wildlife Trusts	2
UK Hab	1
University of Hull	1
Wildlife and Countryside Link	1
Woodland Trust	1

Appendix B - Timeline of LNRS Guidance

Table 3 - Timeline of LNRS Guidance

Date	Organisation	Statutory / non-statutory	Description	Link (if known)
March 2023	Defra	Statutory	Local nature recovery strategy statutory guidance What a local nature recovery strategy should contain	https://assets.publishing.service.gov.uk/media/6421a4bdfe97a8001379ecf1/Local_nature_recovery_strategy_statutory_guidance.pdf
May 2023	Natural England	Non-statutory	Governance and working with partners	
August 2023	Natural England	Non-statutory	Species Recovery	
October 2023	Natural England	Non-statutory	Engaging the land management sector	
November 2023	Natural England	Non-statutory	Identifying priorities	

January 2024	Defra	Non-statutory	National environmental objectives	https://somerset.moderngov.co.uk/documents/s39275/LNRS%20National%20Environmental%20Objectives.pdf
February 2024	Natural England	Non-statutory	Data standards for Local Nature Recovery Strategies - Advice for Responsible Authorities	https://www.makingspacefornaturekent.org.uk/wp-content/uploads/2024/05/Data-Standards-Advice-for-LNRS-Responsible-Authorities.pdf
March 2024	Natural England	Non-statutory	Mapping potential measures	
September 2024	Defra	Statutory	Irreplaceable habitats (guidance)	https://www.gov.uk/guidance/irreplaceable-habitats
December 2024	MHCLG	Non-statutory	A working paper setting out a new approach to development and nature recovery	https://assets.publishing.service.gov.uk/media/67644f004e2d5e9c0bde9c18/11_Chief_Planners_Newsletter_December.pdf
December 2024	Defra	Non-statutory	LNRS Policy Update	
February 2025	MHCLG	Statutory	Planning Policy Guidance updates - Paragraph: 044 to 048	https://www.gov.uk/guidance/natural-environment?utm_medium=email&utm_campaign=govuk-notifications-topic&utm_source=9cfadc7b-c74f-4922-a2df-7dd5ea411ca0&utm_content=immediately#full-publication-update-history