

# Buckinghamshire & Milton Keynes Local Nature Recovery Strategy (LNRS) Methodology Statements Document



*Early Morning Ivinghoe. Photo: Chris Smith*

## Table of Contents

<b>1) Step 3: Description of the Strategy Area and its Biodiversity and Opportunities for Recovery</b>	
<b>Methodology Statement</b> .....	7
Requirements .....	7
Sources of information used to write the description – strategies, documents, data and expertise .....	9
Requirements .....	12
Summary.....	14
APPENDIX – EXISTING PLANS AND STRATEGIES USED TO INFORM THE LNRS – Step 3 and beyond.....	14
<b>2) Stakeholder Engagement Methodology Statement</b> .....	18
2.1 ABOUT THE LNRS.....	18
2.2 ABOUT STAKEHOLDER ENGAGEMENT WITHIN THE LNRS .....	19
ABOUT THIS DOCUMENT.....	20
SUMMARY OF STAKEHOLDERS.....	21
INTERNAL STAKEHOLDERS.....	22
EXTERNAL STAKEHOLDERS .....	24
2.3 SUMMARY OF THE MAJOR STAKEHOLDER ENGAGEMENT ACTIVITIES .....	25
2.4 DESIGN OF THE INTRODUCTORY WEBINARS .....	29
Overview.....	29
Groups Involved in Developing the Stakeholder Engagement Workshops .....	29
Stakeholder Groups for Whom the Webinars were Designed.....	29
Advertising and Outreach.....	29
Objectives of the Webinars .....	30
Design and Delivery of the Webinars .....	30
Webinar Participation.....	31
Feedback and Key Learning from Webinars.....	31
Conclusion .....	32
2.5 DESIGN OF THE STAKEHOLDER ENGAGEMENT WORKSHOPS .....	33
Overview.....	33

Groups Involved in Developing the Stakeholder Engagement Workshops .....	33
Stakeholder Groups invited to the workshops.....	34
Advertising and Outreach.....	34
Objectives of the Workshops .....	35
Design and Delivery of the Workshops .....	35
Key Considerations .....	38
Workshop Participation.....	38
Final Workshop Structure and Specific Activities.....	39
Feedback from the Workshops .....	42
Conclusion .....	43
2.6 DESIGN OF THE STAKEHOLDER ENGAGEMENT SURVEY .....	43
Overview.....	43
Groups Involved in Developing the Stakeholder Engagement Survey.....	43
Stakeholder target Groups for the Survey w.....	44
Advertising and Outreach.....	44
Purpose of the Questions in the Survey - were to: .....	45
Design and Delivery of the Workshops .....	45
How the Data was Used .....	56
Survey Participation.....	56
Conclusion .....	56
2.8 Design of the Update Webinar.....	57
Overview.....	57
Groups Involved in Developing the Update Webinar .....	57
Stakeholder Target Groups for the Update Webinar .....	57
Advertising and Outreach.....	58
Objectives of the Webinar.....	58
Design and Delivery of the Webinar.....	58
Webinar Participation.....	59
Feedback and Key Learning from Webinars.....	59

Conclusion .....	60
2.9 Design of the Cross-sector Stakeholder Workshop .....	60
Overview.....	60
Groups Involved in Developing the Stakeholder Engagement Workshops .....	61
Stakeholder Groups invited to the workshops.....	61
Advertising and Outreach.....	61
Objectives of the Workshops .....	61
Design and Delivery of the Workshops - key stages in the co-design process (see table below) .....	62
Key Considerations .....	64
Allocation by sector .....	64
Number of participants by sector:.....	64
Workshop Participation.....	66
Pre-briefing .....	66
Venue layout.....	66
Final Workshop Structure and Specific Activities.....	66
CONCLUSION .....	74
Technical Appendix.....	75
<b>3) Data Analysis Methodology Statement .....</b>	<b>76</b>
3.1 ABOUT THE LNRS.....	76
3.2 ABOUT THIS DOCUMENT .....	77
3.3 WHO WAS INVOLVED.....	77
Overview.....	77
Groups Involved in Developing the Stakeholder Engagement Workshops .....	78
3.4 OVERVIEW OF DATA COLLECTION PROCESS.....	78
3.5 DATA CATEGORISATION, ANALYSIS AND PRIORITIES AND MEASURES SHORTLISTING PROCESS .....	83
Background Information.....	83
Lessons from the LNRS Pilot .....	85
Key Considerations .....	85

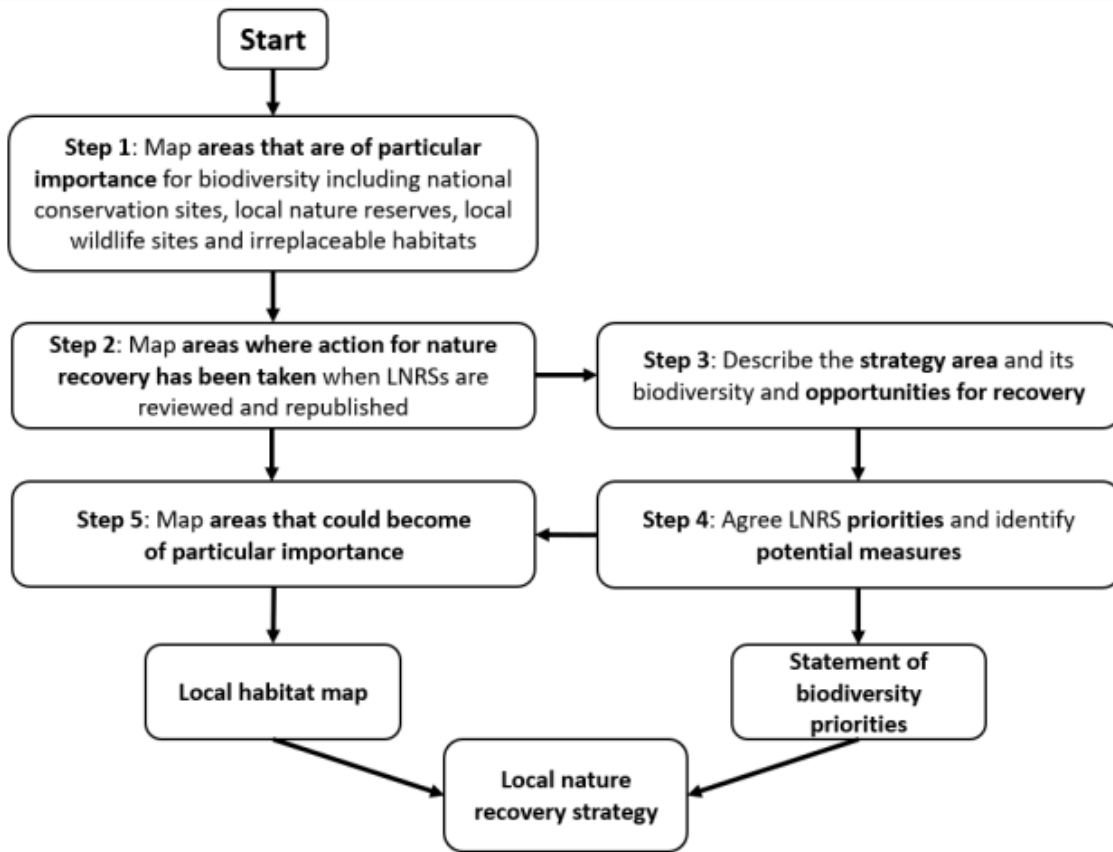
Goals for Data Analysis .....	87
Design of the Data Analysis Framework.....	87
Data Categorisation Method .....	87
Priorities Shortlisting Framework.....	89
How the Data Categorisation and Analysis Methodology Applied to the Data from the LNRS Workshops.....	92
3.6 How the Data Categorisation and Analysis Methodology Applied to the Data from the LNRS Survey.....	93
3.7 RESULTS FROM THE DATA ANALYSIS PROCESS.....	93
Workshop Data Analysis .....	93
Survey Data Analysis.....	94
Defra Guidance Regarding Other Plans and Strategies.....	94
Other Plans and Strategies Identified through NEP’s Review .....	95
How the Other Plans and Strategies were Incorporated into the LNRS .....	95
3.8 CONCLUSION .....	96
3.9 Data Analysis Methodology Technical Appendix .....	97
<b>4) SPECIES SHORTLISTING METHODOLOGY STATEMENT.....</b>	<b>98</b>
Criteria for species to consider in LNRS.....	100
Stakeholder Engagement .....	100
Creating the long list.....	101
Stakeholder Engagement Activities.....	103
Target Areas of Important Species – an expert led, data supported approach.....	103
Niches .....	106
Conclusion .....	106
<b>5) Step 1 – Baseline mapping Methodology Statement .....</b>	<b>107</b>
About the Local Nature Recovery Strategy.....	107
About this Document .....	108
Statutory LNRS Guidance on Step 1 of the LNRS process .....	108
Methodology for producing the Buckinghamshire and Milton Keynes LNRS “Step 1” Baseline Map .....	110

Deliberation and Decision-Making Process.....	110
Identifying Areas of Particular Importance for Biodiversity .....	111
Overview of the process .....	111
Detailed considerations.....	112
<b>6.1. Step 5 – Mapping of Measures Methodology .....</b>	<b>125</b>
6.1a. Approach to mapping habitats .....	125
6.1b. Modelling and mapping ecosystem services (benefits) .....	126
6.1c. Biodiversity opportunity maps .....	128
6.1d. Ecosystem services opportunity maps .....	129
6.1e. Combined opportunity maps – delivering multifunctionality .....	131
6.2. Methods for mapping individual measures .....	131

# 1) Step 3: Description of the Strategy Area and its Biodiversity and Opportunities for Recovery Methodology Statement

## Requirements

The LNRS process at step 3 requires a “description of the strategy area and its biodiversity and opportunities for recovery”. Both steps 3 and 4 of the LNRS process combine together into one of the final outputs, the Statement of biodiversity priorities, as shown in the diagram below:



According to the statutory guidance, the description of the strategy area will inform setting priorities for recovering or enhancing biodiversity and environmental improvement in the area. It must include a description of:

- “the range of habitats in the strategy area and their general distribution – especially priority habitats. They should also include habitats of local importance, including ones that support scarce or declining species
- how this distribution and extent of habitats has changed in recent decades, including habitats that may have been lost entirely from the strategy area
- the species or groups of species for which the strategy area is, or could feasibly be, of national importance
- anticipated future pressures likely to influence species or the extent, distribution or quality of different habitat types – including recognising the impact of climate change



scenarios and anticipated new developments, including house building and infrastructure

- wider environmental issues affecting part or all of the strategy area which changes in land use or management could help to address – for example improvements to the water environment, flood risk management, or climate mitigation and adaptation”.

(Para 36, [Local Nature Recovery Strategy Statutory Guidance](#), Defra, March 2023)

## Sources of information used to write the description – strategies, documents, data and expertise

The description of the strategy area is based on the following key sources of information about the area’s landscapes, habitats, species, opportunities and challenges facing nature in the area:

### *Key information documents*

- [Buckinghamshire pilot Local Nature Recovery Strategy description of the strategy area](#) (which covered Buckinghamshire only)
- the latest area-wide [Biodiversity Action Plan \(BAP\)](#) covering Buckinghamshire and Milton Keynes, completed in 2021 by experts in the area’s Local Nature Partnership, the Buckinghamshire and Milton Keynes Natural Environment Partnership (the “NEP”). This provided much of the background text about the area’s landscapes, habitats, opportunities and challenges as well as key information about the current state of nature in the area.
- [Natural Capital Reports completed by Natural Capital Solutions](#) for Buckinghamshire (2020) and Milton Keynes (2021) – providing information about the area’s Natural Capital assets, ecosystem services and habitat opportunity mapping

- Natural Capital Solutions (2024) – The changing habitats of Buckinghamshire and Milton Keynes: a historic perspective over 90 years
- Natural Capital Solutions (2023) – Buckinghamshire Biodiversity Assessment, Natural Capital Solutions.

### ***Expert input***

Our experts were asked to review the documents in April and May 2024 to provide comments or suggested edits. Individual organisations were also approached to provide updated data or information in the description where previous documents (such as the BAP) drew on data that may not be current.

The following organisations were asked to review or provide data towards the document:

- Original BAP (list partners)
- LNRS Steering Group experts and broader experts, from the following organisations:
- Buckinghamshire Council – planners, floods team, Environment and ecology teams
- Bucks & MK Environmental Records Centre (BMERC)
- Milton Keynes City Council – ecology team, floods team, planning
- Natural England – Senior LNRS Officers
- Berkshires, Buckinghamshire and Oxfordshire Wildlife Trust
- Environment Agency
- Woodland trust
- Forestry Commission
- City of London Corporation (manager of Burnham Beeches)
- Colne Valley Regional Partnership
- Chilterns National Landscape
- Milton Keynes Parks Trust
- Floodplain Meadows Partnership
- River Thames Conservation Trust
- Freshwater Habitats Trust

A draft description of the strategy area was shared with neighbouring LNRS areas for comment in November 2024.

### ***Existing plans and strategies and data***

Data and information were drawn from a number of existing plans and strategies covering the area. Where data is quoted the source document is referred to throughout the Step 3 description. These plans and strategies used for the description were:

#### *Used to inform the writing of the main text*

- NEP's BAP (2021)
- Pilot LNRS (2021)

#### *In mind by experts as part of the review of the detailed text (as requested):*

- Local Plans relevant to the area
- By the Environment Agency: review reflecting the general actions set out in the Thames River Basin Management Plan, internal EA catchment habitat restoration strategies (not published), catchment partnership plans
- By the Chilterns National Landscape: AONB Management Plan (and early work on the Chilterns Nature Recovery plan).
- By the Forestry Commission: alignment with key policies and strategies: [Keepers of Time](#) and [Open Habitats Policy](#), National Environmental Objectives, the [FC Strategy Thriving for the Future 2023-28](#) and Forestry England's published woodland management plans including [Bernwood's](#). Also reviewing against the FC's woodland creation pipeline.
- By the Berks, Bucks and Oxon Wildlife Trust (BBOWT): BBOWT Nature Recovery Network; BBOWT Living Landscape Plans (unpublished).

The [appendix to this methodology statement](#) shows how the various existing plans and strategies of relevance were brought into step 3 or other aspects of the LNRS.

Finally, the description of the strategy area also refers to the Step 1 baseline mapping process completed for the LNRS. For a summary of this and the relevant methodology statement, see [here](#).

## Requirements

The Table below summarises the key sources of information that were used to inform the specific requirements of the Step 3 description.

Requirement	Key information documents, plans and strategies	Expert input	Other
<p><b>Range of habitats</b> in the strategy area and their general distribution – especially priority habitats.</p> <p><b>Habitats of local importance</b>, including ones that support scarce or declining species.</p>	<p><a href="#">Bucks &amp; MK NEP’s Biodiversity Action Plan 2021</a></p> <p><a href="#">Pilot LNRS 2021</a> (Buckinghamshire)</p> <p>Step 1 LNRS APIB map and local “APIB +” map – BMERC and local experts: <a href="#">Interactive LNRS Summary</a></p> <p>Review by representatives from the Environment Agency, Forestry Commission, ecologists and planners from MK City Council and Buckinghamshire Council</p>	<p>Experts on the NEP’s BAP production working group BBOWT, Buckinghamshire Council, Chilterns Conservation Board, Environment Agency, Milton Keynes Council, Natural England, MK Parks Trust, River Thames Conservation Trust, Alan Holmes, NEP Delivery Group Chair.</p> <p>Buckinghamshire &amp; Milton Keynes Environmental Records Centre (BMERC) Plus expert review to the step 3 output – as listed above.</p>	<p>Land cover data from Natural Capital Solutions Natural Capital Reports completed by Natural Capital Solutions for Buckinghamshire (2020) and Milton Keynes (2021)</p> <p>Water environment and water quality data from the Environment Agency</p> <p>Priority habitats and BOA data from the Bucks and MK Environmental Records Centre (BMERC)</p>
<p>How this <b>distribution and extent of habitats has changed</b> in recent decades, including</p>	<p>Natural Capital Solutions (2024) – The changing habitats of Buckinghamshire and Milton Keynes: a historic perspective over 90 years</p>	<p>Expert input (listed above) invited to comment on full draft LNRS step 3 document.</p>	

habitats that may have been lost entirely from the strategy area	<a href="#">Bucks &amp; MK NEP's Biodiversity Action Plan 2021</a> – including some data from the NEP's 2016 State of the Environment Report.		
<b>Species or groups of species</b> for which the strategy area is, or could feasibly be, of national importance		Buckinghamshire and Milton Keynes Environmental Records Centre (BMERC), in conjunction with local recorder and species experts  See here for the <a href="#">species shortlisting methodology statement</a> .	
<b>Anticipated future pressures</b> likely to influence species or the extent, distribution or quality of different habitat types – including recognising the impact of climate change scenarios and anticipated new developments, including house building and infrastructure	<a href="#">Bucks &amp; MK NEP's Biodiversity Action Plan 2021</a> and its underlying data and information collected e.g. via expert knowledge and experience and reports such as climate impacts.	Experts on the NEP's BAP production working group  BBOWT, Buckinghamshire Council, Chilterns Conservation Board, Environment Agency, Milton Keynes Council, Natural England, MK Parks Trust, River Thame Conservation Trust, Alan Holmes, NEP Delivery Group Chair.  Plus expert review to the step 3 output – as listed above.	
<b>Opportunities for nature recovery</b> in	<a href="#">Bucks &amp; MK NEP's Biodiversity Action Plan 2021</a> - this identifies	Expert input to the original 2021 BAP identified opportunities	

terms of habitats and species	<p>overall pressures on nature and opportunities across Bucks and MK, as well as pressures and opportunities specific to the four LNRS areas (based on underlying NCA zones) that were identified during 2021 for the latest NEP BAP.</p> <p>Description of the strategy areas in the LNRS, including key pressures.</p>	<p>(overall for the area, and by the 4 zones, based on underlying NCA areas and used for the LNRS production).</p> <p>Expert input (listed above) invited to comment on full draft LNRS step 3 document.</p>	
-------------------------------	--	--	--

**Summary**

The Step 3 description brings together the best available information provided by local experts and from the most relevant key documents and existing plans and strategies for the area at the present time.

The summary of the description of the area and links to underlying details can be found [here](#).

The methodology statement for the species work is [here](#).

The LNRS baseline map, Areas of Particular Importance for Biodiversity, is [here](#).

**APPENDIX – EXISTING PLANS AND STRATEGIES USED TO INFORM THE LNRS – Step 3 and beyond**

Plan / strategy topic area	Type of plan / strategy	Name of plan / strategy	Where captured in			How captured?			
			Description of nature	Priorities and measures	Mapping (if captured)	Core group member review of	Expert input to description and priorities	Survey - for inclusion in Ps&Ms	Sought separate input
Water-related	Local flood-risk management plans	Bucks C Local Flood Risk Management Strategy		✓			✓	✓	
		MKCC Local Flood Risk Management Strategy. Available at: <a href="https://www.milton-keynes.gov.uk/flood-and-water-management/strategic-flood-risk-documents-0">https://www.milton-keynes.gov.uk/flood-and-water-management/strategic-flood-risk-documents-0</a>		✓			✓		
		NFM priority mapping (requested by only available for Thame catchment from EA)			✓				✓
		EA's internal catchment habitat restoration strategies (not published)	✓	✓			✓		
		<a href="https://www.gov.uk/guidance/thames-river-basin-district-river-basin-management-plan-updated-2022">River Basin Management Plans</a> <a href="#">Anglian RBD Part 1 river basin management plan .pdf</a>	✓	✓			✓	✓	
		Catchment plans	WFD catchment Planning System (EA)		✓			✓	✓
			Catchment Habitat Restoration Strategies in Thames area		✓				✓
			Thames RBMP						
			Upper and Bedford Ouse Catchment Plans		✓				✓
			Various catchment management plans (leads for Thame, ColneCan and Upper Ouse - draft LNRS description and mapping shared early Dec 24)	✓	✓			✓	
		Landscape restoration project (catchment)	Ock and Thame Farmers: Freshwaters and Floodplain Restoration Project <a href="https://freshwaterhabitats.org.uk/projects/ock-and-thame-farmers/">https://freshwaterhabitats.org.uk/projects/ock-and-thame-farmers/</a>		✓		✓	✓	
		Water company BAPs	Water Industry National Environment Programme (Anglian Water)		✓				✓
			Thames Water BAP		✓				✓
	Internal drainage board BAPs			✓				IDB completed the survey	
	Important Freshwater Areas	Important Freshwater Areas (FHT)			✓				

GI Plans	Bucks GI strategy	Buckinghamshire GI Strategy April 2009		✓		✓			
	NEP's GI Vision and Principles (referred to in local plans)	Vision and Principles for the Improvement of Green and Blue Infrastructure in Bucks and MK		✓		✓	✓		
Biodiversity	The NEP's BAP	Forward to 2030	✓	✓		✓	✓		
	LPA local ecological networks	- BBOWT Nature Recovery Network - BBOWT Living Landscape plans (unpublished)	✓	✓			✓		
	Species and protected site conservation strategies	Many came up in the survey - e.g.							
		Burnham Beeches management plan (City of London Corporation)							
		The Management Plan for the Chilterns National Landscape							
		Anglian Water Water Industry National Environment Programme (for SSSIs)	✓	✓			✓ (Chiltern Soc Manifesto only)	✓	
		BBOWT "Wilder Strategic Plan 2021-26" (mentioned SSSIs)							
		Chiltern Society Manifesto for Chilterns Wildlife							
	Tree and woodland plans	Forestry Commission Strategy: Keepers of Time and Open Habitats Policy, NEOs, our FC Strategy Thriving for the Future 2023-28 and Forestry England's published woodland management plans including Bernwood's. Also the woodland creation pipeline.							
		City of Trees and Milton Keynes CC	✓ (FC)	✓			✓	✓	
		Community Trees Milton Keynes							
		The Soil Association (part of agroforestry scheme)							
		Bucks Tree Mission (part of its Climate Change and Air Quality Strategy)							



Plan / strategy topic area	Type of plan / strategy	Name of plan / strategy	Where captured in			How captured?			
			Description of nature	Priorities and measures	Mapping (if captured)	Core group member review of	Expert input to description and priorities	Survey - for inclusion in Ps&Ms	Sought separate input from

Natural Capital	NC reporting	NC report - Bucks and MK (2020 and 2021)	✓	✓		✓			
AONB Management Plan	Chilterns National Landscape	<a href="#">Management Plan for the Chilterns National Landscape</a>	✓	✓			✓		
Local Plans	Local Plans	Plan:MK Vale of Aylesbury local Plan Wycombe Local Plan Chiltern&South Bucks Plans,	✓	✓			✓	✓	
		Minerals and Waste Plans				✓			
Climate change		National Trust Climate and Environment Policy							
		Forestry Commission Strategy		✓				✓	✓
		Chiltern Society Management Plan							
		Bucks C Climate and Air Quality Plan							
Infrastructure projects		Green Corridor Prospectus - HS2							
		Milton Keynes CC City Plan		✓				✓	
Other		Big Chalk <a href="https://www.big-chalk.org">https://www.big-chalk.org</a>	✓			✓	✓		

# 2) Stakeholder Engagement

## Methodology Statement

### 2.1 ABOUT THE LNRS

Local Nature Recovery Strategies (LNRSs) are a new, England-wide system of spatial strategies, introduced in the Environment Act 2021, that establish priorities and map proposals to drive nature's recovery locally and provide wider environmental benefits, such as climate change adaptation. LNRSs are being prepared for individual areas across England, such as Buckinghamshire and Milton Keynes, and will come together to set the framework for a nationwide Nature Recovery Network.

**This new system of spatial strategies will:**

1. Support efforts to recover nature across England
2. Help planning authorities incorporate nature recovery objectives into local decision-making
3. Support the delivery of Biodiversity Net Gain
4. Help deliver our national environment objectives

The LNRSs are designed to drive more coordinated, practical, focussed action and investment to help nature and people flourish together, whilst delivering wider nature-based environmental benefits. They consist of:

- A **Statement of Biodiversity Priorities**, which reflect stakeholder priorities for environmental outcomes, and the actions that need to be undertaken to achieve these outcomes.
- A **Local Habitat Map**, which identifies the existing distribution of habitats and the location of areas already important for biodiversity, overlaid by locations considered suitable for delivering the outcomes and actions identified by stakeholders.

Defra has appointed Buckinghamshire Council as the "Responsible Authority" (RA) in charge of preparing an LNRS that covers the entirety of Buckinghamshire and Milton Keynes. The RA will be supported by two "Supporting Authorities" (SAs) - of Milton Keynes City Council and Natural England.

The RA has commissioned the area's Local Nature Partnership, the Buckinghamshire and Milton Keynes Natural Environment Partnership (NEP), to act as the project manager for the Buckinghamshire and Milton Keynes LNRS. The RA, SAs and NEP together comprise the core LNRS team. The LNRS process is also supported by a Steering Group and various technical working groups.

The Government has now published LNRS [regulations](#) and [statutory guidance](#) which work together to establish the 'rules' to enable high quality and consistent LNRSs to be prepared across England.

Previously, Buckinghamshire (not including Milton Keynes) was part of a Defra pilot to understand how best to develop LNRSs. For more details on the specific steps of the pilot, please download the [Buckinghamshire Local Nature Recovery Strategy Pilot Overview](#) document.

## 2.2 ABOUT STAKEHOLDER ENGAGEMENT WITHIN THE LNRS

Stakeholder engagement is a key part of developing the LNRS. Per the guidance, a wide range of stakeholders must be consulted to ensure that the LNRS is reflective of the needs and ambitions of the area. This document outlines:

- Who the stakeholders involved in the LNRS process were
- How stakeholders were involved and why
- Why certain key decisions were made during this process and justifications for these decisions
- How data gathered from the various stakeholder engagement processes was used to inform the final LNRS

Our primary goal throughout this process has been to maintain transparency, fairness, and inclusivity for all stakeholders, ensuring their needs were considered. At the same time, we carefully integrated expert input to create a relevant and robust LNRS for the area. Additionally, we ensured that the LNRS for Buckinghamshire and Milton Keynes complied with government guidelines and regulations, while also incorporating local knowledge, needs, and ambitions for nature recovery and improvement in the region.

## Goals for Stakeholder Engagement

1. To engage a wide variety of stakeholders who have insight into their local area and harness their knowledge to develop a locally relevant and reflective LNRS.
2. To engage a representative variety of people from within the stakeholder groups mentioned below. For example, within the farming and land-managing sector, a diverse variety of farms and ownership types; or from within the general public group, people from across the whole area and a mix of demographics, including seldom-heard-from groups.
3. To ensure that the priorities listed in the LNRS align with existing plans and strategies for nature conservation
4. To ensure that the priorities for nature listed in the LNRS align with those of people living and working in the area .
5. To ensure that we gain information from stakeholders to develop a user-friendly LNRS.
6. To create interest for the LNRS, so stakeholders are aware of the process and goals of the strategy, and relevant stakeholders are encouraged to use/deliver the LNRS once it is published.

## ABOUT THIS DOCUMENT

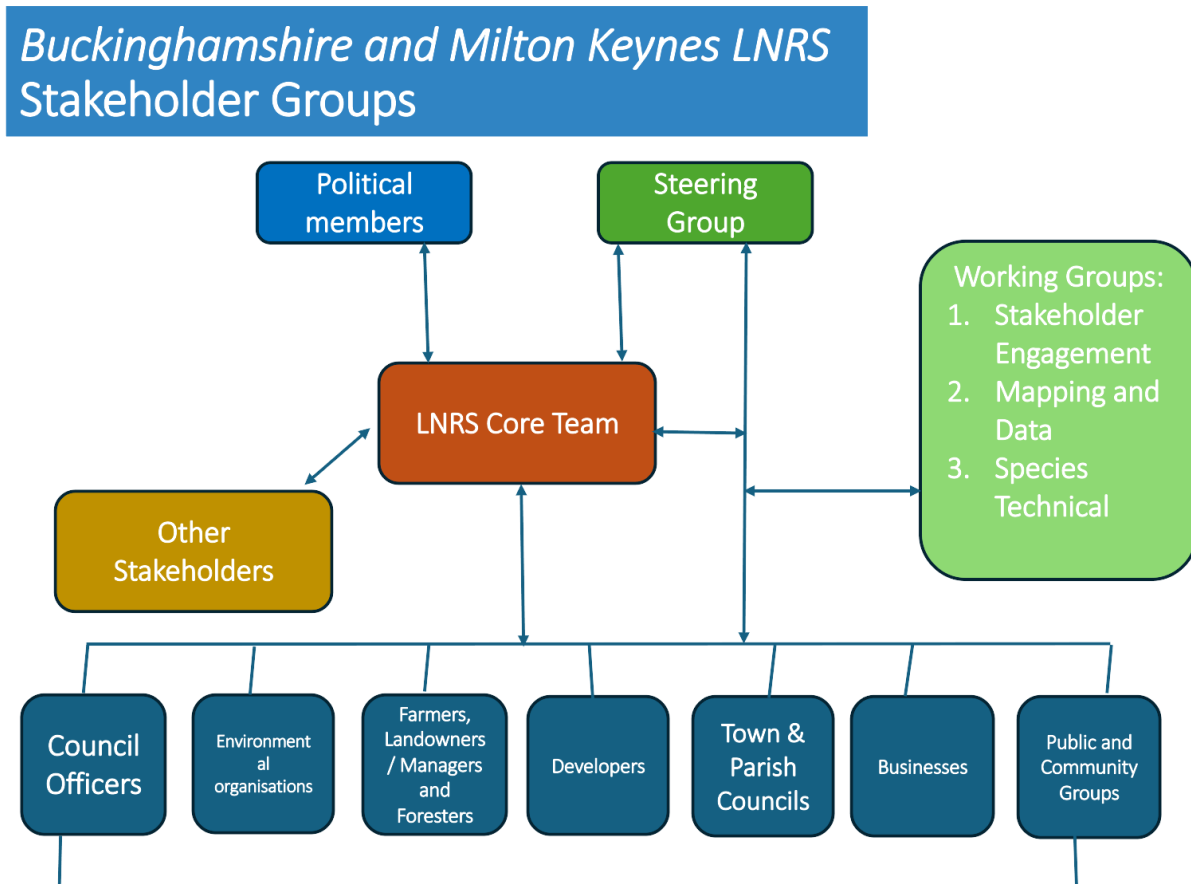
This document provides a detailed explanation of the entire process LNRS Stakeholder Engagement process. It includes:

- A summary of the internal and external stakeholder and stakeholder groups involved in developing the LNRS
- An overview of the stakeholder engagement activities, including who was involved and what it entailed
- A summary of how the major stakeholder engagement activities were designed and how information gathered through each of these activities was utilised in the development of the LNRS
- A summary of key considerations, decision, issues and lessons

This document should be read in conjunction with the main Local Nature Recovery Strategy documents (the written statement of biodiversity priorities and the Local Habitat Map) to understand how this process informed their creation.

## SUMMARY OF STAKEHOLDERS

Figure 1. Flow diagram of stakeholder groups and how they are connected, with the core group in the centre of the diagram.



The figure above shows which stakeholder groups we engaged in the LNRs process and how they fitted into the overall structure. Additionally, the various sector groups will also be engaged in geographic clusters based on the four LNRs Zones (North Bucks & MK, Aylesbury Vale, The Chilterns and South Bucks) to ensure a balanced and localised engagement process.

The LNRs Core Group coordinates between all the various groups listed. As such, while they feature on the diagram above, they will not be considered stakeholders in and of themselves for the purposes of this document (although note that Milton Keynes City Council and Natural England have roles as ‘supporting authorities’). The Core Team includes the Buckinghamshire and Milton Keynes Natural Environment Partnership (NEP) – the entity commissioned to lead the work to produce the LNRs – as well as specific representatives from Buckinghamshire Council, Milton Keynes City Council, and Natural England. The following is a detailed description of each of the groups:

## INTERNAL STAKEHOLDERS

Internal stakeholders refer to those individuals and organisations that comprise the expertise and position required to develop the LNRS. This group consisted of carefully selected stakeholders who were grouped to support specific functions to develop the LNRS. These stakeholders have all provided their time and support towards the LNRS on a voluntary basis:

- **LNRS Core Group (CG)**: The CG consisted of representatives from the NEP – the NEP Partnership Manager and LNRS Project Manager, the Environment Bill Readiness Manager for Buckinghamshire Council, Landscape and Countryside Manager for Milton Keynes City Council, and the Natural England Appointed LNRS Senior Advisor. This group made the day-to-day decisions regarding the LNRS process as well as oversaw and effectively “signed off” the activities being undertaken to construct the LNRS in line with the Government’s requirements.
- **LNRS Steering Group (SG)**: This group consisted of experts in environmental policy and management who provided a collective steer on major decisions regarding the direction of the LNRS process and content. The SG member organisations, some of whom were chosen during the LNRS pilot project, were broadly chosen because they met the following criteria:
  - Capacity**: Is the organisation going to be able to provide us with advisory and work support? *Ex. Attending strategy writing workshops and sub-groups, regularly attending SG meetings, providing feedback in-between meetings, providing expertise support such as facilitating a specific expert-area workshop/ GIS support.*
  - Why**: Fairness to all stakeholders + we need an SG that can actively contribute to develop the strategy in time.
  - Diversity**: Does the organisation represent a unique voice? Is it bringing perspective about a sector not currently represented on the steering group?
  - Why**: Govt. mandated + LNRS will impact multiple stakeholders + good way to get buy-in to facilitate eventual implementation.
  - Authority and Reach**: Does the organisation and its allotted representative have appropriate decision-making power? Does the organization/ rep have community connections and are they influential?
  - Why**: Multiple departments / organisations will need to serve as eventual implementing partners; important to consider their needs. Buy-in is easier if requisite depts. and decision-makers are involved from the get-go. SG should be able to provide us with introductions, etc. to wider stakeholder bases.
  - Expertise**: Does the organisation/ representative have appropriate knowledge to provide advice?

**Why:** Knowledge should be considered in the wider context – not just technical knowledge, but also knowledge about stakeholders/ community/ other programs/ projects/ informal considerations, etc.

The Steering Group were also provided with a charter that detailed the terms of reference with respect to their roles and responsibilities towards developing the LNRS. The charter detailed the composition of the steering group, ethical responsibilities, time commitments, and responsibilities, such as drafting the strategy, oversight and decision-making, communications. It also detailed the expectations regarding confidentiality and conflicts of interest. All SG member organisations' representatives signed the charter to cement their commitment to being on the LNRS SG.

Please note that attempts were made to include representatives from the farmer / landowner community, but ultimately we were unable to find a suitable and willing candidate in the timeframe. Instead, we have specifically focussed on engagement with the farmer and landowner sector throughout the engagement process including in finalising the priorities and measures. The Steering Group was satisfied that the approach taken enabled the farmer and landowner voices to be sufficiently heard and taken into account.

**The LNRS SG consisted of representatives from the following organisations:**

- a. Buckinghamshire Council (Environment Bill Readiness Manager, Planning Policy team, Ecology team)
  - b. Milton Keynes City Council (Landscape and Countryside Manager, Ecologists, Development Plans, Department of Ecology, Flood and Water Management)
  - c. Bucks & Milton Keynes Natural Environment Partnership – Partnership Manager (also acted as Chair of the Steering Group)
  - d. Natural England (LNRS Senior Adviser)
  - e. Bucks & Milton Keynes Environmental Records Centre
  - f. Environment Agency
  - g. Forestry Commission
  - h. Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust
  - i. Chilterns Conservation Board
  - j. Milton Keynes Parks Trust
- **Political Members:** This group includes key portfolio members for the environment for both Buckinghamshire Council and Milton Keynes City Council. In addition, this also includes requisite committees at both Councils, such as the TECC committee at Buckinghamshire Council and official meetings with Milton Keynes City Council Cabinet

Members, who need to review and sign off on the LNRS at various points in the process.

- **LNRS Working Groups:** These groups will consist of specific subject matter experts who provided advice on specific parts of the LNRS. The Working Groups were:
  - a. **Mapping & Data Group:** This group’s mandate was to guide the development of the LNRS’s Step 1 baseline Local Habitat Map. This group included representatives of BMERC, Buckinghamshire Council BNG Team, MKCC and Bucks Council Planning Policy Teams, BBOWT, MK Parks Trust, Bucks Council GIS Department, Natural England, Chilterns National Landscape.
  - b. **Stakeholder Consultation Group:** This group was formed to advise on the format of the stakeholder engagement process to strive towards maximum participation. The group included representatives from the Open University (citizen engagement experts), NEP, Buckinghamshire Council Business Intelligence team, Natural England.
  - c. **Species Technical Group:** Per the Defra advice, this group’s mandate was to put together a longlist and subsequently a shortlist of key species to focus on within the LNRS. The Group also identified target areas and ecological niches relevant to important local species to be used in the final Local Habitat Map. For a full list of organisations involved in this group, please refer to [Species Methodology Statement](#).
  
- **Council Officers Group:** This group consisted of council officers from a range of departments at both Buckinghamshire Council and Milton Keynes City Council, who have projects / policy / strategy / programme objectives relevant to the LNRS. The departments represented by the officers who took part were: Buckinghamshire Council - Planning, Country Parks and Estates, Climate Change, Public Health, Strategic Planning & Infrastructure, Economic Development, Flood and Water Management, BNG, Heritage and Ecology, Town & Parish Council teams. Milton Keynes City Council – Sustainability, Development Plans, Floods & Water, Business Development, Countryside & Ecology teams.

## EXTERNAL STAKEHOLDERS

The external stakeholder groups consist of individuals and organisations for whom the LNRS is particularly relevant, i.e. the LNRS affects their work or life in some shape or form. The groups were designed to be wide-ranging but specific enough to ensure that LNRS related information could be tailored for each group. The six sector groups were identified based on those engaged during the pilot. More specifically, they were chosen based on their ability and need to support biodiversity initiatives, the impact of biodiversity initiatives on their lives, and their decision-making capacities and positions. The groups also align with the LNRS guidance on stakeholders to engage.



- **Environmental Organisations:** These were organisations external to the Councils that are engaged in environmental-based work ranging from water catchment management, conservation, climate change mitigation, etc. The group included regional, national and local environmental organisations.
- **Farmer, Foresters and Landowners / Managers:** This groups consisted of individual farmers, landowners, managers and foresters, as well as farming cluster / industry body representatives.
- **Developers:** local and national property developers.
- **Town & Parish Councils:** Town & Parish Council representatives.
- **Businesses:** Businesses of any type based in Buckinghamshire or Milton Keynes, especially those with landholdings.
- **General Public & Community Groups:** This group consists of individual members of the general public as well as community interest groups, who are interested in contributing to the LNRS.
- **Other Stakeholders:** This group consists of entities who require bespoke engagement because of their more specific ability to contribute to the LNRS (as each of these groups has expertise in specific areas relevant to the LNRS). They include:
  - a. Neighbouring Responsible Authorities
  - b. Conservation Sites and Country Parks – such as Colne Valley Park.
  - c. Nationally Significant Infrastructure Projects
  - d. Utilities Companies – such as Anglian Water and Thames Water
  - e. Public Institutions
  - f. Academics & Researchers, such as the Open University.

## 2.3 SUMMARY OF THE MAJOR STAKEHOLDER ENGAGEMENT ACTIVITIES

**Table 1.** Summary of the major stakeholder engagement activities, and key information about them.

Engagement Activity	Who was involved	What data was gathered	How it was used for the LNRS
10 Introductory Webinars by sector	<b>155 individuals representing:</b> <ul style="list-style-type: none"> <li>- 16 Farmers &amp; Landowners</li> <li>- 25 residents</li> <li>- 38 Town &amp; Parish Councils</li> <li>- 23 Developers</li> <li>- 17 Businesses</li> </ul>	The webinar was delivered to provide an introduction to the LNRS for various stakeholders. As such, the only data gathered were the questions asked by the attendees. The attendees were also encouraged to take an anonymous survey	The data from the questions and answers section of the webinars were compiled into an FAQs sheet, which was subsequently publicly published on the NEP's website <a href="#">here</a> . The feedback collected was used to better design subsequent stakeholder engagement

	- 36 Environmental Organisations	to provide feedback on the webinar.	activities such as the workshops mentioned below.
<b>Stakeholder Engagement Workshops</b> March–April 2024	<b>147 individuals representing:</b> <ul style="list-style-type: none"> <li>- 45 Environmental Organisations</li> <li>- 38 Farmers &amp; Landowners</li> <li>- 31 Town &amp; Parish Councils</li> <li>- 6 Developers</li> <li>- 21 Members of the Public</li> <li>- 6 Businesses</li> </ul>	<ul style="list-style-type: none"> <li>- Stakeholders’ priorities regarding nature and nature services and any corresponding measures to action the priorities</li> <li>- Stakeholders’ views on the pressures most (adversely) affecting nature and the ecosystem service benefits that are most valuable to them.</li> <li>- How stakeholder plan on using the LNRS and what format and functionalities within the LNRS document and map would support them in doing so.</li> </ul>	The stakeholder engagement workshops generated 386 responses on priorities and measures for nature. This data was shortlisted through several iterations using pre-determined criteria and expert input (see data analysis methodology for details). The process resulted in 11 themes, 25 priorities, and 120 measures. Additional data, such as desired ecosystem services or urgent pressures on nature, were used to refine priorities and opportunity mapping. Data on the map's format and function was reviewed and integrated into its final design..
<b>Stakeholder Engagement Survey</b> July - August2024	<b>444 individuals representing:</b> <ul style="list-style-type: none"> <li>- 296 Members of the Public</li> <li>- 21 Council officers</li> <li>- 2 businesses</li> <li>- 3 developers</li> <li>- 15 Educators or higher education students</li> <li>- 26 elected or other representatives of Town or Parish Councils</li> <li>- 17 Farmer, landowner/manager, forester</li> <li>- 27 Local community groups</li> <li>- 28 Organisations working on</li> </ul>	The survey’s purpose was to reach a wider audience to corroborate the proposed shortlisted LNRS priorities derived from the stakeholder engagement workshops and pilot LNRS processes, as well as to fill any gaps and gain some additional information regarding “other plans and strategies” that may have a bearing upon the LNRS.	The survey, which generated 444 responses (+ 40 responses from young people via a parsed simpler version of the main survey ), asked respondents to prioritise themes from the workshop data and allowed respondents to suggest additional priorities and measures. These suggestions were compared to the existing list and any new data went through the same shortlisting process as the workshop data. The additional data, resulting in 2 new priorities and 50 new

	<p>environmental conservation</p> <ul style="list-style-type: none"> <li>- 1 Utilities company or Nationally Significant Infrastructure Project (NSIP)</li> <li>- 1 NHS representative</li> <li>- 2 funders</li> <li>- 40 young people</li> </ul>		<p>measures across the list, was merged with the workshop data. The LNRS Steering Group further refined this, leading to 7 themes, 27 priorities, and 179 measures. (The measures in this list were then further refined by specialist expert groups and tested at the final stakeholder engagement event in November 2024 – resulting in 9 themes, 22 priorities and 119 measures.</p>
<p><b>Update Webinar</b> 7<sup>th</sup> October 2024</p>	<p><b>55 Attendees</b> (Attendees were not asked to provide sector representation information)</p>	<p>The webinar was delivered to engage with stakeholders and the general public and provide an update on progress with the LNRS project, whilst raising awareness about the upcoming Cross-sector Stakeholder Workshop and provide a question and answer period</p>	<p>The data from the questions and answers section of the webinar was compiled and made available on the NEP LNRS webpage, as well as being distributed to those who attended, and all those who signed up to our mailing list. We also published a summary of the webinar, with the recording and transcript of the webinar and a copy of the PowerPoint slides used, to the NEP LNRS webpage.</p>
<p><b>Stakeholder Engagement Multisector Event</b> November 2024</p>	<p>120 individuals representing:</p> <ul style="list-style-type: none"> <li>- 27 Farmer, landowner / manager</li> <li>- 10 Businesses or Developers</li> <li>- 27 elected or other representatives of County, Town or Parish Councils</li> <li>- 27 Organisations working on</li> </ul>	<p>The Cross-Sector Stakeholder Workshop was delivered to provide an opportunity for stakeholders from various sectors to come together, learn about progress on the LNRS, engage with the draft versions of the mapping and Priorities and Measures, and be able to ask questions and give feedback on these drafts.</p>	<p>During the workshop, we had an activity to collect input on the Priorities and Measures and the mapping. The questions asked during this exercise and responses received were collated and analysed, , discussed with the Steering and Core groups and were then used to help inform the final mapping and the Priorities and Measures.</p>

	<p>environmental conservation</p> <ul style="list-style-type: none"> <li>- 29 General public or other (including NHS / Education sector)</li> </ul> <p>*Limited space to 120 attendees (based on venue size and logistics – the tickets were allocated to ensure cross-sector representation and were informed by interest expressed and numbers from different sectors in previous engagement activities)</p>	<p>This workshop was also intended to provide an opportunity for stakeholders to network and start to create “<i>action networks</i>” – to collaborate on future projects with other interested stakeholders and create connections and plans for nature recovery projects.</p>	<p>During the workshop, we also had several question periods, and key comments were recorded on a flipchart. This data was then collated, discussed with the Steering and Core groups and used to inform the final mapping and Priorities and Measures. The workshop was also an opportunity for stakeholders to network, and we provided each stakeholder with a small notebook so that they could save contact and project information from other stakeholders. We received positive feedback about this workshop activity. We collected feedback after the workshop and updated those who attended with a news brief on progress made, future goals and how the feedback from the workshop was fed into the LNRS.</p> <p>In tandem with this, as there were several SG members who were not able to attend the workshop, we updated them on the workshop, and requested feedback on the mapping and Priorities and Measures at the subsequent Steering Group meeting.</p>
--	--	---	--

## 2.4 DESIGN OF THE INTRODUCTORY WEBINARS

### Overview

The Local Nature Recovery Strategy (LNRS) introductory webinars were developed and delivered by the LNRS Core Group in July 2023. These webinars were designed to engage key stakeholder groups, provide an introduction to the LNRS, and encourage participation in future LNRS activities. Below is a detailed explanation of the development, delivery, and key insights from these webinars. The webinars RECORDINGS and resulting FAQs sheet can be found [here](#).

### Groups Involved in Developing the Stakeholder Engagement Workshops

The LNRS Core Group was responsible for the development and delivery of the introductory webinars.

### Stakeholder Groups for Whom the Webinars were Designed

1. Farmers/Landowners
2. Residents
3. Town and Parish Councils
4. Developers
5. Businesses
6. Non-Governmental Organisations (NGOs)

### Advertising and Outreach

The webinars were advertised through various communication channels to reach a wide audience, including:

- Council Channels: Buckinghamshire's Community Boards, Council newsletters, developer forum, rural forum, Town & Parish Buckinghamshire Council newsletter and meetings, and social media platforms of Buckinghamshire Council and Milton Keynes City Council
- Natural Environment Partnership (NEP): Action groups, Board members' organisational social media and mailing lists, and social media platforms
- LNRS Pilot: Mailing List
- Other channels: Steering Group member organisations, National Farmers Union, South East Country Landowners Association (CLA), Farmer Cluster leads Bucks Business First,

Southeast Midlands Local Enterprise Partnership (SEMLEP), Buckinghamshire & Milton Keynes Association of Local Councils (BMKALC), community and environmental groups (via LNRS mailing lists)

## Objectives of the Webinars

The purpose of the LNRS introductory webinars was to:

- Introduce what the LNRS is and its significance
- Explain the importance of nature recovery, particularly in Buckinghamshire and Milton Keynes
- Showcase how the LNRS could benefit specific stakeholder groups
- Encourage stakeholders to engage with and participate in LNRS activities
- Provide a platform for questions and answers to address stakeholder queries

## Design and Delivery of the Webinars

The content for the webinars was shaped based on the statutory regulations and guidance of the LNRS as well as through informal discussions with key stakeholders prior to the workshops to understand what stakeholders may need to know about the LNRS.

The webinars were designed to be engaging and interactive, featuring:

- Visual aids, such as images of local nature, polls to gauge audience knowledge and interest, and flow diagrams, to explain the LNRS process
- Customised content tailored to each stakeholder group, highlighting the specific benefits of participation
- A sign-up option for attendees interested in future LNRS activities and feedback survey
- A brief outline of possible future stakeholder engagement opportunities

## Webinar Participation

Table 2. Table summarising participation in the webinars, broken down by sector.

Stakeholder Group	Webinar Sign Up Views	Sign ups	Attendees	Post-Webinar Feedback Responses
Farmers/Landowners 21 July 2023	458	41	16	7
Residents 25 July 2023	196	26	25	8
Town & Parish Councils 25 July 2023	75	55	38	16
Developers 25 July 2023	44	35	23	7
Businesses 26 July 2023	23	17	17 (please note most attendees were not businesses, but Natural England staff members).	23
Environmental NGOs and groups 20 July 2023	180	66	36	24

### Demographics of Attendees

- NGOs: 55% work in Buckinghamshire (Bucks), 35% work in both Bucks & Milton Keynes (MK), and 5% work pan-regionally
- Businesses: All respondents operate in both Bucks & MK
- Residents: 62% were from Bucks, 38% from MK
- Developers: 75% operate in Bucks only, 25% in both Bucks & MK
- Farmers/Landowners: All respondents were based in Bucks
- Town & Parish Councils: 64% were from Bucks, 36% from MK

### Feedback and Key Learning from Webinars

- There was a need for more clarity regarding the current stage of the LNRS process, i.e. whether there were any particular implementation activities currently taking place or whether it was still in the strategy development phase

- Many experienced difficulties visualising the LNRS process, which made it hard for participants to answer questions regarding what they would like to see in terms of the format and functionality of the LNRS map and written document. Stakeholders expressed a strong interest in exploring funding opportunities to deliver the strategy.
- There were requests for more intentional inclusion of urban areas in the process. In response, this issue was raised in several steering group meetings, and it was included in the design of the workshop and while developing the final priorities.
- Several suggestions were made for the creation of a field-scale map to improve understanding.
- There was a strong preference for holding in-person meetings to facilitate stakeholder consultations.

### **Feedback**

- Understanding: 70-75% of respondents said they felt able to explain the LNRS to others. However, this figure was lower for developers (50%) and residents (25%)
- Sources of Information: Participants found out about the webinars through various sources, including council and partner emails/newsletters, LinkedIn, the Natural Environment Partnership (NEP) website, word-of-mouth, environmental groups, and social media
- Highlights: Attendees particularly enjoyed the 'how to get involved' sections, overviews of nature, Q&A sessions, facts and figures, and information on funding opportunities
- Sign-up Process: The sign-up process for the webinar was found to be straightforward, although some respondents suggested it could be made more engaging

### **Conclusion**

The LNRS introductory webinars successfully engaged a diverse group of stakeholders, provided valuable insights, and identified areas for further improvement in stakeholder communication and engagement. The webinars also served as a stepping stone for future engagement activities, where stakeholders will have the opportunity to contribute more actively to the LNRS process.



## 2.5 DESIGN OF THE STAKEHOLDER ENGAGEMENT WORKSHOPS

### Overview

The primary goal of the workshops, held in March and April 2024, was to engage a diverse range of stakeholders in identifying nature recovery priorities, corresponding measures, and gathering feedback on how to present the Local Habitat Map and the Statement of Biodiversity Priorities. This process was spearheaded by the NEP and Core Group advised by a dedicated Stakeholder Engagement Task & Finish Group, with final design and delivery of the workshops Wild Pear CIC and Kath Daly Associates, hired consultants specialising in stakeholder engagement.

### Groups Involved in Developing the Stakeholder Engagement Workshops

- **Task & Finish Group:** Composed of experts in ecology, citizen science and government stakeholder engagement processes. Specifically, representatives of the following organisations were included:
  - Buckinghamshire Council Business Intelligence Department
  - Milton Keynes City Council Landscape and Countryside Manager
  - Buckinghamshire Environment Bill Readiness Manager
  - Bucks & Milton Keynes Natural Environment Partnership (NEP)
  - Natural England
  - Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust
  - Chilterns Conservation Board
  - Open University Experts in Citizen Science
- **Wild Pear CIC:** A consultant hired to design and facilitate the workshops, translating the questions and objectives of the Task & Finish Group into engaging and interactive activities. The consultant was hired through a procurement process and selected because they provided the best value and expertise, they worked together with Kath Daly Associates.
- **Kath Daly Associates:** A consultant hired to design and facilitate the workshops, translating the questions and objectives of the Task & Finish Group into engaging and interactive activities. The consultant was hired through a procurement process and selected because they provided the best value and expertise, they worked together with Wild Pear CIC.
- **Co-host Organisations:** To reach a wide audience through sources they already trusted and frequented, co-hosts for certain stakeholder groups were enlisted to

vouch for and support the LNRS workshops. The co-hosts used their channels to advertise the workshops as well as encouraged their members to attend workshops. The co-hosts also provided a review of the workshop design to ensure it was appropriate for the stakeholder groups and provided an introduction and / or participated in the workshops themselves as industry bodies or membership organisations representing key stakeholder groups. The co-hosts were: Country Landowners Association (CLA), National Farmers Union (NFU), Farmer Clusters, Buckinghamshire & Milton Keynes Association of Local Councils (BMKALC), Southeast Midlands Local Enterprise Partnership (SEMLEP) and Buckinghamshire Business First (BBF).

- **LNRS Core Group:** The core group worked on various drafts of the workshop design, incorporating suggested feedback from the other groups.
- **LNRS Steering Group:** The SG provided overall oversight.

## Stakeholder Groups invited to the workshops

- **Farmers/Landowners**
- **Residents**
- **Town and Parish Councils**
- **Developers**
- **Businesses**
- **Environmental organisations** or environmental Non-Governmental Organisations (eNGOs)

## Advertising and Outreach

The webinars were advertised through various communication channels to reach a wide audience, namely:

- **Council Channels:** Buckinghamshire's Community boards, newsletters, developer forum, rural forum, Buckinghamshire and Milton Keynes' Town & Parish Council newsletters and meetings, and social media platforms of Buckinghamshire Council and Milton Keynes City Council
- **Natural Environment Partnership (NEP):** Mailing lists, action groups, Board member organisation's mailing lists, and social media platforms
- **LNRS Pilot:** Mailing List
- **Other channels:** Steering Group member organisations, National Farmers Union, Country Landowners Association (CLA), Farmer Clusters, Bucks Business First, Southeast

Midlands Local Enterprise Partnership (SEMLEP), Buckinghamshire & Milton Keynes Association of Local Councils (BMKALC), community and environmental groups

## Objectives of the Workshops

- To capture stakeholders' views on the pressures most (adversely) affecting nature.
- To capture stakeholders' views on the ecosystem service benefits that they value the most.
- To capture stakeholders' views on which habitats we need more of, need to increase the sizes of, need to improve the condition of and / or need to increase connectivity for (the "Lawton Principles" or more, bigger, better and connected).
- To capture stakeholders' specific nature-related priorities and any corresponding measures to achieve the priorities they recommend.
- To understand how stakeholders intend to use the LNRS, and therefore, how the mapping should be formatted and what functionality should be included to make sure it is user-friendly.

## Design and Delivery of the Workshops

### Stakeholder Engagement Task & Finish Group Meetings: Developing the Workshop Framework

The Task & Finish Group focussed on Stakeholder Engagement held several meetings to plan and refine the stakeholder engagement workshops. Each meeting had a specific focus:

#### *Meeting 1: Objective Setting and Understanding the Guidance*

In this meeting, the NEP provided the Task & Finish Group members with an overview of the guidance regarding the LNRS and stakeholder engagement for the LNRS, as well as an overview of how stakeholders were approached during the LNRS pilot and how other areas were approaching the stakeholder engagement component of the LNRS. The group then agreed on objectives for themselves:

1. **Developing a framework to analyse the data that comes from the stakeholder consultation process.**
  - Need to categorise / code stakeholder input data.
  - Need to shortlist the 'priorities for nature', i.e. group to decide what weight / criteria to use such as popularity or frequency of mention
  - Need to develop a methodology statement for how and why priorities were chosen – i.e. create and show transparency in process.

2. **In keeping with the framework, to develop the stakeholder and workshop design, to include:**
  - What specific questions are we asking?
  - Are there some additional questions we need to ask based on which stakeholder we are engaging?
  - What are the ways in which we want to capture data; i.e. data collation methods for ease of processing
3. **Providing oversight on stakeholder consultation data analysis process.**
  - A data analysis consultant will be hired to analyse the data from the workshops, based on the framework developed by this group
  - This group will review and ensure the data is appropriately analysed per the framework

#### *Meeting 2: Identifying the Questions and Data Analysis Framework*

During the meeting, the group was introduced to key LNRS definitions of “opportunity”, “priority”, and “measures”. These definitions are listed below:

#### Opportunities

The possibilities for recovering or enhancing habitats and species, including those considered locally or nationally important, to achieve an increase in biodiversity and the provision of ecosystem services that may be of value to those who live and work in the area. Descriptions of opportunities within each LNRS zone (one of the four geographic sub-areas of Buckinghamshire and Milton Keynes devised for the purposes of constructing the LNRS, based on underlying National Character Areas) of Buckinghamshire and Milton Keynes will consider the practicalities of improving habitat condition or creating new areas of habitat, as well as the practicality of creating or enhancing habitats to support identified species or groups of species to be supported by the LNRS.

#### Priorities

Priorities are shortlisted opportunities based on stakeholder feedback. Priorities are “the end results that the strategy is seeking to achieve” ([LNRS statutory guidance, paragraph 51](#)). There is no single right way to describe priorities but, in most cases, priorities should include relevant habitats or species. The right way will depend on local circumstances and the views of stakeholders.

#### Measures

Measures are the actions that are recommended to achieve the priorities. They may or may not be geographically specific. Potential measures are “specific practical actions to achieve” priorities (LNRS statutory guidance, paragraph 51). These are the suggested activities that, if

done properly, would help to deliver the agreed priorities. They can benefit a particular species or habitat or provide wider environmental benefits (nature-based solutions). As with priorities, most potential measures should include relevant habitats or species. RAs should use consistent naming systems with those used in mapping (steps 1, 2 and 5). They can use a broader classification where this is appropriate, for example, potential measures for “Urban” habitat priorities. However, the creation or enhancement of habitats may not be enough to deliver some priorities on their own. As a result, RAs may wish to include a small number of potential measures that do not relate to creating or improving habitat. For example, deer management or reducing recreational disturbance to support recovery of a threatened species.

The shortlisting criteria outlined by the LNRS regulations were also presented, alongside suggestions for opportunity mapping and other important considerations, such as how the area was divided by National Character Area regions during the pilot phase. Additionally, how best and at what point of the process to integrate the NEP’s [Biodiversity Action Plan \(BAP\)](#) objectives and actions, which were recognised as crucially important to the LNRS, was discussed. The group then worked on developing questions for the stakeholder engagement workshops, along with a framework for analysing the data gathered from these workshops. At this point, Wild Pear CIC took the questions devised by the Task & Finish Group to develop related activities to be conducted during the stakeholder engagement workshops.

### *Meeting 3: Finalising the Workshop Design and Setting Criteria for Shortlisting*

In addition to the Task & Finish Group, this meeting was also joined by Future Nature, a consultancy service who was hired to analyse the data that came from the workshops. During this meeting, the Wild Pear CIC and Kath Daly Associates presented their suggestions for workshop, activities to capture the questions the Task & Finish Group had previously developed, and feedback was provided by the group to Wild Pear CIC and Kath Daly Associates on these. Finally, the Task & Finish group used the LNRS guidance to develop a set of criteria through which the analysed and categorised workshop data could be shortlisted objectively into key priorities and measures for nature recovery (to understand the full data analysis and shortlisting process, please read the LNRS Data Analysis Methodology Statement).

### **Other Meetings: Finalising the Workshop Details**

In addition to the key Task & Finish Group Meetings, there were a number of shorter meetings that took place between Wild Pear CIC and Kath Daly Associates, the NEP and the Core Group to finalise the workshop design and logistics based on the feedback from the Task & Finish Group.

## Key Considerations

Several key considerations were integrated into the development of the stakeholder engagement workshops:

- **LNRS Zone Categorisation:** In keeping with how both the BAP and the pilot LNRS was developed, the LNRS SG early on decided that dividing the region into four zones, based on underlying landscape, geology and ecology, (following groupings of National Character Areas (NCA)), would be an appropriate way to gather stakeholder input and to ensure that suggestions for stakeholder priorities and measures for nature recovery were matched to the areas they were feasible in. As such, the workshop also captured data based on the four LNRS zones of North Bucks & Milton Keynes, Aylesbury Vale, The Chilterns and Thames Valley (later renamed for the purposes of the LNRS only to 'South Bucks')
- **Inclusivity:** The workshops were designed to engage both expert and non-expert stakeholders, and cover the geography of both Buckinghamshire and Milton Keynes, allowing for diverse perspectives to inform the LNRS.
- **Accessibility:** In-person workshops were held in both Buckinghamshire and Milton Keynes to ensure maximum number of people could participate. Some workshops were held online. Workshops were also held at times that would be most favourable for the individual stakeholder groups, and accessibility requirements were asked in advance.

## Workshop Participation

Ten deep-dive workshops took place on various dates in March and April 2024. Each individual workshop was directed at one of the six key external stakeholder sector groups. For certain stakeholder groups, multiple workshops were held at different locations in the LNRS area to capture the greatest number of participants. Some workshops were held online to support better reach. This is the breakdown of the participants:

Table 3. Participation in the workshops, broken down by location and sector.

Number of participants by location and sector						
	North Bucks & MK	Aylesbury Vale	Chilterns	Thames Valley	Area wide	Total
Farmers 1 18 March 2024	7	1		1		9
Farmers 2		18			5	23

20 March 2024						
<b>Farmers 3</b> 24 April 2024			5	1		6
<b>Env 1</b> 25 March 2024	3	1	13	1	10	28
<b>Env 2</b> 4 April 2024	8	1		1	7	17
<b>T&amp;PC</b> 8 April 2024	8	9	10	2	2	31
<b>Public 1</b> 26 March 2024	2	0	2		3	7
<b>Public 2</b> 27 March 2024	7	2	3		2	14
<b>Business</b> 5 April 2024	1	3			2	6
<b>Dev</b> 19 March 2024						6
<b>Total</b>	36	35	33	6	31	147

## Final Workshop Structure and Specific Activities

Each workshop was 2.5-3 hours long. A pre-engagement reading and background pack was mailed out to each participant in advance of the workshops.. Participants were asked to sit in groups based on the LNRS zones they were most familiar with. Also available was a table for attendees wishing to consider the whole Buckinghamshire and Milton Keynes area rather than one specific zone. The following activities were conducted during the workshops:

### 1. Introduction to the LNRS

An introductory presentation provided an overview of the LNRS objectives and its importance for the region by members of the Council, the NEP and Natural England. Participants were introduced to the key concepts, including the role of stakeholders in shaping the nature recovery strategy, as well as provided with an overview of the nature in the area. At some workshops, introductions were also made by co-hosts.

### 2. Identifying Pressures on Nature

Participants were presented with a list of seven key pressures on nature (Climate Change, Growth in new housing and infrastructure, Inappropriate River catchment management, Growing demand for water, Inappropriate land management, Pollution, Non-native species, pests and diseases), which were derived [from the BAP](#). Each participant ranked these pressures in terms of their significance and urgency for their LNRS zone. They were also given the choice to add additional pressures, as they saw fit. The participants were then asked to develop a hierarchy of the pressures as a group. The pressure from the HS2 development was a key theme that many stakeholders brought up.

How the data was used: The ranking of the pressures on nature were used as a lens through which to shortlist priorities based on urgency.

### **3. Valuing Nature's Benefits**

Participants were presented with a chart of the following ecosystem services, or services of value provided by nature, which was developed by our mapping consultants, Natural Capital Solutions: Local climate regulation, Clean air, Clean water, Reducing flood risk, Pollination, Pest and disease control, Noise reduction, Healthy soil, Provides habitats for wildlife and biodiversity. They were then asked as a group to allocate points out of a total of 100 points to each service based to indicate which ecosystem services were of most value to them and needed to be focused on the most within the LNRS. They were also afforded the opportunity to add any additional ecosystem services they deemed important. Health & well-being was a salient theme that many stakeholders brought up.

How the data was used: The top ecosystem services were incorporated into the opportunity map modelling process. Additionally, in the final display of LNRS Priorities and Measures, each priority will highlight the ecosystem services benefits it has the potential to provide.

### **4. Identifying Priorities for Habitats**

Participants were asked to rank the habitats within their LNRS zone based on the Lawton Principles of more, bigger, better, more joined up. Participants were given four cards each with one of the Lawton Principles on it. They were then shown the following habitats sequentially and asked to raise the card that described what they thought needed to happen for the particular habitat in their LNRS zone: species-rich grassland, woodland / forest, heathland and shrub, sparsely vegetated land / bare ground, wetlands, natural spaces in urban areas, hedgerows and lines of trees, nature friendly farmland habitats, rivers and other watercourses.

How the data was used: The data from this activity informed how and which habitats were mapped as opportunities for nature recovery in the LNRS map.

### **5. Identifying priorities and measures**



The participants were provided with a paper-based template on which to write down what they thought were the top three priorities for nature recovery in the area and some suggested measures, or actions, to enable the priorities.

How the data was used: This information was taken to the scoping, longlisting and shortlisting process for identifying priorities and corresponding measures in the LNRS.

## **6. Identifying Formats and Functions**

Participants were provided with some visual examples of formats, functions and features as inspiration and were asked to think about what types of functions would support them in making the best use of the LNRS written statement and map.

How the data was used: The participants' responses will directly inform the format and functions of the LNRS map and written statement.

## **7. Mapping Projects**

Stakeholders were asked to mark on a map of the area any projects their organisations were undertaking or that they knew about to support nature recovery efforts.

How the data was used: The data has been recorded and will be used as the LNRS delivery progresses as a means to understand nature recovery activities taking place in the area.

## **Additional Activities**

For some of the workshops, guest speakers were also invited to talk about topics that might be of interest to the audience, to help attract attendees, and “give something back” in return for their time, as well as enthuse the audience about the LNRS process, with an eye on its eventual delivery. For example, a landowner working on regenerative and sustainable farming practices was invited to one of the environmental organisations workshops; a policy specialist from Natural England came to the first farmer / landowner / forester workshop in Milton Keynes, to talk about Environmental Land Schemes (ELMs) and the link with LNRSs, and a specialist in youth engagement to talk about ways to engage young adults in civil life.



## Feedback from the Workshops

The feedback from the workshops was generally positive, with participants appreciating the interactive format and the opportunity to shape the future of nature recovery in their region.

Key themes from the feedback included:

- Participants appreciated the well-designed activities and resources, along with the collaborative and supportive atmosphere that was created.
- The consultation with co-hosts was well-received, contributing positively to the overall experience.
- The inclusion of additional speakers, particularly those from Local Authorities to introduce the LNRS, further enriched the discussions.
- A shared passion for nature recovery was evident among all participants.
- It was suggested that sessions could be extended to allow for more in-depth exploration of topics.
- Participants noted the importance of addressing issues holistically, rather than in isolation.
- More preparatory reading was requested.
- The audio quality of some of the sessions could have been improved, as there was some background noise.
- There were questions about how the discussions could be translated into fundable initiatives.
- Participants called for more guidance and practical strategies to support the outcomes of the sessions.
- The need to more centrally address health and well-being impacts was emphasised.

- Despite challenges, participants expressed a sense of positivity about the overall direction of the discussions.
- Concerns were raised about how to sustain long-term delivery, especially in the face of differing perspectives.
- The importance of effective engagement with local delivery partners was strongly highlighted.

## Conclusion

The stakeholder engagement process for the Buckinghamshire and Milton Keynes LNRS was a well-coordinated and comprehensive effort that successfully engaged a diverse range of participants. The structured workshops, designed by the Task & Finish Group and facilitated by Wild Pear CIC, provided a platform for stakeholders to offer valuable insights on nature recovery priorities, pressures, and actions. The input collected will directly inform the development of the LNRS, ensuring that the strategy reflects the needs and priorities of the local communities, landowners, businesses, and conservationists.

## 2.6 DESIGN OF THE STAKEHOLDER ENGAGEMENT SURVEY

### Overview

The purpose of the stakeholder engagement survey was to provide a wide audience, especially those who were unable to attend the workshops, with a chance to input into the LNRS process. It also provided those who did attend the workshops to corroborate whether the LNRS team had accurately captured their responses (with the caveat that responses were screened to ensure their viability, urgency and alignment to National Environmental Objectives, and direct focus on habitats and species). In addition, the survey was set up for key stakeholder groups to input information from ‘other plans and strategies’, a key step indicated in the LNRS guidance. The survey was live for six weeks between 8<sup>th</sup> July – 18<sup>th</sup> August 2024.

### Groups Involved in Developing the Stakeholder Engagement Survey

- **Stakeholder engagement Task & Finish Group:** Composed of experts in ecology, citizen science and government stakeholder engagement processes. Specifically, representatives of the following organisations were included:
  - Buckinghamshire Council Business Intelligence Department
  - Milton Keynes City Council Landscape and Countryside Manager

- Buckinghamshire Environment Readiness Bill Manager
- Bucks & Milton Keynes Natural Environment Partnership (NEP)
- Natural England
- Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust
- Chilterns Conservation Board
- Open University Experts in Citizen Science
- **Future Nature:** Future Nature, the consultancy hired to conduct the data analysis of the data from the workshops and survey advised how the data from the workshops could be easily translated into the survey format and how data should be captured through the survey in order to ensure that it could be analysed well.
- **LNRS Core Group:** The core group worked on various drafts of the survey, incorporating suggested feedback from the other groups.
- **LNRS Steering Group:** The SG provided overall oversight and sign-off for the survey.

## Stakeholder target Groups for the Survey w

The survey was designed with the following stakeholder groups in mind:

1. Organisations working in environmental conservation
2. Buckinghamshire Council or Milton Keynes City Council officers
3. Utilities company or Nationally Significant Infrastructure Projects (NSIP)
4. Local community groups
5. Developers
6. Businesses
7. Town or parish councils
8. Farmers, landowners/managers, foresters
9. Members of the public
10. Elected representatives in Buckinghamshire or Milton Keynes
11. Educators or higher education students
12. Other

## Advertising and Outreach

The survey was advertised through various communication channels to reach a wide audience, including:

- **Council Channels:** Community boards, newsletters, developer forum, rural forum, Town & Parish Council newsletter and meetings, and social media platforms of Buckinghamshire Council and Milton Keynes City Council
- **Bucks & MK Natural Environment Partnership (NEP):** Mailing lists, action groups, board members' mailing lists, and social media platforms

- **LNRS Pilot:** Mailing List
- **Other channels:** Steering Group member organisations, National Farmers Union, Country Landowners Association (CLA), Farmer Clusters, Bucks Business First, Southeast Midlands Local Enterprise Partnership (SEMLEP), Buckinghamshire & Milton Keynes Association of Local Councils (BMKALC), community and environmental groups, local libraries, local surgeries

## Purpose of the Questions in the Survey - were to:

- Identify which areas of Buckinghamshire and Milton Keynes participants were most familiar with to tailor the Local Nature Recovery Strategy (LNRS) to local needs.
- Gather feedback on the ranking of draft priorities (through their overarching themes) for nature recovery in the area.
- Collect suggestions for additional priorities or specific species and habitats that should be included in the LNRS.
- Understand participants' vision for the future of nature in Buckinghamshire and Milton Keynes over the next five years.
- Determine how individuals and organisations plan to use the LNRS, whether for understanding local nature opportunities, taking action, or accessing funding.
- Capture the key objectives of any additional plans and strategies that may be relevant to the LNRS.
- Capture demographic information to ensure a diverse range of views is represented in the development of the LNRS.

\*For further information on the purpose and reasoning behind asking each question, please refer to the Data Analysis methodology.

## Design and Delivery of the Workshops

### Task & Finish Group Meetings: Developing the Survey

The Task & Finish Group held two meetings to plan and refine the stakeholder engagement survey. Originally, the intention was to conduct the survey and the workshops at the same time, however, following the advice of the task and finish group and with agreement from the steering group and core group, we subsequently decided to split the timing of the initial deep-dive sector workshops and the survey, so that the survey could be used to both broaden engagement and also to act as a check on the outcome of the workshops, with further opportunity for input.

The objectives set for the Task & Finish Group, with regard to developing the survey questions were as follows:

- Identify a collective vision for nature in the area

- Identify stakeholder priorities in relation to species, habitats, and ecosystem services
- Identify actions to enhance and recover the species, habitats, and ecosystem services deemed important by stakeholders
- Identify format and functions of the Local Habitat Map
- Identify format and functions of the Written Statement of Biodiversity Priorities

Based on the objectives as well as the following key considerations, the survey questions (below) were developed.

**Which questions best meet the objective?**

**What is the best format for the questions?**

If you are assigning a question as multiple choice, please add the choices.

**How can we decrease the number of questions?**

**Are there any sector-specific amendments that need to be made to the questions?**

(Farmers & Landowners, Town & Parish Councils, Businesses, Developers, Environmental Organisations, General Public).

**Key Considerations**

Some key considerations and decisions while developing the survey included:

- Ensuring language used was clear and appropriate for both expert and non-expert stakeholders
- Using the themes rather than individual priorities to make it easier to answer the survey questions
- Ensuring data captured aligned with format of, and built upon, data captured during the workshops
- Ensuring that information followed the appropriate GDPR protocols
- Providing space for people to add any additional information
- Ensuring people adding priorities also thought about the measures or actions needed to achieve them
- Ensuring that the responses were connected to a specific NCA zone in keeping with the data from the workshops and the overall LNRS process
- Identifying which stakeholder group was providing the data
- Including standard demographic data, as required by Council protocols
- Hosting the survey on a familiar and user-friendly platform ([Your Voice Bucks](#))

**Bucks Youth Survey**

Prior to the launch of the workshops and main LNRS survey, a simplified set of survey questions, was also developed for the Bucks Youth Summit (an annual conference held by the Buckinghamshire Council to engage students from schools across the area on key themes, such as the environment, cyber bullying, etc.), so that young people between the ages of 13 and 18 could also input into the LNRS process.

The questions asked were:

1. Are you (or your parents if you are 13 years or younger) happy for us to use your answers to these questions to help us write a local plan for nature?
2. Which parts of nature do you like the best near where you live (please list any plants, animals or areas that are important to you)?
3. In your opinion, which THREE of these threats to local nature are you most worried about? (please tick 3 only)  
[Climate change; air pollution; water pollution; new buildings; not looking after natural spaces (e.g. parks, forests, rivers or the soil) properly; increase in human demand for resources such as water and wood; flooding; diseases affective wildlife; something else (please describe)]
4. Are there any parts of nature near where you live that you think should be improved or there should be more of? Please select as many as you like.  
[Trees and woods; hedgerows; wildflowers; ponds and water areas; areas for rare plants and animals; something else – please describe]
5. Is there anything else you would like to tell us about nature near where you live?
6. How old are you? (We are asking this question to help us understand any differences in what different aged children think about local nature.)
7. What is the name of your school?
8. Did you attend the Bucks Youth Summit?

### ***Final LNRS online Survey Questions***

#### **Supporting Information**

Help us shape the future of nature in Buckinghamshire and Milton Keynes

Open date: 8 July 2024

Close date: 18 August 2024

Name: Buckinghamshire and Milton Keynes Natural Environment Partnership

Email: [lnrs@buckinghamshire.gov.uk](mailto:lnrs@buckinghamshire.gov.uk)

### *Overview*

We want to hear which aspects of nature are important to you to help us develop a Local Nature Recovery Strategy (LNRS) for Buckinghamshire and Milton Keynes.

### *Why we need to recover nature*

Buckinghamshire and Milton Keynes are home to a wide range of wildlife. For example, we have on our doorstep some of the world's only chalk streams, ancient woodland, and nationally significant populations of species such as native black poplar trees and black hairstreak butterflies.

The health of the natural environment is critical in supporting these habitats and species. Nature is both vital for human life and economic growth and it is an important part of our heritage.

However, our wildlife is under threat and in decline for many reasons, including climate change, competition for land, and the rise of pests and diseases.

We are developing a Local Nature Recovery Strategy (LNRS) for Buckinghamshire and Milton Keynes to help reverse the decline in nature in our local area (also known as 'recovering' nature).

We want to hear your views on our draft priorities for nature so they align with the nature you think is important to see in Buckinghamshire and Milton Keynes in the future. You do not need to be an expert on nature to take part.

### *What a Local Nature Recovery Strategy is*

Local Nature Recovery Strategies (LNRS) were introduced in the Environment Act 2021. Every area in England is producing one. A LNRS:

- provides a single vision for improving and increasing nature
- sets out local priorities and opportunities for nature recovery activities
- identifies the best locations to improve nature
- helps Local Planning Authorities plan with regard to the natural environment
- supports the delivery of Biodiversity Net Gain (a national policy that requires a 10% increase in biodiversity in all new developments)
- helps deliver our National Environment Objectives set by Government

The strategies do not force the owners and managers of the land identified to make any changes. Instead, the Government is encouraging action through opportunities for funding and investment. For example, Environment Land Management Schemes (ELMs), Biodiversity Net Gain (BNG), and for planning authorities to have regard to the LNRS in statutory Local Plans.



### *Who is responsible for developing the LNRS*

We, Buckinghamshire Council, are responsible for developing the LNRS for the area. Milton Keynes City Council and Natural England are partners in the process. We commissioned the Buckinghamshire and Milton Keynes Natural Environment Partnership (NEP), our Local Nature Partnership, to lead the LNRS process on our behalf.

### *How we are developing the LNRS*

Stakeholder engagement is key to the development of the LNRS. Our stakeholders include, but are not limited to, the following:

- residents
- farmers and landowners
- town and parish councils
- businesses
- developers
- environmental organisations and experts
- local members

In Spring 2024, we identified a draft set of priorities for nature through workshops with our stakeholders. We also gathered information on the pressures on nature that are the most urgent to address, and the benefits that nature provides that are vital for us. Stakeholders also told us how they would like the LNRS to be presented so it is user-friendly.

Each step in the LNRS stakeholder engagement process will feed into the next. For example, responses to this activity will be used to cross-check the information we gathered through the workshops, as well as collecting views on nature in the area.

Buckinghamshire (not including Milton Keynes) was part of a Defra pilot to understand how best to develop LNRSs. The information gathered during the pilot will be incorporated in the final LNRS for Buckinghamshire and Milton Keynes.

### *How we are developing the priorities and actions to be included in the LNRS*

Through our stakeholder engagement across Buckinghamshire and Milton Keynes in Spring 2024, and an earlier LNRS pilot in Buckinghamshire, we have developed a shortlist of draft priorities for nature's recovery.

To help us do this, we divided Buckinghamshire and Milton Keynes into geographic zones. These are based on areas with similar underlying ecology and geology so we can collect data and develop priorities that are tailored to the landscape.

To develop the shortlist of draft priorities, we analysed all of the information we received using national guidelines, specifically ensuring that the priorities shortlisted:

- are related to a species and/or habitat that is important for the area

- are the most urgent to address
- deliver at least one National Environment Objective
- and/or take into consideration the preferences of the people who live and work in the area

*The draft priorities are:*

- create connections between natural areas for wildlife to flourish
- take action to improve soil quality
- restore rivers and enhance their floodplains
- increase and improve wetlands and ponds
- improve river water quality
- improve and increase the most important (priority) habitats in the area
- improve and increase other habitats for biodiversity (non-priority)
- enable farmers to balance production with wildlife-friendly farming practices
- improve biodiversity in urban and other built-up areas
- help nature adapt to a changing climate
- improve the environment for target species

### **Survey Questions**

1. Using the map as a guide, which area(s) of Buckinghamshire and Milton Keynes are you most familiar with?

For example, where you live, work, study, socialise and/or spend time in nature. The zones are based on areas with similar underlying ecology and geology so we can collect data and develop priorities that are tailored to the landscape.

Please tick (✓) all that apply:

- Milton Keynes City and its wider boroughs
- North Buckinghamshire
- Aylesbury Vale
- The Chilterns
- Thames Valley
- Whole area

2. Please rank the draft priorities for nature recovery based on which are most important for the area(s) you are most familiar with.

Where '1' is the most important and '11' is least important.

You do not need to be an expert on nature to answer. We want to understand what you would like to see in your local area so we can ensure we are focusing on your priorities in the LNRS.

Please tick (✓) one option per column.

Create connections between natural areas for wildlife to flourish

Take action to improve soil quality

Restore rivers and enhance their floodplains

Increase and improve wetlands and ponds

Improve river water quality

Improve and increase priority habitats

Improve and increase non-priority habitats

Enable farmers to balance wildlife-friendly farming practices

Improve biodiversity in urban areas

Help nature adapt to a changing climate

Improve the environment for target species

3. If you think there are any other priorities for nature that should be included in the Local Nature Recovery Strategy, please tell us here:

[Text box for open-ended response]

4. If you think there are any specific species or habitats that should be a priority in the Local Nature Recovery Strategy, please tell us here:

[Text box for open-ended response]

5. Thinking about the area(s) of Buckinghamshire and Milton Keynes you are familiar with, what would you like nature to look like in the area(s) in the next five years?

[Text box for open-ended response]

6. How do you think you will use the Local Nature Recovery Strategy?

The LNRS will describe the key priorities for nature and the actions needed to achieve them. It will also include a map of our area showing where action should be focused to achieve the priorities.

Please tick (✓) all that apply:

- To understand what the most important nature improvement opportunities are within my area
- To understand how I can take action in the best way to improve nature
- To understand the benefits that each priority could bring
- To be directed to funding sources that might help me deliver an LNRS priority
- To generally learn about nature in the area

- I can't see a use for me
- I don't know
- Other (please give details below): [Text box for open-ended response]

7. Which best describes you?

Please tick (✓) one option:

- Organisation working on environmental conservation (go to question 11)
- Buckinghamshire Council or Milton Keynes City Council officer (go to question 11)
- Utilities company or Nationally Significant Infrastructure Project (NSIP) (go to question 11)
- Local community group (go to question 10)
- Developer (go to question 10)
- Business (go to question 10)
- Town or parish council (go to question 10)
- Farmer, landowner/manager, forester (go to question 16)
- Member of the public (go to question 16)
- Elected representative in Buckinghamshire or Milton Keynes (go to question 16)
- Educator or higher education student (go to question 16)
- Other (please give details below): [Text box for open-ended response]

8. Did you attend a Local Nature Recovery Strategy workshop in March or April 2024?

Please tick (✓) one option:

- Yes
- No
- I don't know

9. How did you find out about this survey?

Please tick (✓) all that apply:

- Local media (newspaper, radio, TV, website or newsfeed)
- Social media (Facebook, Twitter/X, Instagram, Nextdoor or LinkedIn)
- Buckinghamshire Council website or Your Voice Bucks website
- Email or newsletter from Buckinghamshire Council
- Buckinghamshire Council staff or other professionals
- Through working at Buckinghamshire Council
- Poster or leaflet
- Friend or family member
- Local community or special interest group
- Councillor, town/parish council or community board

- Other (please give details below): [Text box for open-ended response]

10. (For local community group, developer, business, or town/parish council representatives)

Please provide the following details:

- Name of organisation: [Text box]

- Your job title: [Text box]

11. (For organisation working on environmental conservation, Buckinghamshire Council or Milton Keynes City Council officer, utilities company or NSIP representatives) Please provide the following details:

- Name of organisation or council: [Text box]

- Your job title and/or council department: [Text box]

12. Does your organisation or council department have any agreed upon strategies or plans for nature, or plans that would affect nature?

For example, this could include species and protected sites conservation strategies, Local plans, local tree and woodland strategies, catchment plans, Green and Blue Infrastructure plans, AONB plans, nature restoration/enhancement plans for infrastructure projects.

Please tick (✓) one option:

- Yes (go to question 13)

- No (go to end)

- I don't know (go to end)

13. Please provide the names of the strategies or plans and, if available, links to the document(s) here:

[Text box for open-ended response]

14. If the strategies or plans include any targets or actions that relate directly to any of the draft shortlist of priorities for nature recovery identified by the LNRS process so far, please tell us what those targets or actions are:

Please state which shortlisted LNRS priority each target or action in your strategy relates to.

[Text box for open-ended response]

15. If there are any other relevant priorities and associated actions/targets within the strategies and plans of your organisation that have NOT already been captured by the draft shortlist of priorities for nature recovery so far captured in the LNRS process, please tell us here:

[Text box for open-ended response]

16. What is your postcode?

We want to understand the views of people living in different areas. You don't have to provide your postcode, but it helps us plan and make considered decisions.

[Text box for postcode]

17. What is your age?

Why we ask this: We want to understand the experiences and views of different age groups.

Please tick (✓) one option:

- Under 16
- 16 to 24
- 25 to 34
- 35 to 44
- 45 to 54
- 55 to 64
- 65 to 74
- 75 to 84
- Over 85
- Prefer not to say

18. Do you consider yourself to have a disability / disabilities, impairment(s) or long-term health condition(s)?

Why we ask this: We want to understand the experiences and views of disabled people, people with impairments and people with long-term health conditions.

Please tick (✓) all that apply:

- Disability / disabilities
- Impairment(s)
- Long term health condition(s)
- No
- Prefer not to say

19. Are you:

Why we ask this: We want to understand the experiences and views of different sexes.

Please tick (✓) one option:

- Female
- Male
- Prefer not to say

20. How would you describe your ethnicity?

Why we ask this: We want to understand the experiences and views of different ethnicities.

Please tick (✓) one option:

- Asian - British
- Asian - Bangladeshi
- Asian - Chinese
- Asian - Indian
- Asian - Pakistani
- Any other Asian background - Please give details below: [Text box]
- Black - African
- Black - British
- Black - Caribbean
- Any other Black, African or Caribbean background - Please give details below: [Text box]
- Mixed or multiple ethnic groups - White and Asian
- Mixed or multiple ethnic groups - White and Black African
- Mixed or multiple ethnic groups - White and Black British
- Mixed or multiple ethnic groups - White and Black Caribbean
- Any other Mixed or Multiple ethnic background - Please give details below: [Text box]
- White - English, Welsh, Scottish, Northern Irish or British
- White - Irish
- White - Gypsy or English traveller
- White - Irish Traveller
- White - European
- Any other White background - Please give details below: [Text box]
- Other ethnic group - Arab
- Other ethnic group - Arab British
- Other ethnic group - Please give details below: [Text box]
- Prefer not to say

Thank you for taking the time to complete this survey.

Please return your completed survey by 11:59pm on 18 August 2024. You can:

- email it to [lnrs@buckinghamshire.gov.uk](mailto:lnrs@buckinghamshire.gov.uk)
- post it to LNRS priorities, The NEP, Planning and Environment, Buckinghamshire Council, Walton Street Offices, Walton Street, Aylesbury, HP20 1UA

## How the Data was Used

All the data from the survey was screened through the same process as the workshop data was (please see data analysis methodology). The ranking of the themes indicated within the mapping and the priorities setting the importance of particular priorities. The data on priorities and measures were directly incorporated into the LNRS written statement and the data on key plans and strategies, was both directly incorporated as priorities into the written statement and as a means to reference which other plans and strategies' objectives were incorporated into the LNRS. Data from the Bucks Youth Summit survey was also fed into the prioritisation of priorities process.

## Survey Participation

**444 individuals representing:**

- 296 Members of the Public
- 21 Council officers
- 2 businesses
- 3 developers
- 15 Educators or higher education students
- 26 elected or other representatives of Town or Parish Councils
- 17 Farmer, landowner/manager, forester
- 27 Local community groups
- 28 Organisations working on environmental conservation
- 1 Utilities company or Nationally Significant Infrastructure Project (NSIP)
- 1 NHS representative
- 2 funders
- 40 young people

## Conclusion

The stakeholder engagement survey for the Buckinghamshire and Milton Keynes Local Nature Recovery Strategy (LNRS) was an effective tool to broaden participation, reaching individuals who could not attend the in-person workshops. It provided a platform for the wider public and specific stakeholder groups to contribute feedback on nature recovery priorities, aligning their responses with local and national objectives.

The survey was well-structured, with questions that were clear and accessible to both expert and non-expert participants. It was developed with input from various experts and organizations to ensure data gathered was robust and useful. Key considerations, such as ensuring demographic diversity and following GDPR protocols, were prioritized.



Survey participation was strong, with 444 individuals from a variety of sectors, including the general public, council officers, environmental groups, and local community groups. However, participation from the business and development sectors was notably low, indicating a need for further engagement with these groups. The survey data, combined with inputs from workshops and the Bucks Youth Summit, contributed to refining the LNRS priorities and measures, ensuring that the strategy reflects both local knowledge and stakeholder ambitions for nature recovery.

Overall, the survey was a crucial component in ensuring the LNRS is grounded in community needs and environmental objectives.

## 2.8 Design of the Update Webinar

### Overview

The Local Nature Recovery Strategy (LNRS) update webinar was developed and delivered by the LNRS Core Group in October 2024. This webinar was designed to engage key stakeholder groups and the public, provide an update and information on the LNRS, and encourage participation in future LNRS activities, particularly the upcoming Cross-sector Stakeholder Workshop. Below is a detailed explanation of the development, delivery, and key insights from this webinar. Further details about the webinar are available on the [NEP's website](#).

### Groups Involved in Developing the Update Webinar

The LNRS Core Group was responsible for the development and delivery of the update webinar.

### Stakeholder Target Groups for the Update Webinar

The Update Webinar was designed for the following stakeholder groups in particular:

- **Farmers/Landowners**
- **Residents**
- **Town and Parish Councils**
- **Developers**
- **Businesses**
- **Non-Governmental Organisations (NGOs)**
- **General public**

## Advertising and Outreach

The webinar was advertised through various communication channels to reach a wide audience, including:

- **Council Channels:** Buckinghamshire's Community Boards and social media platforms of Buckinghamshire Council
- **Natural Environment Partnership (NEP):** Action groups, Board members' organisational social media and mailing lists, and social media platforms
- **LNRS Pilot:** Mailing List
- **Other channels:** Steering Group member organisations and their social media channels, community and environmental group (via LNRS mailing list)

## Objectives of the Webinar

The purpose of the LNRS update webinar was to:

- Review what the LNRS is and its significance
- Explain the importance of nature recovery, particularly in Buckinghamshire and Milton Keynes
- Update stakeholders and the public on the work that has been done since the spring stakeholder events, the current work that is underway and the future work and goals of the LNRS
- Encourage stakeholders to engage with and participate in LNRS activities, especially to raise awareness and boost attendance at the upcoming Cross-sector Stakeholder Workshop
- Provide a platform for questions and answers to address stakeholder queries

## Design and Delivery of the Webinar

The content for the webinar was shaped based on the statutory regulations and guidance of the LNRS as well as through informal discussions with key stakeholders and core group members prior to the workshop to understand what stakeholders may want an update on and what is most important to communicate regarding the LNRS.

The webinar was designed to be engaging and interactive, featuring:

- Visual aids, such as images of local nature, and flow diagrams, to explain the LNRS process
- A live chat messaging box that attendees could post questions or comments to throughout the webinar, which were answered by core group members during the webinar and which were also used during the question and answer period
- A sign-up option for attendees interested in future LNRS activities and updates (included in invitation email, not incorporated into webinar itself)
- Information on the upcoming Cross-sector Stakeholder Workshop, including what attendees could expect and why they should come

## Webinar Participation

On the morning of the webinar, we had 55 people in attendance. This video was then circulated to those on our mailing list, as well as those who expressed interest in the webinar but who were unable to attend on the day. In addition, we posted the webinar recording to the NEP website and YouTube channel, please see [here](#).

\*This webinar was strictly an information-giving event, and we did not poll attendees on sector representation, nor gather any other information on attendees at this event.

## Feedback and Key Learning from Webinars

From the brief question and answer period during the webinar, along with the questions asked in the chat function, the following is a summary of key issues raised at the update webinar.

- Information on how Neighbourhood Plans were being integrated into the LNRS, or whether they were being integrated into the LNRS (*LNRS team liaising with Neighbouring Authorities, as well as engaging with town and parish councils, to ensure input at the Neighbourhood Plan scale*)
- Funding: there were several queries regarding sources of funding for delivery of the LNRS / nature recovery, and how the LNRS could feed into grant funding opportunities, for instance. (*At this time, the core team pointed attendees towards the Planning Advisory Service (PAS) guidance on this, and that once "...up and running, we expect LNRS to inform future funding opportunities from a range of public and private sources."*)
- More information requested on the target species / species shortlist (*at this point, the Buckinghamshire and Milton Keynes Environmental Records Centre was still in the process of finalising this list, and attendees were informed of this*)

- More information on the LNRS final map required (*at this point, the consultancy we appointed for the mapping, Natural Capital Solutions, was still developing the mapping, attendees were informed of this, and that we would be sharing the mapping at the upcoming workshop*)

## Conclusion

The LNRS update webinar successfully delivered a broad range of information regarding past, current and future work underway on the LNRS to a large audience, both those that were able to attend in person, as well as those who watched the webinar after recording. This webinar provided valuable insights and information to attendees regarding the LNRS process and allowed attendees to engage, communicate pressing questions and gain feedback on issues related to the LNRS. The webinar also served as a platform to boost interest and encourage attendance in the upcoming Cross-sector Stakeholder Workshop, where stakeholders will have the opportunity to contribute more actively to the LNRS process.

## 2.9 Design of the Cross-sector Stakeholder Workshop

### Overview

The primary goal of the workshop was to bring together representatives from multiple sectors across Buckinghamshire and Milton Keynes as the final stakeholder input step in production of the LNRS, gathering feedback on the draft priorities, measures, and mapping. The Core Group also wanted to use the workshop to enable stakeholders to ask questions about the LNRS and to start engaging stakeholders about practical delivery of the priorities and measures identified in the LNRS.

The workshop development process was led by the NEP and Core Group advised by the LNRS steering group and with design and delivery of the workshop by Kath Daly Associates in partnership with Wild Pear CIC, consultants specialising in stakeholder engagement. Mapping work formed part of the workshop too, with the mapping work led by the consultancy Natural Capital Solutions.

## Groups Involved in Developing the Stakeholder Engagement Workshops

- **LNRS Core Group:** The core group worked closely with the consultants in steering development and delivery of the workshop design
- **LNRS Steering Group:** The SG provided overall oversight and signed off the overall workshop plan.
- **Bucks & Milton Keynes Natural Environment Partnership** provided project management and worked closely with the consultants. Note: There was a change in LNRS project manager during the period of workshop planning.
- **Kath Daly Associates** in partnership with **Wild Pear CIC:** were commissioned to design and facilitate the workshops, translating the questions and objectives provided into an engaging 5-hour workshop for up to 120 people.
- **Natural Capital Solutions** were commissioned to lead on the mapping work, including creation of the APIB and Local Habitat Map.

## Stakeholder Groups invited to the workshops

- Farmers / foresters / landowners
- General public / community organisations
- Town and Parish Councils
- Developers
- Businesses
- Environmental organisations

**Advertising and Outreach** was managed by the Bucks & MK NEP

## Objectives of the Workshops

- To build understanding of the LNRS - what it is, what it hopes to achieve
- To share the story, process and findings so far in development of the LNRS
- To sense-check aspects of the LNRS before it goes out to public consultation
- To build understanding between sectors, to support action for nature recovery

## Design and Delivery of the Workshops - key stages in the co-design process (see table below)

**Table 4.** Overview of the co-design process for the workshop, broken down by meeting date, the activity (or meeting) in which the workshop design was discussed and the purpose and outcomes of those activities / meetings.

	Activity	Purpose
30-07-24	Inception meeting with Core Group	Discussed key aspects of the brief to ensure mutual understanding
22-08-24	Meeting with Core Group	Reviewed and agreed focus of workshop Decision taken to hold webinar September as part of pre-brief & workshop promotion Agreed workshop pre-booking info including opportunity to submit questions Still to be finalised: date and timing of workshop; mapping end product spec and timelines
23-09-24	Meeting with Core Group	Shared and reviewed first iteration of workshop plan
1-10-24	Meeting with Steering Group	Shared and reviewed second iteration of workshop plan
10-10-24	Meeting with Core Group	Workshop plan reviewed, including discussion on <ul style="list-style-type: none"> <li>- Key questions and data to be gathered</li> <li>- Involvement of sector reps, including the idea of a rep for nature</li> </ul> Awaiting finalisation of <ul style="list-style-type: none"> <li>- Priorities and measures, including total number of each and final wording</li> <li>- Mapping – including number of mapped measures</li> </ul>
17-10-24	Meeting with Future Nature	Provided insight into how the data had been processed to support ‘telling the story’ of the LNRS work so far.
17-10-24	Meeting with Natural Capital Solutions	Discussed mapping of priorities and measures, what was likely to be available to provide to workshop participants, and what feedback was sought on the maps.
22-08-24	Meeting with Core Group	Reviewed and agreed focus of workshop Decision taken to hold webinar September as part of pre-brief & workshop promotion Agreed workshop pre-booking info including opportunity to submit questions Still to be finalised: date and timing of workshop; mapping end product spec and timelines
23-09-24	Meeting with Core Group	Shared and reviewed first iteration of workshop plan
1-10-24	Meeting with	Shared and reviewed second iteration of workshop plan

	Steering Group	
10-10-24	Meeting with Core Group	Workshop plan reviewed, including discussion on <ul style="list-style-type: none"> <li>- Key questions and data to be gathered</li> <li>- Involvement of sector reps, including the idea of a rep for nature</li> </ul> Awaiting finalisation of <ul style="list-style-type: none"> <li>- Priorities and measures, including total number of each and final wording</li> <li>- Mapping – including number of mapped measures</li> </ul>
17-10-24	Meeting with Future Nature	Provided insight into how the data had been processed to support 'telling the story' of the LNRS work so far.
17-10-24	Meeting with Natural Capital Solutions	Discussed mapping of priorities and measures, what was likely to be available to provide to workshop participants, and what feedback was sought on the maps.
22-10-24	Technical testing at venue	Checked out venue practicalities & discussed with venue staff; tested audio-visual equipment
Multiple dates from 22-10-24 to 12-11-24	Individual briefings with sector reps	Briefing and supporting sector reps in preparing their presentations for the panel
30-10-24	Meeting with Natural Capital Solutions / Project Manager	Discussed use of maps at workshop. Priorities and measures not yet finalised; mapping still under development  Fine-tuned sequencing of presentations re maps at workshop  Discussed constraints around how many measures could be prepared for printing (maximum of 40 maps, each one covering one of the LNRS zones.)  Agreed timeline to ensure mapping prepared and printed
4-11-24	Meeting with NEP partnership manager	Reviewed selection of priorities and measures for discussion at the workshop and summary versions of priorities and measures
5-11-24	Brief meeting with Core Group	Finalised aspects of workshop plan
12-11-24	Facilitator briefing	Briefed facilitators
13-11-24	Sector rep rehearsal / briefing	Briefed / rehearsed sector reps
14-11-24	Meeting Cabinet	Briefed Cabinet member / discussed welcome address
15-11-24	Set up	Set up at venue

## Key Considerations

The following were integrated into the development of the cross-sector stakeholder engagement workshop:

- **LNRS Zone Categorisation** was continued on a similar basis to the first round of stakeholder workshops, the only change being that 'Thames Valley' was renamed 'South Bucks.' Participants were grouped in the areas that they most relate to in order to facilitate networking and engagement with the materials.
- **Accessibility:** The workshop was held in person at a reasonably central location for the area as a whole and scheduled during the daytime. Early in the planning process, we discussed with the core group whether to host one central workshop or 2-3 smaller, dispersed events closer to where people live. The decision to hold a single, large event was based partly on Steering Group's the desire to strengthen the sense of shared purpose and partnership across sectors by bringing everyone together, as well as by budgetary and timing considerations.

The timing of the event was also carefully considered. While a late afternoon or early evening session may have accommodated those unable to attend during the day, the diverse mix of participants meant no single time would suit everyone.

When booking, participants were asked to share any accessibility or dietary needs so these could be addressed.

- **Inclusivity & cross-sector dialogue:** the workshop was designed with a wide range of stakeholders in mind from across the area, in ways that sought to build engagement and cross sector working. We actively sought a mix of speakers, in terms of representation of sector, geography and demographics –with partial success and efforts were made by the NEP to target and encourage participants from across all 4 geographic zones and 6 sectors, again with partial success.

## Allocation by sector

Each sector was given a ticket allocation on Eventbrite in an attempt to ensure good cross-sector take up at the workshop.

## Number of participants by sector:



\*Note the allocation included 12 spaces for organisers, facilitators and speakers not included in participant numbers in Table 5 below.

**Table 5.** Workshop participation and attendance filtered by sector.

Sector	Booked	Attended	Maximum allocation*
Community / Public	26	14	29
Council	23	18	27
Development/ business	8	6	10
Environment	27	27	27
Farmers/ Foresters/ Landowners	21	19	27
<b>Total</b>	<b>105</b>	<b>84</b>	<b>120</b>

**Table 6.** Number of participants filtered by geography (LNRS zone).

LNRS zone	Booked	Attended
North Bucks & Milton Keynes	40	30
Aylesbury Vale	32	23
Chilterns	25	23
South Bucks	8	8
<b>Total</b>	<b>105</b>	<b>84</b>

## Workshop Participation

The workshop took place at the Oculus, The Gateway Centre, Aylesbury on 18<sup>th</sup> November 2024. The venue has a maximum capacity of 120 people. A total of 105 bookings were made which together with the 12 core group members, facilitators and other operational support brought the total almost to capacity.

On the day, of the 105 who had booked, 84 people came to the event (80%). This was despite reminders sent by the NEP asking people to let them know if unable to attend as some sectors were fully booked.

## Pre-briefing

One week ahead of the workshop, participants were sent a briefing pack including the full list of the finalised priorities and measures, a link to the September webinar and the outline of the itinerary for the event.

## Venue layout

The room was laid out with 15 tables, each seating up to 8 people. 13 tables were reserved for delegates and 2 for resources/ organisers and were allocated by the 4 LNRS zones in proportion to the number of delegates booked. A mix of sectors was then allocated at each table. 2 sets of maps were placed on each table – one set per half table, i.e. for up to 4 delegates per map set.

Tables were numbered, and table signage indicated geographic zone and mapped priorities on the table.

## Final Workshop Structure and Specific Activities

**Table 7.** Outline of workshop and its activities, filtered by Activity Theme and with description of the purpose behind each activity.

Theme	Activity	Purpose
Sign in	Networking books made with recycled maps from stakeholder engagement distributed	Create area identity / provide tool for networking – place to begin to build LNRS contacts
	Birdsong playing	Connect to nature in a corporate setting
	Wayfinder on stage	Indicate position conference hall in relation to actual geographic local LNRS areas
	Delegates assigned to cross sector tables, based on common interests and one of the four LNRS areas.	Maximise potential for new cross sector relationships to be built that will lead to action on nature recovery.
	Facilitators to stimulate introductions at tables	Begin to build cross sector relationships
Intro and Welcome	Thank birds of Bucks + MK for opening event Housekeeping Welcome by Cllr Strachan (Buckinghamshire Council Cabinet member for planning and regeneration) Overview	Establish nature as a priority Health and Safety Contextualise LNRS and give it gravitas Orientate and prepare participants for the day
Sector specific feedback on stakeholder engagement	A representative from each sector gathered on the stage. Sharing results of headlines from previous stakeholder engagement from their sector, and adding their own reflections in response to questions 1) what mattered to them about their role in Nature Recovery 2) what they would like to convey to other sectors and 3) a recent Nature Recovery initiative they are proud of. Each short presentation framed by	Create a strong empowered cross sector frame for the event. Establish consistent link from previous stakeholder engagement (March / April 2024) Demonstrate that findings have been heard by responsible authorities. Build understanding across sectors.

	a quote from the stakeholder engagement, and an image of the nature recovery achievement described.	
<b>Icebreaker</b>	On cross sector tables in twos / threes participants to share - Anything that resonates with you from sector feedback - A nature recovery achievement that you are proud of	Build relationships, understanding and confidence across sectors
<b>Feedback on cross sector presentations</b>	Free roving mic - questions and answers written up live on flip chart	Establish wider participant voice. Increase cross sector understanding
<b>Introduction to Priorities and Measures</b>	Describe what they are and focus on language used – particularly that measures = actions	Ensure participants understand language of LNRS, so that they can engage in workshop activities.
<b>Presentation from Partnership Manager, Bucks and MK NEP</b>	Share the process of developing the LNRS so far – particularly priorities and measures	Build understanding, confidence and transparency, strengthen the ethos that statutory and civic society partners are in this together. Summarise where we are in the process of creating the LNRS
<b>Presentation from Natural Capital Solutions</b>	Short summary / preview of digital LNRS maps to introduce habitat maps and show how the map layers worked.	Lead into and contextualise next activity: – sense checking the priorities and measures for nature recovery.
<b>Sense checking Priorities for nature recovery and measures to achieve them</b>	A selection of measures provided on sets of layered biodegradable tracing paper maps, together with simplified written summary of these mapped measures plus a selection of relevant non-mapped measures.  Two sets of maps provided per table, each map covering one LNRS zone only. Each set	Give participants an opportunity to look at and discuss a small sample of measures (both in map form and summary written form) to comment on / sense check based on their knowledge of the issues and/ or area.

	<p>included an OS base map, and a selection of measures, one per sheet of tracing paper. One additional sheet was provided per table showing the APIB layer.</p>	
	<p>Selection of measures based on grouping measures which made sense to consider together within a particular LNRS zone.</p> <p>Delegates allocated to a table based partly on what was known about their area of interest for example Forestry Commission &amp; Woodland Trust were allocated to a table sense-checking a selection of measures from Priority 1 (Trees and woodlands)</p>	
	<p><b>Activity 1</b></p> <p>Participants given 5 minute to familiarise themselves with priorities and measures on their table.</p> <p>Participants asked to work in groups of three or four to answer an open question in relation to the priorities and measures provided.</p>	<p>Question designed to</p> <ul style="list-style-type: none"> <li>- test the useability of the priorities and measures,</li> <li>- gain insight as to where action might best begin.</li> </ul>

	<p>What would you focus on first + why?</p> <p>Blue post its used to write answers along with and stars to designate any specific locations. Both to be placed on map / written statements.</p>	
	<p><b>Activity 2</b></p>	<p>Question designed to</p> <ul style="list-style-type: none"> <li>- generate cross sector discussion and share 'intelligence'</li> </ul>

	<p>Participant groups asked to answer open questions in relation to the priorities and measures provided:</p> <p><b>What is already working well in relation to this priority / group of actions?</b></p> <p>Answer on green post its</p> <p><b>What might be the greatest challenges?</b></p> <p>Answer on pink post its</p>	<ul style="list-style-type: none"> <li>- support better understanding of where action should begin.</li> </ul>
--	---	--

	<p><b>Activity 3</b></p> <p>Participant groups asked to answer closed questions in relation to the priorities and measures provided:</p> <p><b>Will the measures achieve the priorities?</b></p> <p>Answer by placing coloured dots against measure description:</p>	<p>Question designed to</p> <ul style="list-style-type: none"> <li>- check whether the measures and priorities will be effective</li> <li>- highlight any problem areas</li> <li>- gain understanding of what might need to be changed</li> </ul>
--	--	---

	<p>Yes Green / Maybe Orange / No Red</p> <p>Asked to agree a collective response if possible - If can't agree use a number of dots</p> <p>Asked to add reasoning with yellow post its</p>	
	<b>Activity 4</b>	Question designed to

	<p>Participant groups asked to answer a mix of one closed and one open question in relation to the clarity and level of information on the priorities and measures.</p> <p><b>Are the Priorities and actions clear, do they give you enough info to know what to do?</b></p> <p>Answer by way of a 1–5-star review, using on strip of paper with 5 stars.</p> <p>Participants asked to write any explanatory comments on the back prompted by: -</p> <p><b>Is there anything else you would like to add?</b></p>	<ul style="list-style-type: none"> <li>- get a general sense of how fit for purpose the LNRS is from the perspective of participants across sectors.</li> <li>- understand how it could become more fit for purpose.</li> <li>- create an open opportunity to provide feedback on the measures</li> </ul>
--	--	---

<b>Short Break</b>		
--------------------	--	--

<b>Interactive presentation from Natural Capital Solutions</b>	<p>Natural Capital Solutions present wider functionality of digital platform/ LNRS map, whilst participants have access to a temporary platform link, so that they</p>	<p>Demonstrate responsiveness to stakeholder engagement.</p> <p>Enable participants to critique the LNRS digital map practically and conceptually.</p>
--	--	--

	<p>can explore the map during the presentation. Focused on</p> <ul style="list-style-type: none"> <li>- How the form of the platform responds to recommendations from consultation</li> <li>- Functionality and limitations</li> </ul>	
Q+A with Natural Capital Solutions	<p>Free roving mic, answers demonstrated via live map. Questions, answers and suggested changes written up live on flip chart</p>	<p>Enable participants to gain detailed understanding of how to use the LNRS map and the thinking behind its design. Gain insight as to how it could be improved from a user perspective.</p>

<p>Prepped Q+A With Core LNRs team: BC Rep NEP Rep Natural England Rep Joined by Cllr Strachan + Planning lead for Buckinghamshire</p>	<p>Q+A in two parts</p> <p>1) Responses to questions most frequently presubmitted at time of sign up (participants were invited to ask up to three questions at sign up) Themes included links into BNG; links to the planning process; role of Parish Councils; how new developments can contribute; links to support for on-farm habitat creation; landowner control of proposed investment; funding / resourcing;</p> <p>2) Open Q+A.</p>	<p>Building trust transparency and knowledge. Giving participant direct access to key figures developing / implicated by the LNRs</p>
Long Break	Birdsong in lunch hall	Re –rooting the event in nature, providing sensory respite for participants
Preparing the ground for an action network	<p>12 Question cards supplied face down on each table</p> <p>Questions such as: What do we not talk about in nature recovery, that we should be talking about? Participants</p>	<p>Increase pace / re-inject energy.</p> <p>Deepen cross –sector conversations and relationships.</p> <p>Limber participants up for 30 mins of self-directed networking around actioning the LNRS</p>



	asked to have 2 min conversations prompted by card question and then swap, encourage to talk to people they do not know.	
	<p>Participants asked to gravitate to an area, or a priority/measure that they are interested in, see who they find there share a bit about themselves &amp; their interest / involvement in the priority /measure / area.</p> <p>Prompted to</p> <ul style="list-style-type: none"> <li>- use notebooks to take down contact info/ ideas.</li> <li>-make a date to continue to conversation directly after at the event</li> <li>- leave calling cards at tables visited</li> </ul>	<p>Begin to build an action network Record where energy is (based on who left calling cards on which tables and the geography/ priorities on the tables)</p> <p>Lighter afternoon atmosphere after work intensive morning. Re-iterating nature connection in corporate venue by using cow sound as signal</p>
	Participants moved on after 10 mins via cow sound	
	Open mic – highlights fed back into the room Notes on flipchart	<p>Share the experience and potential discovered through LNRS focused networking.</p> <p>Build energy and confidence in action network</p>
Plenary	Open mic – LNRS Core group invited to respond to further feedback from participants. Participants invited to submit any unresolved burning questions. Notes on flipchart	Ensure participants feel heard, collect any unresolved issues to be addressed outside of the event for instance through updated website FAQ's.
Event Closed	Next steps described, all participants and contributors thanked. Feedback forms distributed	Forge investment in continued engagement. Seek feedback on the workshop
Further networking opportunity	Venue open to participants for one hour with	Enable deeper networking towards action without time constraints

refreshments provided, to continue any networking started in previous session



## CONCLUSION

The stakeholder engagement process for the Buckinghamshire and Milton Keynes Local Nature Recovery Strategy (LNRS) successfully involved a diverse array of participants, representing various sectors including the general

public, council officers, environmental organisations, educators, farmers, landowners, developers, and community groups. The process was inclusive, aiming to reflect the needs and priorities of the area in the LNRS, while ensuring transparency and alignment with national objectives.

The engagement activities, such as webinars, workshops, and a survey, provided multiple avenues for stakeholder input, with a particular emphasis on capturing local knowledge, biodiversity priorities, and ecosystem service benefits. The survey reached a wide audience of 439 individuals, contributing valuable insights, especially from residents, environmental organisations, farmers and landowners and other local representatives. However, engagement from the business and developer sectors was lower than anticipated, indicating that further efforts are needed to clarify the LNRS's value proposition for these groups.

The data collected from all activities was thoroughly analysed and integrated into the LNRS, shaping the draft priorities, measures, Local Habitat Map and the final Areas that Could Become of Importance map. These engagement activities, and the data collected from them, also provided avenues for collaboration and networking, with a strong emphasis on providing avenues for delivery of LNRS priorities and measures. This structured and collaborative approach ensured that the LNRS reflects the local community's vision for nature recovery, while adhering to the guidance set out in the Environment Act 2021.

## **Technical Appendix**

### **LNRS Contact List**

Throughout the LNRS project process, we collaborated with 108 organisations, representing over eight sectors, including business, development, environmental, agriculture and government.

# 3) Data Analysis Methodology Statement

## 3.1 ABOUT THE LNRS

Local Nature Recovery Strategies (LNRSs) are a new, England-wide system of spatial strategies, introduced in the Environment Act 2021, that will establish priorities and map proposals to drive nature’s recovery and provide wider environmental benefits, such as climate change adaptation as well as non-environmental co-benefits, such as recreation and education opportunities. LNRSs will be prepared for individual areas, such as Buckinghamshire and Milton Keynes, which will come together to set the framework for a nationwide Nature Recovery Network.

This new system of spatial strategies will:

1. Support efforts to recover nature across England
2. Help planning authorities
3. Incorporate nature recovery objectives
4. Support the delivery of Biodiversity Net Gain
5. Help deliver our national environment targets

These are plans that will help drive more coordinated, practical, focussed action and investment to help nature and people flourish together, whilst delivering wider nature-based environmental benefits. They will consist of:

- A **Statement of Biodiversity Priorities**, which reflect stakeholder priorities for environmental outcomes, and the actions that need to be undertaken to achieve these outcomes.
- A **Local Habitat Map**, which will identify the existing distribution of habitats and the location of areas already important for biodiversity, overlaid by locations considered suitable for delivering the outcomes and actions identified by stakeholders.

Defra has appointed Buckinghamshire Council as the “Responsible Authority” (RA) in charge of preparing an LNRS that covers the entirety of Buckinghamshire and Milton Keynes. The RA will be supported by two “Supporting Authorities” (SAs) - of Milton Keynes City Council and Natural England.

The RA has commissioned the area’s Local Nature Partnership, the Buckinghamshire and Milton Keynes Natural Environment Partnership (NEP), to act as the project manager for the Buckinghamshire and Milton Keynes LNRS. The RA, SAs and NEP together comprise the core LNRS team. The LNRS process is also supported by a Steering Group and various technical working groups.

The Government has now published LNRS [regulations](#) and [statutory guidance](#) which work together to establish the ‘rules’ to enable high quality and consistent LNRSs to be prepared across England.

Previously, Buckinghamshire (not including Milton Keynes) was part of a Defra pilot to understand how best to develop LNRSs. For more details on the specific steps of the pilot, please download the [Buckinghamshire Local Nature Recovery Strategy Pilot Overview](#) document.

## 3.2 ABOUT THIS DOCUMENT

This document outlines the process through which the priorities and measures of the LNRS Written Statement of Biodiversity Priorities was developed. It explains:

- Who was involved in steering this process and how
- How the data was collected
- What data was collected
- How the data was analysed and key considerations during this process

This document should be read in conjunction with the [Stakeholder Engagement Methodology Statement](#).

## 3.3 WHO WAS INVOLVED

### Overview

This process of identifying the data to be collected from stakeholders, developing a data analysis methodology, analysing the data, shortlisting the data, and sense-checking was spearheaded by the Steering Group (SG) and Core Group under the aegis of a dedicated Task & Finish Group, and with support from Future Nature, a hired consultant specialising in ecological advisory services.

## Groups Involved in Developing the Stakeholder Engagement Workshops

- **Stakeholder Engagement Task & Finish Group:** The T&F group was in-charge of developing the data collection questions the LNRS workshop and survey were designed around and the corresponding data analysis framework. Composed of experts in ecology, citizen science and government stakeholder engagement processes. Specifically, representatives of the following organisations were included:
  - Buckinghamshire Council Business Intelligence Department
  - Milton Keynes City Council Landscape and Countryside Manager
  - Buckinghamshire Environment Bill Manager
  - Bucks & Milton Keynes Natural Environment Partnership (NEP) - Chair
  - Natural England
  - Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust
  - Conservation Board
  - Open University Experts in Citizen Science
  - Future Nature Consultancy
- **Future Nature:** The consultancy was tasked with applying the data analysis framework developed by the Task & Finish Group to both the workshop data and subsequently the survey data. Future Nature also helped shape the survey questions as part of the Task & Finish Group.
- **LNRS Steering Group:** The SG reviewed and edited multiple drafts of the analysed LNRS data to ensure it adhered to the LNRS guidelines, appropriately captured stakeholder priorities and balanced this with what is possible ecologically in the area and what is feasible to action, in order to develop the written statement of biodiversity priorities.
- **LNRS Core Group:** The core group worked on various drafts of the survey, incorporating suggested feedback from the other groups.

## 3.4 OVERVIEW OF DATA COLLECTION PROCESS

### Key Definitions

To ensure that all stakeholders involved in developing the LNRS could clearly understand and effectively structure the priorities and measures—key elements of the LNRS Written Statement—the following definitions were established. These were based on both LNRS regulations and guidance, with additional contextual nuances tailored to suit the specific needs of the Buckinghamshire & Milton Keynes area.

### Opportunities

The possibilities for recovering or enhancing habitats and species, including those considered locally or nationally important, to achieve an increase in biodiversity and the provision of ecosystem services that may be of value to those who live and work in the area. Descriptions of opportunities within each LNRS zone (one of the four geographic sub-areas of Buckinghamshire and Milton Keynes devised for the purposes of constructing the LNRS, based on underlying National Character Areas) of Buckinghamshire and Milton Keynes will consider the practicalities of improving habitat condition or creating new areas of habitat, as well as the practicality of creating or enhancing habitats to support identified species or groups of species to be supported by the LNRS.

### Priorities

Priorities are shortlisted opportunities based on stakeholder feedback. Priorities are “the end results that the strategy is seeking to achieve” ([LNRS statutory guidance, paragraph 51](#)). There is no single right way to describe priorities but, in most cases, priorities should include relevant habitats or species. The right way will depend on local circumstances and the views of stakeholders.

### Measures

Measures are the actions that are recommended to achieve the priorities. They may or may not be geographically specific. Potential measures are “specific practical actions to achieve” priorities ([LNRS statutory guidance, paragraph 51](#)). These are the suggested activities that, if done properly, would help to deliver the agreed priorities. They can benefit a particular species or habitat or provide wider environmental benefits (nature-based solutions). As with priorities, most potential measures should include relevant habitats or species. RAs should use consistent naming systems with those used in mapping (steps 1, 2 and 5). They can use a broader classification where this is appropriate, for example, potential measures for “Urban” habitat priorities. However, the creation or enhancement of habitats may not be enough to deliver some priorities on their own. As a result, RAs may wish to include a small number of potential measures that do not relate to creating or improving habitat. For example, deer management or reducing recreational disturbance to support recovery of a threatened species.

### **Data Collection Process**

Table 1. Data collection process for the development of the priorities and measures.

Engagement Activity	Who was involved	What data was gathered	How it was used for the LNRS
10 Introductory Webinars by sector	155 individuals representing: <ul style="list-style-type: none"> <li>- 16 Farmers &amp; Landowners</li> <li>- 25 residents</li> </ul>	The webinar was delivered to provide an introduction to the LNRS for various stakeholders. As such, the only data gathered were	The data from the questions and answers section of the webinars were compiled into an FAQs sheet, which was subsequently publicly

	<ul style="list-style-type: none"> <li>- 38 Town &amp; Parish Councils</li> <li>- 23 Developers</li> <li>- 17 Businesses</li> <li>- 36 Environmental Organisations</li> </ul>	<p>the questions asked by the attendees. The attendees were also encouraged to take an anonymous survey to provide feedback on the webinar.</p>	<p>published on the NEP’s website <a href="#">here</a>. The feedback collected was used to better design subsequent stakeholder engagement activities such as the workshops mentioned below.</p>
<p><b>Stakeholder Engagement Workshops</b> March–April 2024</p>	<p><b>147 individuals representing:</b></p> <ul style="list-style-type: none"> <li>- 45 Environmental Organisations</li> <li>- 38 Farmers &amp; Landowners</li> <li>- 31 Town &amp; Parish Councils</li> <li>- 6 Developers</li> <li>- 21 Members of the Public</li> <li>- 6 Businesses</li> </ul>	<ul style="list-style-type: none"> <li>- Stakeholders’ priorities regarding nature and nature services and any corresponding measures to action the priorities</li> <li>- Stakeholders’ views on the pressures most (adversely) affecting nature and the ecosystem service benefits that are most valuable to them.</li> <li>- How stakeholder plan on using the LNRS and what format and functionalities within the LNRS document and map would support them in doing so.</li> </ul>	<p>The stakeholder engagement workshops generated 386 responses on priorities and measures for nature. This data was shortlisted through several iterations using pre-determined criteria and expert input (see data analysis methodology for details). The process resulted in 11 themes, 25 priorities, and 120 measures. Additional data, such as desired ecosystem services or urgent pressures on nature, were used to refine priorities and opportunity mapping. Data on the map's format and function was reviewed and integrated into its final design..</p>
<p><b>Stakeholder Engagement Survey</b> July - August2024</p>	<p><b>444 individuals representing:</b></p> <ul style="list-style-type: none"> <li>- 296 Members of the Public</li> <li>- 21 Council officers</li> <li>- 2 businesses</li> <li>- 3 developers</li> <li>- 15 Educators or higher education students</li> <li>- 26 elected or other representatives of Town or Parish Councils</li> <li>- 17 Farmer, landowner/manager, forester</li> </ul>	<p>The survey’s purpose was to reach a wider audience to corroborate the proposed shortlisted LNRS priorities derived from the stakeholder engagement workshops and pilot LNRS processes, as well as to fill any gaps and gain some additional information regarding “other plans and strategies” that may have a bearing upon the LNRS.</p>	<p>The survey, which generated 444 responses (+ 40 responses from young people via a parsed simpler version of the main survey ), asked respondents to prioritise themes from the workshop data and allowed respondents to suggest additional priorities and measures. These suggestions were compared to the existing list and any new data went through the</p>



	<ul style="list-style-type: none"> <li>- 27 Local community groups</li> <li>- 28 Organisations working on environmental conservation</li> <li>- 1 Utilities company or Nationally Significant Infrastructure Project (NSIP)</li> <li>- 1 NHS representative</li> <li>- 2 funders</li> <li>- 40 young people</li> </ul>		<p>same shortlisting process as the workshop data. The additional data, resulting in 2 new priorities and 50 new measures across the list, was merged with the workshop data. The LNRS Steering Group further refined this, leading to 7 themes, 27 priorities, and 179 measures. (The measures in this list were then further refined by specialist expert groups and tested at the final stakeholder engagement event in November 2024 – resulting in 9 themes, 22 priorities and 119 measures.</p>
<p><b>Update Webinar</b> 7<sup>th</sup> October 2024</p>	<p><b>55 Attendees</b> (Attendees were not asked to provide sector representation information)</p>	<p>The webinar was delivered to engage with stakeholders and the general public and provide an update on progress with the LNRS project, whilst raising awareness about the upcoming Cross-sector Stakeholder Workshop and provide a question and answer period</p>	<p>The data from the questions and answers section of the webinar was compiled and made available on the NEP LNRS webpage, as well as being distributed to those who attended, and all those who signed up to our mailing list. We also published a summary of the webinar, with the recording and transcript of the webinar and a copy of the PowerPoint slides used, to the NEP LNRS webpage.</p>
<p><b>Stakeholder Engagement Multisector Event</b> November 2024</p>	<p>120 individuals representing:</p> <ul style="list-style-type: none"> <li>- 27 Farmer, landowner / manager</li> <li>- 10 Businesses or Developers</li> <li>- 27 elected or other representatives of</li> </ul>	<p>The Cross-Sector Stakeholder Workshop was delivered to provide an opportunity for stakeholders from various sectors to come together, learn about progress on the LNRS, engage with the draft versions of the</p>	<p>During the workshop, we had an activity to collect input on the Priorities and Measures and the mapping. The questions asked during this exercise and responses received were collated and analysed, , discussed with the Steering and Core</p>

	<p>County, Town or Parish Councils</p> <ul style="list-style-type: none"> <li>- 27 Organisations working on environmental conservation</li> <li>- 29 General public or other (including NHS / Education sector)</li> </ul> <p>*Limited space to 120 attendees (based on venue size and logistics – the tickets were allocated to ensure cross-sector representation and were informed by interest expressed and numbers from different sectors in previous engagement activities)</p>	<p>mapping and Priorities and Measures, and be able to ask questions and give feedback on these drafts. This workshop was also intended to provide an opportunity for stakeholders to network and start to create “<i>action networks</i>” – to collaborate on future projects with other interested stakeholders and create connections and plans for nature recovery projects.</p>	<p>groups and were then used to help inform the final mapping and the Priorities and Measures.</p> <p>During the workshop, we also had several question periods, and key comments were recorded on a flipchart. This data was then collated, discussed with the Steering and Core groups and used to inform the final mapping and Priorities and Measures. The workshop was also an opportunity for stakeholders to network, and we provided each stakeholder with a small notebook so that they could save contact and project information from other stakeholders. We received positive feedback about this workshop activity. We collected feedback after the workshop and updated those who attended with a news brief on progress made, future goals and how the feedback from the workshop was fed into the LNRS.</p> <p>In tandem with this, as there were several SG members who were not able to attend the workshop, we updated them on the workshop, and requested feedback on the mapping and Priorities and Measures at the subsequent Steering Group meeting.</p>
--	---	--	---

# 3.5 DATA CATEGORISATION, ANALYSIS AND PRIORITIES AND MEASURES SHORTLISTING PROCESS

## Background Information

To assist the Task & Finish Group and Steering Group in developing the data analysis framework, and in subsequently shortlisting and finalising the LNRS priorities and measures in line with the guidance and area-specific nuances, they were provided with the following key information and considerations. It is important to note that some decisions regarding these considerations had already been made by the Steering Group and Core Group during previous SG meetings.

### Guidance from Defra

#### **LONGLISTING (SCOPING):**

- Task and Finish Groups should identify habitats and species where the strategy area holds particular importance or can make a significant contribution, especially in terms of creation, enhancement, and connectivity.
- Priorities should reflect those most frequently listed or discussed across different groups.
- Use matrices and scoring systems to visualise priorities, including upsides and downsides.
- Share and iterate draft lists to refine them.
- Keep the long-list distinct from the shortlist; avoid initial shortlisting during early stages.
- Engage stakeholders and link up with previous work without directly copying other strategies.
- Ensure comprehensive records are maintained, particularly during scoping in and out.

#### **SHORTLISTING:**

- Focus on habitats or species where the area is particularly important or can make a notable contribution.
- Ensure alignment with the delivery of National Environmental Objectives (NEOs).
- Consider the urgency of the issue the priority will address or improve.
- Factor in cross-border impacts by aligning with the priorities of neighbouring Responsible Authorities (RAs).
- Include popularity and criteria-based factors in decision-making.

## **FINALISING:**

- Ensure a balanced range of National Environmental Objectives (NEOs) is addressed across the priorities.
- Reflect opportunities and pressures identified in Step 3 of the strategy process.
- Ensure sufficient coverage of landscapes and ecosystems in the strategy area.
- Secure balanced contributions from various stakeholders.
- Maintain a manageable number of priorities and allocate relevant measures to each.
- Group related priorities to streamline implementation and presentation.

## **RECORDING AND PRESENTING INFORMATION:**

- Adapt the recording and presentation of priorities to ensure accessibility for different end-users, allowing for varying levels of complexity.
- Use a prioritisation matrix to show the links between priorities and potential measures.
- 'Tag' priorities and measures with:
  - Stakeholder (who raised it) or existing plan/strategy it originated from.
  - Category (e.g., species).
  - Dependencies between habitat and species priorities.

## **EXAMPLES:**

- **Priorities:**
  - Improve species abundance and biodiversity in X city.
  - Improve species abundance and biodiversity in X city by connecting existing wildlife-rich sites.
  - Improve species abundance and biodiversity in X city by connecting existing open mosaic habitats on previously developed land (brownfield sites).
- **Potential Measure:**
  - Create urban meadows and ponds in X area of previously developed land.

## **SENSE-CHECK AND ALLOCATION:**

- Ensure the list balances national objectives and contributions from stakeholders.
- Confirm the number of agreed priorities is manageable.
- Conduct a final iteration with the technical Task & Finish Group to ensure robust allocation of measures to priorities.

## **PRESENTATION:**

- Group related priorities for clarity and accessibility.
- Coordinate with neighbouring areas to address common themes, pressures, or opportunities.
- Present links and narrative between the different steps, showing connections between priorities, potential measures, and the mapping of those measures.

## Lessons from the LNRS Pilot

In 2020-21, Buckinghamshire (not including Milton Keynes) was one of five pilot LNRS processed selected by Defra to test the suggested LNRS process to support the development of guidance for the actual LNRSs. Through this work, the following lessons were learned in relation to data collection and applied to the current LNRS process:

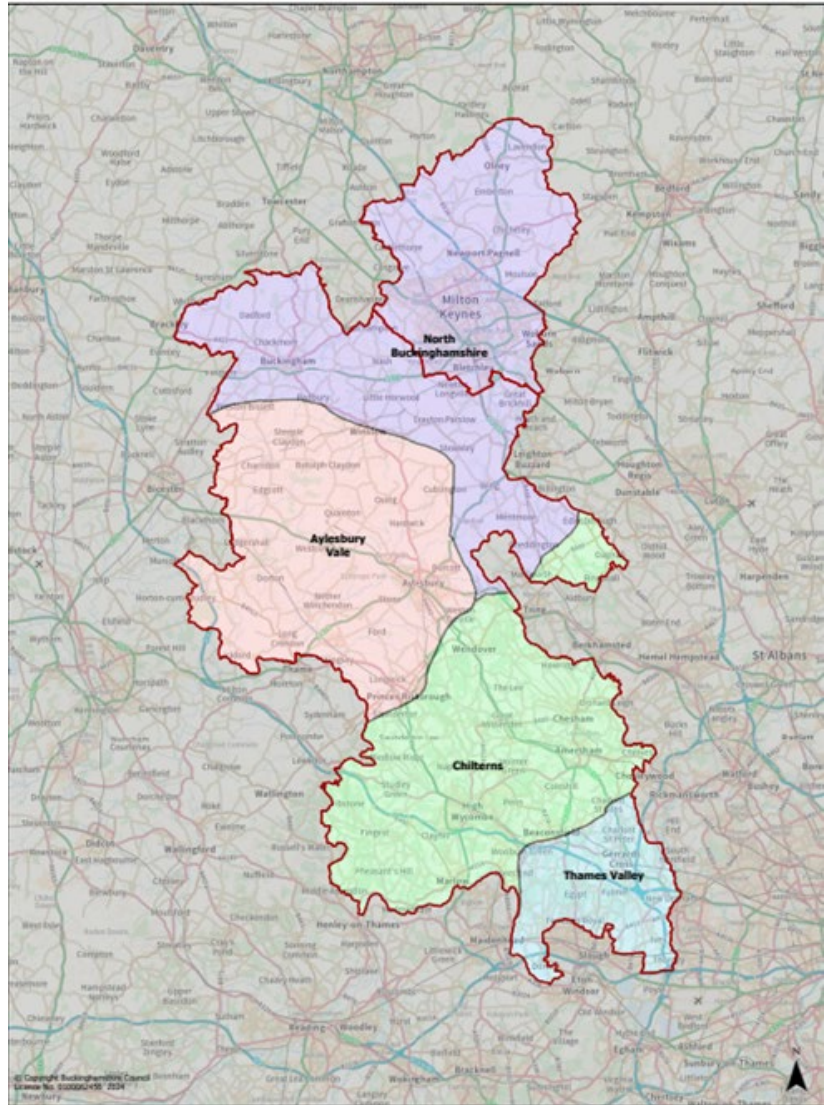
- NRNs were identified as the most effective categorisation method, of those that were reviewed.
- Use the pilot data to frame the initial questions and establish a starting point for prioritisation, i.e. use the data gathered as a reference to the topics and issues that might be brought up
- Find a question format that is focused and structured, but not overly restrictive, such as using "fill in the blanks."
- Separate questions by habitat, species, and benefits to ensure specificity alongside broader input.
- Engage consultants to manage the stakeholder engagement process for effective organisation.
- Establish a methodology for analysing and using the data before developing the stakeholder engagement questions.
- Conduct surveys to enable broader participation, ensuring a better balance of stakeholders. Demonstrate to stakeholders why their involvement in the process is beneficial

## Key Considerations

In keeping with the pilot and because it is still a useful way to divide the strategy area based on its underlying ecology, geology and landscapes, and also because the area's latest 2021 Biodiversity Action Plan had also used the same categories, the area was divided into 4 LNRS zones, which were groups of underlying National Character Areas. They were Milton Keynes & North Bucks, Aylesbury Vale, The Chilterns, and South Bucks (at first called "Thames Valley" in

the process before being renamed after stakeholder feedback suggesting South Bucks was a more accurate description).

- Any species information or input from the workshop and survey phases was recorded and used in tandem with the work and engagement activities being carried out by the Species Technical Group. For more information, refer to the Species Shortlisting Methodology.
- Priorities and measures should focus on either habitats or species or the wider environmental improvements that the conservation and enhancement of habitats and species will achieve.
- While the overall goal needs to be habitat improvement or creation, measures can sometimes be indirect, e.g. reducing unnecessary pesticides use to help pollination.
- Designated sites (Sites of Special Scientific Interest and Areas of Outstanding Natural Beauty) have their own conservation plans; therefore, they should be referred to in the context of 'join up' – buffer, link, enlarge, etc. unless, there is a particular measure not already present in the sites' existing plans.
- LNRs are likely to identify measures both IN and AROUND Local Wildlife Sites and irreplaceable habitats.
- Co-benefits should not be considered in the shortlisting of LNRs priorities, but we will mention and record the co-benefits identified by stakeholders and co-benefits can be



National Character Area Zones in Buckinghamshire and Milton Keynes

taken into account to identify the final mapped potential areas of importance for biodiversity so that targeted action has the most benefit *“RAs should also check that they have considered the wider societal co-benefits, such as access to greenspace, that can be generated through mapping of potential measures in suitable locations”*. (Defra Guidance March 2024: Mapping Potential Measures in LNRSs)

## Goals for Data Analysis

- Capture priorities, by National Character Area (NCA), and link appropriate measures to each priority.
- Develop a clear and effective format, presentation, and functionality for the written statement of biodiversity priorities and the Local Habitat Map.
- Categorise and code stakeholder input data to ensure comprehensive and organised analysis.
- Establish criteria and weightings, such as popularity and relevance at national or local levels, to prioritise the 'priorities for nature' in keeping with LNRS regulations and guidance.
- Create a transparent and objective methodology to ensure how and why priorities were selected are easily understood and all stakeholder responses are carefully and equally considered.

## Design of the Data Analysis Framework

The data analysis framework consisted of two elements – the data categorisation method and the priorities shortlisting method. Both these methods were applied to both the data derived from the LNRS workshops as well as the data derived from the LNRS survey to ensure uniformity. However, there were some additional considerations specific to each stakeholder engagement / data collection element, which is explained in the sections on how the data analysis framework was applied to the workshops and survey, respectively. Please note this section is best understood when reading it in conjunction with the [Stakeholder Engagement Methodology Statement](#).

## Data Categorisation Method

The LNRS team employed a Data Categorisation Method to organise and analyse the workshop and survey data. This ensured consistency across the data sets and an objective process through which all stakeholder responses could be carefully considered and shortlisted.

## **Step 1 – Data Categorisation**

1. **REDUNDANCY REMOVAL:** Redundant or duplicate responses were removed, but the frequency of similar inputs was noted to ensure common themes were captured.

### **2. TAGGING:**

- Theme Type: Responses were tagged based on whether they related to habitats, species, ecosystem services, or nature-based solutions.
- Scope 1: Responses were tagged by LNRS zone.
- Scope 2: Responses were tagged based on whether they applied to the whole area, water environment, or urban environment, or to specific LNRS zone(s).
- Response Type: Responses were classified as priorities, measures, or feedback regarding LNRS format.

### **3. SCOPING IN AND OUT (in accordance with the guidance):**

The team also assessed whether the responses from stakeholders were in-scope for the LNRS according to the LNRS guidance issued to Responsible Authorities. This scoping part of the process is a sense-check, rather than a prioritisation exercise. In line with the guidance, we selected to scope in or exclude (scope out) as follows:

#### **Scope in possible priorities that:**

- In general, refer to specific habitats and species and achievable improvements to the wider natural environment through their conservation and enhancement.
- Contribute to relevant National Environmental Objectives (NEOs) for the strategy area.
- Address pressures and opportunities identified (in Step 3 of the LNRS requirements) in the strategy area.

The guidance also suggests considering using a prioritisation matrix to illustrate the relationship between potential priorities and measures.

#### **Scope out (but record) possible priorities that:**

- Geographically or ecologically unfeasible priorities – which could not be practically possible to delivery / not relevant to the area (e.g. for example, peat restoration in an area where the geology and topography is not suitable).



- Are co-benefits (which are outside the legal scope of what LNRSs are designed to achieve – and relate to benefits other than those to species, habitats and the wider natural environment. Co-benefits include improvements to peoples health, for example.
- Relating to site-level locations (specific locations are required to be considered at the mapping stage of the LNRS, rather than at the scoping of possible priorities stage). However, site-level locations, if mentioned, were recorded, for use at the step 5 stage of the LNRS preparation.

We kept a record of priorities and potential measures that were out of scope, again in line with guidance, in case the ideas are helpful for related strategies that could support nature recovery, for which the suggested priorities and measures are in scope. Suggested co-benefits were also recorded as, in line with the guidance, RAs can consider taking these into account at a later stage when mapping areas that could become of particular importance, so that priorities can be delivered in ways that also deliver co-benefits where possible.

4. **BUCKET CATEGORISATION:** Priorities were grouped into Bigger, Better, More, and More Joined Up, helping to determine whether they aimed to expand habitats, improve current habitats, or enhance connectivity across the landscape (in accordance with the [Lawton Review](#)).

## Priorities Shortlisting Framework

A Priorities Shortlisting Framework was developed and agreed by the Steering Group and applied to both the workshop and survey data to refine the list of priorities based on the following weighted criteria:

**Table 2.** Priorities Shortlisting Framework: guidance recommended criteria and their given percent weightage, with evidence base for the given guidance criteria and the scoring system associated with that evidence base.

Guidance Recommended Criteria	% Weightage	Evidence Base / Assessment Process	Scoring System
-------------------------------	-------------	------------------------------------	----------------

Relate to habitat / species for which area is particularly important or can make particular contribution.	30%	Step 3 description (including species work, once completed). Step 3 incorporates Section 41 habitats (priority habitats) * and locally identified irreplaceable habitats.	0 if it doesn't feature in Step 3; 1 if it does.
Delivery of National Environmental Objectives.	20%	Defra advice note sets out NEOs** – professional judgement needed to decide which priorities contribute to which, but should be straightforward	1 point for each NEO the priority addresses.
Urgency of the issue it will resolve / improve.	20%	How many of the Top 5 pressures based on stakeholder feedback – how many does it tick? ***	1 point for each of the pressures the priority addresses.
Preference based factors.	10%	Number of individuals and organisations proposing this or a similar priority.	1 point for each frequency of mention.
Compare to Biodiversity Action Plan Priorities	N/A	N/A	N/A

## Priority Habitats List

**Table 3.** Priority Habitats List, with broad habitat types and their associated priority habitats.

Broad Habitat Type	Priority Habitat
Woodland	Native woodland:
	i) Lowland Mixed Deciduous Woodland
	ii) Lowland Beech and Yew Woodland
	iii) Wet Woodland
	Wood-Pasture and Parkland

	Traditional Orchards
Grassland	Lowland Dry Acid Grassland
	Lowland Calcareous Grassland
	Lowland Meadows
	Coastal and Floodplain Grazing Marsh
Heathlands	Lowland Heathland
Fen, Marsh and Swamp	Lowland Fens
	Purple Moor Grass and Rush Pastures
	Reedbed
Standing open waters and canals	Eutrophic Standing Waters (lakes, pools and man-made waters)
	Ponds (assuming average size of 0.05 ha; and up to 2 ha)
	Canals (6 across Bucks & MK)
	Rivers and streams (including chalk rivers)
Boundary and Linear Features	Hedgerows (at least 2m wide) [i.e. mature hedgerows]
Other	Open Mosaic Habitats on Previously Developed Land
	Arable field margins
	Flood plain mosaic

**National Environmental Objectives (NEOs)** (as supplied in the LNRS guidance):

- Increase Biodiversity: Halt species decline by 2030 and restore a variety of wildlife-rich habitats.
- Increase Woodland Cover: Expand tree cover by 2% by 2050.
- Water Quality and Availability: Improve water quality by reducing nitrogen, phosphorus, and sediment pollution by 40% by 2038, and restore 75% of water bodies to good ecological status.
- Peatland Restoration: Restore approximately 280,000 hectares of peatland by 2050.
- Hedgerow Improvement: Create or restore 30,000 miles of hedgerows by 2037 and 45,000 miles by 2050.
- Conservation Sites: Restore 75% of Sites of Special Scientific Interest (SSSIs) to favourable condition by 2042.
- Climate Change Adaptation: Ensure resilience and adaptation through nature-based solutions.
- Sustainable Forestry: Improve woodland management for biodiversity and carbon capture.

- Reduce Air Pollution: Cut nitrogen oxide emissions by 73% and ammonia by 16% by 2030.
- Invasive Species Control: Reduce the introduction of invasive species by 50% by 2030.
- Flood Management: Implement natural flood management solutions to mitigate risks.

#### **Stakeholder-identified Pressures on Nature:**

- Climate Change
- Growth in new housing and infrastructure
- Inappropriate river catchment management
- Growing demand for water
- Inappropriate land management
- Pollution
- Non-native species, pests and diseases

## **How the Data Categorisation and Analysis Methodology Applied to the Data from the LNRS Workshops**

The data analysis and categorisation framework was developed alongside the workshop data analysis framework by the Stakeholder Engagement Task & Finish Group, to ensure that the data received from stakeholders would be exactly matched to how it was meant to be analysed and vice versa. The approach was approved by the Steering Group and Core Group.

On receipt, the data was first categorised and then shortlisted and scored using the framework explained above. This analysed data was then provided to the LNRS Steering Group for review. At this stage, any additional priorities and measures within the NEP's Biodiversity Action Plan and the LNRS pilot that were not already covered by the priorities and measures were also added in.

The Steering Group decided to further categorise the priorities by themes that it identified in reviewing the full suite of priorities and associated measures identified by the stakeholders. The SG also considered the overall scores (according to the scorecard above), consolidated priorities that were similar, reframed priorities to include the requisite technical nuance, and finally added measures that were missing, in order to achieve the priorities. The raw data with scores from the workshops that the Steering Group reviewed can be found in the Technical Appendix. Please see the section on [Results from the Data Analysis Process](#) for more details.

A note on measures: Measures were kept alongside the shortlisted priorities they applied to during the shortlisting process. However, we did not receive adequate suggestions on measures from the stakeholder groups. As such, to fill in the gaps, the Steering Group and other local experts, identified for each theme, worked together to add in and refined measures to achieve the priorities as was felt appropriate.

## **3.6 How the Data Categorisation and Analysis Methodology Applied to the Data from the LNRS Survey**

The survey was designed to gain feedback on the themes and priorities as they stood after the data analysis process. As such, the survey questions focused on the themes identified in the previous round and the provision of free space for the survey participants to record their priorities and corresponding measures for nature. This was done because it was not feasible to add the entire length of the identified priorities and measures into the survey, but we wanted to use the survey to engage a wider audience and capture further ideas for LNRS priorities and measures.

The data from the survey was first compared to the existing post-workshop priorities. Any redundancies were removed, but they were counted within the frequency to ensure we captured the popularity of a particular priority. Any additional priorities were then processed through the same data analysis framework as the workshop data. Finally, the processed data (i.e. any priorities and measures shortlisted via the survey collection) were added into the priorities and measures framework ready for further refinement.

From this point onwards, the entire Steering Group was involved in consolidating similar priorities, re-wording priorities to include the requisite technical nuance and to make them clear and accessible and finally added measures they felt seemed missing and needed to meet the priorities. In addition to Steering Group members, neighbouring and responsible authorities as well as catchment partners, were invited to give feedback on final iterations of the work. The final number of priorities was 22, with 119 measures associated with them.

Please see the section on [Results from the Data Analysis Process](#) (below) for more details.

## **3.7 RESULTS FROM THE DATA ANALYSIS PROCESS**

### **Workshop Data Analysis**

- The 386 responses from the workshops were categorised into 11 themes, 25 priorities, and 120 measures using the Data Categorisation Framework.
- Expert input was used to further refine the data through several rounds of analysis and consolidation, resulting in an initial shortlist of 11 themes, 25 priorities, and 120 measures.

## Survey Data Analysis

- The survey generated 444 responses, with participants ranking the 11 themes identified in the workshops.
- The survey also introduced 2 new priorities and 50 new measures, which were processed through the Priorities Shortlisting Framework and merged with the workshop data. The new priorities related to restoring and enhancing grasslands, and enabling landowners to practice wildlife-friendly land management.
- Finally, this has led to 22 priorities and 119 measures.
- Please note during the process of finalising the priorities and measures, the Steering Group felt 'Thames Valley' was not an appropriate name for the Southern part of the strategy area, and decided to more accurately name it 'South Bucks.'
- The survey also asked certain stakeholders (Council Officers, eNGOs, Utilities companies) to provide information regarding published 'other plans and strategies' that may be pertinent to the LNRS. This exercise was stipulated by the guidance, to ensure the LNRS captures and builds on information from existing relevant local environmental and spatial plans and strategies. The SG and Core Group decided that the survey should be the main means to capture the key objectives of such plans and strategies. A level of discretion applied by the expert Steering Group as to which of these plans and strategies were ultimately referenced in the LNRS – this was based on the guidance on how to incorporate other plans and strategies.
- Additionally, it was found that some important and relevant other plans and strategies were not identified through the survey. To fill this gap, members of the core group undertook an additional exercise to review and identify key objectives from these plans that should be considered in the priorities and measures of the LNRS.
- The list of 'other plans and strategies' that were referenced in the development of the LNRS are shown in the [table here](#).

## Defra Guidance Regarding Other Plans and Strategies

- Responsible authorities should engage with local partner organisations to find out what environmental projects are already planned or underway to see if the projects could be included as potential measures. This allows the local nature recovery strategies to

incorporate existing relevant work and to align with other environmental spatial strategies. This will help improve efficiency and achieve better environmental outcomes. Examples of relevant strategies include river basin management plans, local tree and woodland strategies and National Park Management Plans. ([Local Nature Recovery Strategy, para 68](#))

- Responsible authorities should draw upon other relevant environmental plans, strategies and knowledge held by local partners about where nature conservation activity is already proposed, and where additional action would have most impact. They should identify areas that could become of particular importance for specific potential measures and make it clear which potential measure has been proposed in those areas. ([Local Nature Recovery Strategy Guidance, para 79](#))

## **Other Plans and Strategies Identified through NEP's Review**

Throughout the LNRS process, the NEP collected data from the survey and other engagement activities (webinars and workshops) along with emails sent directly to LNRS CG members and compiled a list and requested information on major existing environmental plans and strategies, including those that were in the beginning stages of delivery. A completed list of these major existing environmental plans and strategies, and how they were incorporated into the LNRS, can be found [here](#).

## **How the Other Plans and Strategies were Incorporated into the LNRS**

In the first instance, the data regarding the other plans and strategies from the survey was directly included in the survey data analysis process.

The plans and strategies that were incorporated through an additional review by the NEP were used in several ways. The project information that we were able to compile was added to the Step 5 map (Areas that Could Become of Particular Importance) in certain areas where habitats or measures are specific to large-scale projects. Additional detail on these projects was included in the underlying LNRS document.

Further, in tandem with the consultation period, an interactive map is set to go live, and stakeholders will be able to view, edit and update information on the location and aims of their project via the interactive map. This will also serve as a way to keep records of project status in the future, as many projects on our list are up to have their funding granted, or revoked, before the next LNRS revision. Thus, the interactive map will provide a living record of projects underway and their status, as well as provide an opportunity for stakeholders to incorporate

new or additional projects that have not as yet been mentioned. Thus, this interactive map will provide a gateway for both connectivity and collaboration across and between project areas and their partners, as well as acting as an active records keeper for the LNRS project.

## 3.8 CONCLUSION

The methodology for the Buckinghamshire & Milton Keynes Local Nature Recovery Strategy (LNRS) represents a detailed and structured approach to environmental data analysis, aiming to support nature recovery efforts at both local and national levels. The LNRS process ensures the engagement of a broad range of stakeholders, from landowners to environmental organizations, through workshops and surveys. This process allows for the identification and prioritisation of biodiversity goals and measures that reflect local ecological needs and stakeholder feedback.

### **Key aspects of this approach include:**

- 1. Stakeholder Engagement:** The process was highly inclusive, involving workshops and surveys with a wide range of participants. The workshops generated significant data, which was categorised into themes, priorities, and practical measures to support nature recovery. The survey aimed to reach a broader audience, validating and refining these priorities.
- 2. Data Analysis:** The data from stakeholders were meticulously organised, categorised, and shortlisted through frameworks designed by expert groups. These frameworks ensured that the priorities and measures were aligned with national environmental objectives, reflected local ecological needs, and were feasible to implement.
- 3. Prioritisation Framework:** Priorities were selected based on multiple criteria, such as their contribution to habitats and species in the area, alignment with national goals, urgency, and popularity among stakeholders. This method ensured a balanced, transparent, and objective prioritisation process.
- 4. Iterative Refinement:** The LNRS process was iterative, with expert groups reviewing and refining the priorities and measures through several rounds of analysis and stakeholder feedback (for all iterations of the Priorities and Measures, please see here). This led to a finalised list of themes, priorities, and measures, which will guide future conservation efforts in the area.

In conclusion, the LNRS methodology provides a robust, collaborative framework for guiding nature recovery in Buckinghamshire and Milton Keynes, ensuring that the LNRS statutory



guidance and regulations were adhere to and that local actions contribute meaningfully to England's broader environmental goals.

## 3.9 Data Analysis Methodology Technical Appendix

### **LNRS Stakeholder Analysis Data Template**

This is the main working spreadsheet with working data, scoped out priorities, pilot response and long list, from the Workshops.

### **LNRS Stakeholder Analysis Data template – raw**

This file contains the raw data from the workshops that was compiled by the NEP and sent to Steering Group members to review and consolidate.

### **Priorities and Measures: Drafts**

In total, the Priorities and Measures underwent over 18 iterations.

### **Priorities and Measures: Feedback from neighbouring and responsible authorities, steering group members and catchment partners**

As the final list of Priorities and Measures was developed, this list was sent off to our neighbouring and responsible authorities, steering group members and several catchment partners. See below for further details.

### **Neighbouring and Responsible Authority Feedback:**

A draft of the Priorities and Measures was sent to Neighbouring and Responsible Authorities from Oxfordshire, London, Berkshires, Hertfordshire, Kent, Surrey and Essex. The responses received were recorded, and implemented where possible.

### **Steering Group Feedback:**

A draft of the Priorities and Measures was sent to the Steering Group for final feedback. The responses received were recorded, and implemented where possible.

### **Catchment Partners:**

A draft of the Priorities and Measures was sent to several Catchment Partners (Thame Catchment Partnership, Greensand Trust, Chilterns National Landscape, Rivers Trust) for final feedback.

# 4) Species Shortlisting Methodology

## SPECIES SHORTLISTING METHODOLOGY

### STATEMENT

The State of Nature Report 2023 disclosed that nearly 1 in 6 species are threatened with extinction from Great Britain. Half of flowering plants and a sixth of invertebrates are found in fewer places.

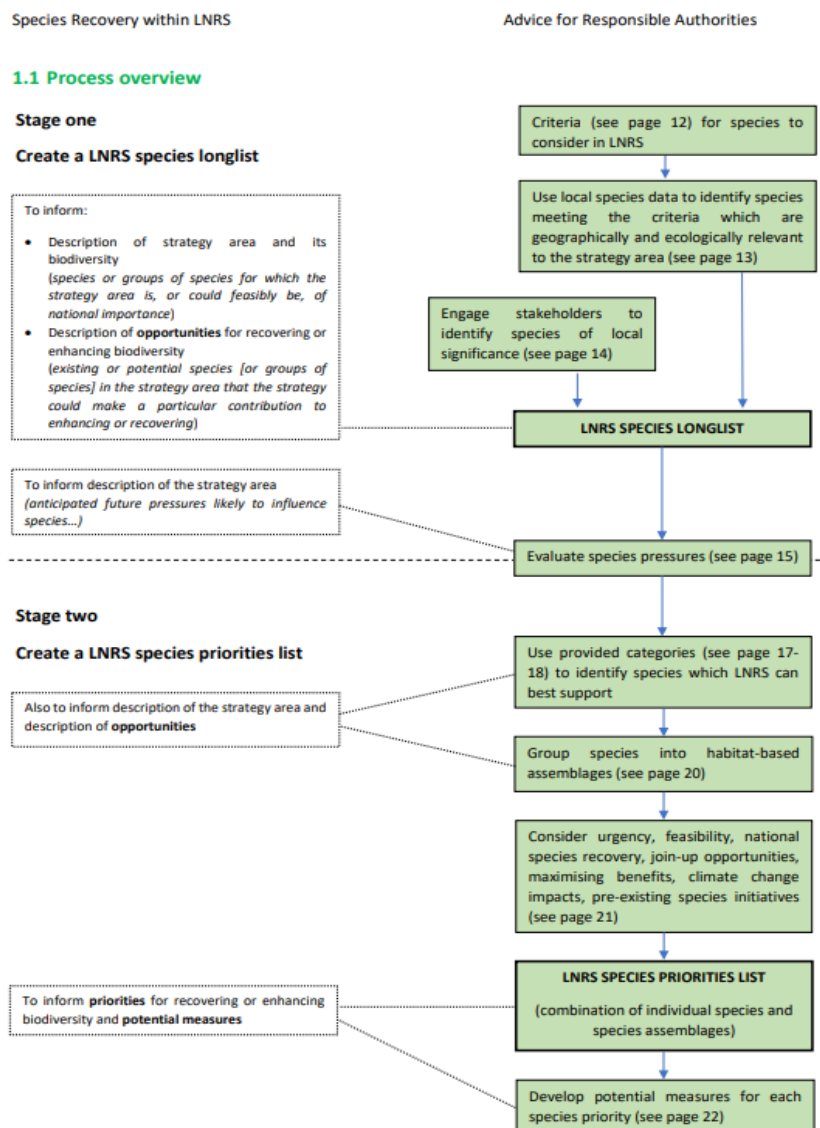
Evidence suggests that we are well on our way to a 6<sup>th</sup> global mass extinction event and that action must be taken quickly to reverse the decline of species abundance and distribution. The UK Government has signed an international agreement to halt species loss by 2030 and has set interim targets to ensure overall species abundance is increasing by 2030, and increasing by 10 percent by 2042, compared with 2030.

To support the reversal of the decline in species abundance and distribution, Local Nature Recovery Strategies (LNRS) must describe opportunities, set priorities, and propose potential measures (actions) for the recovery and enhancement of species.

The national LNRS guidance states that each LNRS must contain a shortlist of species that require direct action, over and above standard management practice for a habitat and where action for that species can be delivered through the implementation of the LNRS.

This document sets out the methodology used in the Buckinghamshire and Milton Keynes LNRS for creating a shortlist of species and how that process adheres to national guidance on its creation.

Fig 1 – Process overview from Species Recovery within Local Nature Recovery Strategies – Advice to Responsible Authorities, August 2023



## Criteria for species to consider in LNRS

National guidance provides a set of criteria for species to consider in LNRS's. The first stage involves identifying threatened and other locally significant species relevant to the strategy area. The second stage involves determining which of these species are best supported through targeted local action beyond the measures for restoring, creating and joining up habitats across the LNRS area.

The species prioritisation was led by Buckinghamshire and Milton Keynes Biological Record Centre (BMERC).

## Stakeholder Engagement

Throughout the process of creating and refining the long and resultant short list of species, target areas for action, and key ecological niches, partners were invited into the process. Many generously provided support, data, guidance and technical expertise at various stages. Consultees comprised representatives from across the landscape of conservation organisations and individuals.

Figure 2. Species Technical Group. Stakeholder groups involved in species work, including the development of the long list and short list, target areas for action and key ecological niches.

<b>Species Technical Group</b>		
Adjacent Local Environmental Records Centres'	Bucks Invertebrate Group	Landowners and managers
Amphibian and Reptile Conservation	Bucks Mammal Group	Local and regional experts on species and habitats
Ancient Tree Forum	Bucks Owl and Raptor Group	Mammals Trust
Bat Conservation	Bucks Fungi Group	Milton Keynes Council
Bees Wasps and Ants Recording Scheme	Bucks, Berks and Oxfordshire Wildlife Trust	Milton Keynes Natural History Society
Botanical Society for Britain and Ireland	Buglife	National Trust
British Arachnological Society	Butterfly Conservation	Natural England

British Bryological Society	UK Centre for Ecology and Hydrology	North Bucks Bat Group
British Dragonfly Society	Chesham and District Natural History Society	Peoples Trust for Endangered Species
British Lichen Society	Chilterns AONB (National Landscape)	Plantlife
British Trust for Ornithology	Chilterns Society	River Thames Conservation Trust
Buckinghamshire and Milton Keynes Natural Environment Partnership	City of London Corporation	Soldierflies and Allies Forum
Buckinghamshire Council	County Recorders	Species Recovery Trust
Bucks Amphibian and Reptile Group	Environment Agency	UK Pollinator Monitoring Scheme
Bucks Badger Group	Fishing club members	Upper Thames Butterfly Conservation
Bucks Bird Club	Forestry Commission	Wycombe Urban Wildlife Group
Bucks Dormouse Group	Freshwater Habitats Trust	

## Creating the long list

Data was collated from a range of sources for species considered threatened on Great Britain and England's International Union for Conservation of Nature (IUCN) Red Lists, namely:

- Buckinghamshire and Milton Keynes Environmental Records Centre (BMERC)
- National recording schemes (such a Butterfly Recording Scheme, Breeding Bird Survey, National Plant Monitoring Scheme, Spider Recording Scheme, Fungal Records Database of Britain and Ireland etc)
- iRecord
- National Biodiversity Network Atlas referenced records
- County recorders
- Local and regional experts

### *Inclusion criteria*

The following criteria were used to determine which species to include on the species longlist:

- Species that were considered threatened on GB and England IUCN Red Lists
- For invertebrates, species highlighted within the Centre for Ecology and Hydrology's Pantheon system were used also to reflect updates in knowledge on that species, its rarity and level of threat. Pantheons concept of Species Quality Indices was used as an additional source of data, higher SQI species were added to the longlist, if they had not already been flagged for inclusion under the RDB status sifts.
- There were recent records within the county
- There were recent records close to the border with Buckinghamshire and Milton Keynes
- Records that are verified sources

Through a range of stakeholder activities the list was sense checked to remove records that local experts considered anomalous (e.g. were single records of likely vagrants, accidental releases, likely incorrectly identified, the record was too old and / or the species likely extinct). Species were added where it was considered Buckinghamshire and Milton Keynes held a significant proportion of the national population or was of other local significance, or where climate change is altering the range of a species, and it is likely that it will appear in the LNRS area in the next 5 years.

### *Refining the list to create a species shortlist*

**As per the guidance, species were not included in the shortlist if:**

- Their needs could be covered by more, bigger, better and connected habitat as these needs aim to be met through the habitat related measures within the LNRS
- It is unclear what is causing their decline or on the ground action is not a priority
- The factors constraining their recovery lie outside of England
- The species records held were considered as passing vagrants/occasional visitors

Additionally

- species that were found only in single sites, or the needs of the species is not well known.

## Stakeholder Engagement Activities

Movement from the Long List to a more focussed Short List and creation of specific target areas for action was managed through many Stakeholder Engagement Activities, in various forms to encourage inclusion from across the biological recording and expert community. These ranged from one-to-one conversations to small group reviews and ultimately workshops. Two workshops (in Milton Keynes and Chesham) were held in Spring 2024 to garner wider and additional input.

Workshop sessions focussed on the earlier promoted themes of:-

- Species - which ones should or shouldn't be shortlisted
- Natural assemblages of species, and how they might be organised for with others of similar needs for shortlisting purposes
- Niches – particularly describing key niches in the county not already under consideration via the earlier phases of the LNRS work

And a new spatial element for consideration (see later notes)

- Target Areas of Important Species – where specific action is needed as a priority for key habitats, niches, species or assemblages identified from all the above works.

The species shortlist can be found [here](#).

## Target Areas of Important Species – an expert led, data supported approach.

Data is gathered on where individual species occur across Buckinghamshire and Milton Keynes by a wide number of organisations and dedicated volunteers and fed into a variety of databases, both locally and nationally. This data can tell us a huge amount about certain species, their population trends and general distribution. However, for the purposes of the LNRS – defining place-based measures (actions) for individual species across the LNRS area - the coverage of data is inevitably incomplete and imperfect. Some groups of species are well recorded, others less so. The reasons for this are varied, for example, access to private land may be difficult to obtain, some species require extremely specialist knowledge that may not be held locally or by so few people that coverage of the area may not be possible. Certain species can only be recorded by

either damaging the habitat they inhabit or the species themselves. Records of species can be skewed around locations where recorders operate. For these reasons, an expert led, data supported approach was taken to create a map to Target Areas of Important species.

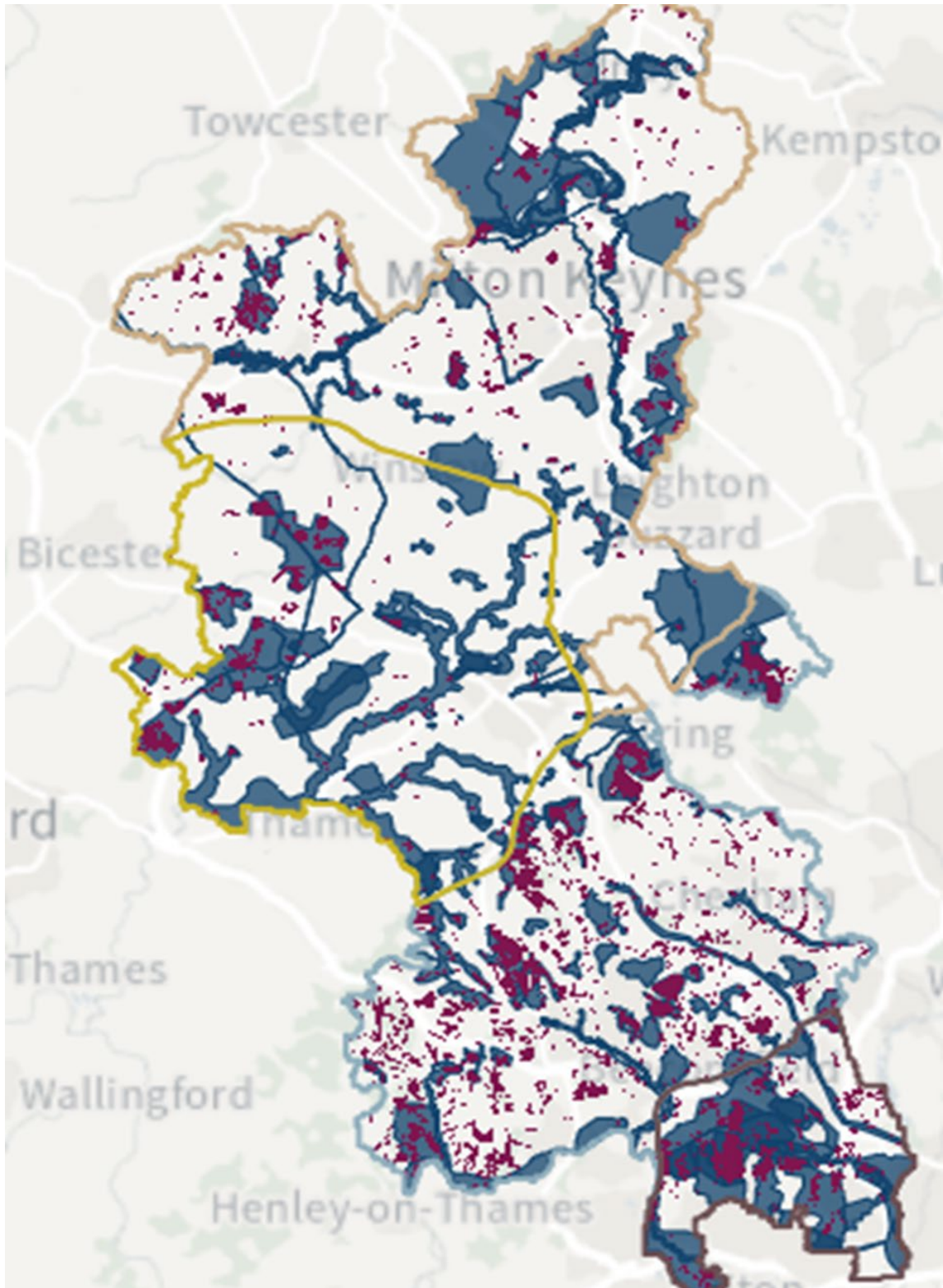
Specialists from across the range of species specialisms (such as spiders; dragon and damselflies; beetles; butterflies and moths; other invertebrates; fungi; vascular plants; mosses; lichens; mammals; amphibians and reptiles; birds; and fish) were invited to the workshops, to use the best-available data and pool their expert knowledge in order to highlight the key areas for species across the LNRS area. These Target Areas of Important Species were identified on the maps, noting which groups of species they were important for, species specific expansion buffers were added, and areas were linked (where biogeography suggested it).

Within the LNRS map, the areas can be selected to provide details of the species they are important for and then linked through to the document that provides information on the target area and the measures or actions that would best be taken to support those species.

Please see below for an overview of the map.



Figure 3. Map of combined Target Areas for Important Species (blue) and APIB map (burgundy).



## Niches

Many species that are threatened today have extremely specific habitat requirements, which cannot be met by the other measures (actions) in the LNRS. These specific habitat requirements (niches) have been captured in the species shortlist. An introduction to how niches differ from Habitats of Principle Importance and description of the niches highlighted for Buckinghamshire and Milton Keynes can be found [here](#).

## Conclusion

Through filtering and sense checking national and local data sets with species experts a **short list** of species was created of threatened or locally significant species or groups of species whose needs cannot be met through the measures (actions) relating to habitats, and for which local action on the ground can support recovery.

**Target Areas for Important Species** were identified by local experts, these were buffered and linked where possible and mapped to create a species map layer consisting of 160 species recovery zones with an accompanying table that details which species and groups are important in that zone, what actions will support species recovery and any special habitat requirements (niches).

# 5) Step 1: Baseline Map Methodology

## Statement

### About the Local Nature Recovery Strategy

Local Nature Recovery Strategies (LNRS) were introduced in the Environment Act 2021. This new system of spatial strategies will:

1. Support efforts to recover nature across England
2. Identify local nature recovery priorities
3. Help direct the delivery of Biodiversity Net Gain
4. Help deliver national environment targets

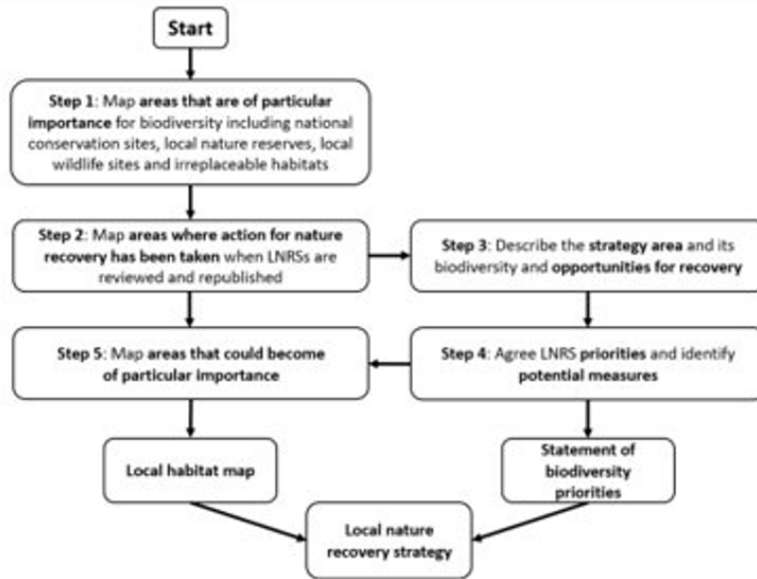
The Government has now published LNRS [regulations](#) and [statutory guidance](#), which set out the process for preparing LNRSs and what they should contain, to enable high quality and consistent LNRSs to be prepared across England. LNRSs will help drive more coordinated, practical, focussed action and investment to help nature and people flourish together, whilst delivering wider nature-based environmental benefits.

The LNRS consists of:

- **A Statement of Biodiversity Priorities**, which reflects stakeholder priorities, in terms of habitats and species, for recovering or enhancing biodiversity and achieving wider environmental improvement; and the actions that need to be undertaken to achieve those priorities.
- **A Local Habitat Map**, which will identify the existing distribution of habitats and the location of areas already important for biodiversity, overlaid by locations considered suitable for delivering the outcomes and actions identified by stakeholders.

The Buckinghamshire and Milton Keynes Natural Environment Partnership (the “NEP”) has been commissioned by the LNRS Responsible Authority, Buckinghamshire Council, to project manage the LNRS development process for Buckinghamshire and Milton Keynes. Milton Keynes City Council and Natural England are supporting authorities, which will support LNRS preparation.

The steps to develop the LNRS, as set out in the statutory guidance, are as follows:



## About this Document

This document details how the elements included in the **Step 1** of the Buckinghamshire and Milton Keynes LNRs process were deliberated and concluded upon.

Step 1 is to:

“Map areas of particular importance for biodiversity including national conservation sites, local nature reserves, local wildlife sites and irreplaceable habitats”

This “APIB” map forms part of the final Local Habitat map for the LNRs.

This document explains the rationales behind exclusions and inclusions of specific habitats and the structure of the Step 1 map. This Step 1 map is referred to as the ‘baseline LNRs map’ or the “APIB” map in the Buckinghamshire and Milton Keynes LNRs process.

## Statutory LNRs Guidance on Step 1 of the LNRs process

The statutory guidance states the following in relation to the **Step 1** map:

“Map areas of particular importance for biodiversity (Pg.8-10 of Statutory Guidance):

‘21. Every local habitat map must identify all national conservation sites and local nature reserves. They must also identify “other areas in the strategy area which in the opinion of the responsible

authority are of particular importance for biodiversity”. The government will provide responsible authorities with a national habitat map. This map will include information on national conservation sites and local nature reserves for this purpose. As local nature reserves are identified locally, local partners may have more up-to-date information than the government can provide. The local nature recovery strategy regulations give responsible authorities powers to request information on local nature reserves from other local planning authorities in the strategy area if necessary.

22. Responsible authorities should take a consistent approach to identifying the other areas of particular importance for biodiversity in their local habitat map, they should include:

- all existing local wildlife sites
- areas of irreplaceable habitat
- other areas identified by the Secretary of State as being of particular importance

This will help local nature recovery strategies integrate well with other environmental and land use policies.

23. ‘Local wildlife site’ is a term used to describe various areas identified at a local level for their biodiversity value, which are granted protection from inappropriate development or change of use. Including them in the local habitat map as areas of particular importance will help align local nature recovery strategies with the planning system. If responsible authorities do not have information on all the local wildlife sites in their area, the local nature recovery strategy regulations provide powers to request this information from the relevant local planning authority.

24. Responsible authorities should map known areas of irreplaceable habitats, such as ancient woodland, as areas of particular importance for biodiversity. Protecting irreplaceable habitat is established government policy. The government is preparing regulations to establish a clear legal definition of ‘irreplaceable habitat’. Until this is available, responsible authorities should use the definition of irreplaceable habitat in the National Planning Policy Framework.

25. The Secretary of State may identify areas that, in their opinion, are of particular importance for biodiversity. If the Secretary of State does this, they will inform the relevant responsible authority who should map these areas as being of particular importance - unless there are strong reasons not to.

26. Responsible authorities should not map any other areas that are not mentioned in paragraph 22 as being of particular importance for biodiversity. This is not to suggest that other areas are not of importance for biodiversity. This is to help establish a nationally consistent baseline of areas whose particular importance has already been recognised and are protected. This will help local nature recovery strategies align well with local planning policy and avoid duplicating with the identification of local wildlife sites.

27. If the responsible authority believes that additional areas require protection due to their particular importance, they should discuss making those areas local wildlife sites with the relevant local planning authority (if this is not the responsible authority).

28. When reviewing their local nature recovery strategy ahead of republication, responsible authorities should identify any changes to the areas of particular importance for biodiversity and update their local habitat map.

29. Responsible authorities may need to consult with other parties to identify areas of particular importance, including Natural England, other local authorities and national park authorities (where relevant). They may also need to request data from other organisations, for example on the distribution of irreplaceable habitats. However, this step is not expected to require wide engagement with local partner organisations and so should be comparatively quick to complete.”

## Methodology for producing the Buckinghamshire and Milton Keynes LNRS “Step 1” Baseline Map

### Deliberation and Decision-Making Process

#### Groups and Organisations Involved:

Representatives from the following organisations and teams were involved in developing the Baseline LNRS Map. Together, these formed an “**LNRS Mapping Working Group**”:

1. Buckinghamshire and Milton Keynes Environmental Records Centre (BMERC)
2. Natural England (NE)
3. Buckinghamshire Council Biodiversity Net Gain team
4. Buckinghamshire Council GIS team
5. Buckinghamshire Council Planning Policy Team
6. Milton Keynes City Council Flood and Water Management Team  
Milton Keynes City Council Development Plans Team  
Milton Keynes City Council GIS Team
7. Milton Keynes Parks Trust (MK Parks Trust)
8. Berkshire, Buckinghamshire & Oxfordshire Wildlife Trust (BBOWT)
9. Chilterns Conservation Board (CCB)
10. Open University (OU)

#### Mapping Working Group Objectives

Members of the LNRS Mapping Working Group volunteered their time to the process and were convened to contribute their expertise in mapping, data and GIS processes. The agreed overall objectives of this group were to:

1. Determine the functions of the LNRS Step 5 Map based on regulations & guidance and stakeholder needs.
2. Review the timeliness, validity, accuracy, duplication and consistency of data required to compile the baseline map, identify gaps and decide the process to acquire missing data or mitigate for/ acknowledge this where it is not possible.
3. Define users and how they will use, and be informed by, the LNRS Step 1 and Step 5 map.
4. Determine the different types of layer needed on the Step 1 and Step 5 map, needed for different purposes.
5. Develop consultation maps for the stakeholder engagement process, for some stakeholder groups.
6. Archive the process of identifying the data that comprised the Step 1 and Step 5 map for transparency.
7. Assess the best technologies and consultants to engage to create the LNRS Step 1 and 5 map.
8. Provide steer and recommendations on what the LNRS Step 1 and Step 5 map should include and how.
9. Help test the LNRS Step 1 and Step 5 map and its functionality.

The main LNRS Steering Group provided a final review prior to stakeholder consultation of the Step 1 and Step 5 map. The Steering Group involved representatives from the following organisations:

1. Buckinghamshire Council (Various Departments)
2. Milton Keynes City Council (Various Departments)
3. Buckinghamshire & Milton Keynes Natural Environment Partnership (NEP)
4. Natural England (NE)
5. Milton Keynes Parks Trust (MK Parks Trust)
6. Forestry Commission (FC)
7. Environment Agency (EA)
8. Chilterns Conservation Board (CCB)
9. Berkshire, Buckinghamshire, and Oxfordshire Wildlife Trust (BBOWT)

## Identifying Areas of Particular Importance for Biodiversity

### Overview of the process

1. Natural England presented a summary of the LNRS guidance, as to how to develop the Baseline LNRS map, to the Mapping & Monitoring Group. The group discussed and agreed which locally-designated sites should be categorised as the required 'local wildlife sites' for the purposes of the LNRS.



2. BMERC and the Milton Keynes City Council Planning team provided the local definitions and data to map existing local wildlife sites (LWS) and Local Nature Reserves (LNR) within each authority.
3. The Responsible Authority’s GIS team collated the LWS and LNR data as well as the nationally-available data sets of national conservation sites, as defined in from Defra, and combined these into an ArcGIS map.
4. Based on the NPPF definition of “irreplaceable habitats” as required, The Mapping & Monitoring Group identified, discussed and agreed a finalised list of local habitats that should be classified as “irreplaceable”, and so should appear on the baseline map.
5. BMERC sourced the corresponding data to populate the irreplaceable habitats layer of the map according to the selection agreed at Phase 4..
6. In November 2023, Defra published an updated list of Irreplaceable habitats to support the introduction of mandatory biodiversity net gain. However, this was different to the types of site that had been identified locally as irreplaceable by the Mapping and Monitoring Group at Phase 5. Given that the Step 1 Baseline Map needs to be consistent across the country to facilitate join-up with other LNRS areas, [the RA GIS team then] amended the agreed irreplaceable map layer was amended to only include the mandated list of habitats according to the BNG guidance. However, in order to acknowledge the habitats that had been considered locally to be irreplaceable, and which did not appear in the new list, the Mapping & Monitoring Group decided that the list agreed in Phase 4 would still be helpful to inform the Step 5 Local Habitat Map, and should be displayed in the final LNRS somewhere, although not labelled as the official Step 1 baseline map.
7. The LNRS Steering Group was presented with the Baseline LNRS map and this methodology statement for their review, after which both elements were finalised.
8. Publication

## Detailed considerations

### *National Conservation Sites*

Nature sites and areas of countryside can be ‘designated’ by the UK Government - which means they are acknowledged and considered within the planning system because of their importance for nature. These sites tend to have clear boundaries, are managed to benefit the particular species or habitats that they are designated for, and are acknowledged and considered in planning law, aiming to ensure that the nature and wildlife are not harmed or destroyed. Such sites can sometimes also be used by people for recreation and study

The site types selected as LNRS national conservation sites for Buckinghamshire and Milton Keynes are set out in Table below, which also provides a definition of each, identifies the national data sources used to add them to the baseline map, and information about the number of sites locally.

TABLE 1. National conservation sites for Buckinghamshire and Milton Keynes.



Site Type / Name	Definition	Data Source	Buckinghamshire Sites	Milton Keynes Sites	Number of Local Sites	Comments
National Nature Reserves (England)	National Nature Reserves (NNRs) were established to protect some of our most important habitats, species and geology, and to provide 'outdoor laboratories' for research. Most NNRs offer great opportunities to schools, specialist interest groups and the public to experience wildlife at first hand and to learn more about nature conservation <sup>(iii)</sup> .	Defra Group. Open data published by Natural England. <a href="https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::national-nature-reserves-england/about">https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::national-nature-reserves-england/about</a>	3	0	3	Pre-defined sites, included as prescribed by the statutory guidance on the LNRS.
			0.14% cover	n/a	0.14% cover	
			264ha	n/a	264ha	

Ramsar (England)	Wetlands identified under the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat. <sup>(iii)</sup>	Defra Group. Open data published by Natural England. <a href="https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::ramsar-england/about">https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::ramsar-england/about</a>	0 0% cover	0 0% cover	0 0% cover	Pre-defined sites, included as prescribed by the statutory guidance on the LNRS. Please note these types of sites (including proposed Ramsar sites) do not feature in the Buckinghamshire & Milton Keynes area.
Sites of Special Scientific Interest (England)	Sites of Special Scientific Interest (SSSI) support plants and animals that find it difficult to survive elsewhere in the countryside, and they represent the country's best wildlife	Defra Group. Open data published by Natural England. <a href="https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::sites-of-special-scientific-interest-england/about">https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::sites-of-special-scientific-interest-england/about</a>	69 1.34% cover	4 0.03% cover	73 1.37% cover	Pre-defined sites, included as prescribed by the statutory guidance on the LNRS.
			0 ha	0 ha	0 ha	
			2517.4ha	50.7 ha	2568.1ha	

	and geological sites. SSSI are legally protected under the Wildlife and Countryside Act 1981 <sup>[vi]</sup> .					
Special Areas of Conservation (England)	Protected sites to establish a network of important high-quality conservation sites that will make a significant contribution to conserving the habitats and species identified in Annexes I and II, respectively, of <a href="#">European Council Directive 92/43/EEC</a> <sup>[v]</sup> .	Defra Group. Open data published by Natural England. <a href="https://naturalengland-defra.opendata.arcgis.com/dataset/Defra::special-areas-of-conservation-england/about">https://naturalengland-defra.opendata.arcgis.com/dataset/Defra::special-areas-of-conservation-england/about</a>	3	0	3	-Pre-defined sites, included as prescribed by the statutory guidance on the LNRS. Note that there are no candidate Special Areas of Conservation in Buckinghamshire and Milton Keynes.
			0.5% cover	n/a	0.5% cover	
			932.4ha	n/a	932.4ha	
Special Protection Areas	Special Protection Areas (SPAs) are protected	Defra Group. Open data published by Natural England. <a href="https://naturalengland-defra.opendata.arcgis.com/dataset/Defra::special-areas-of-conservation-england/about">https://naturalengland-defra.opendata.arcgis.com/dataset/Defra::special-areas-of-conservation-england/about</a>	0	0	0	Pre-defined, included as prescribed
			% cover	% cover	0% cover	

(England)	areas for birds in the UK <sup>[vi]</sup> .	<a href="https://www.gov.uk/government/collections/special-protection-areas-england/about">s/Defra::special-protection-areas-england/about</a>	0 ha	0 ha	0 ha	by the statutory guidance on the LNRS. Please note these types of sites (including potential Special Areas of Conservation) do not feature in the Buckinghamshire & Milton Keynes area.
<b>TOTAL</b>			<b>75</b>	<b>4</b>	<b>79</b>	
			<b>1.98% cover</b>	<b>0.03% cover</b>	<b>2.0% cover</b>	
			<b>3713.8ha</b>	<b>50.7ha</b>	<b>3764.5ha</b>	

### **Local Nature Reserves (LNR)**

Local Nature Reserves (or LNRs) are for both people and wildlife. They are places with wildlife or geological features that are of special interest locally, which give people special opportunities to study and learn about them or simply enjoy and have contact with nature. Local Nature Reserves are a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act 1949 by principal local authorities. Proposed sites are included as these also have some planning protection.<sup>[vii]</sup>

TABLE 2. Local Nature Reserves in Buckinghamshire and Milton Keynes.

Site Type / Name	Definition	Data Source	Buckinghamshire Sites	Milton Keynes	Number of Local	Comments
------------------	------------	-------------	-----------------------	---------------	-----------------	----------

				Sites	Local Sites	
Local Nature Reserves (England)	See above	Defra Group. Open data published by Natural England. <a href="https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::local-nature-reserves-england/about">https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::local-nature-reserves-england/about</a>	18	1	19	-Pre-defined sites, included as prescribed by the statutory guidance on the LNRS.
<b>TOTAL</b>			<b>0.11%</b>	<b>0.02%</b>	<b>0.12%</b>	
			<b>200.7ha</b>	<b>33.1ha</b>	<b>233.8ha</b>	

**Local wildlife sites**

Local Wildlife Sites (LWSs) are some of the most ecologically important sites in the county and they are protected through the local planning system. They often support rare or threatened species and habitats that are locally important and distinctive. From flower-rich meadows to tiny, fungi-filled churchyards, majestic Chiltern Beechwoods to urban wetlands supporting important wintering bird populations, these are the wild places where nature thrives. Potential sites are identified and surveyed by BMERC surveyors, and a report is produced for the landowner and for presentation to the Local Wildlife Sites selection panel. The panel is made up of a group of wildlife experts, county wildlife recorders and representatives from various environmental organisations and statutory bodies. The panel reviews the reports and if the site is of sufficient quality to meet the rigorous Local Wildlife Sites criteria, it is approved and designated as a Local Wildlife Site<sup>[ix]</sup>. Local Wildlife Sites (LWS) are non-statutory sites of significant value for the conservation of wildlife. These sites represent local character and distinctiveness and have an important role to play in meeting local and national targets for biodiversity conservation. The purpose of their selection is to provide recognition of their value and to help conserve those features by affording a level of protection.

TABLE 3. Local wildlife sites in Buckinghamshire and Milton Keynes.

Site Type / Name	Definition	Data Source	Number of Local Sites	Deliberation
LWS in Buckinghamshire	<p>In Buckinghamshire, there are 4 types of sites which can be considered “local wildlife sites” in line with the LNRS guidance:</p> <ul style="list-style-type: none"> <li>· 443 Local Wildlife Sites</li> <li>· 26 Local Geology Sites</li> <li>· 322 Biological Notification Sites</li> <li>· 38 Road Verge Nature Reserves</li> </ul> <p>Please see <a href="#">here</a> for designation criteria which are exactly the same for Bucks and Milton Keynes.</p>	<p>BMERC <a href="#">Local Wildlife Sites   Buckinghamshire and Milton Keynes Environmental Records</a></p> <p><a href="https://bucksmknep.co.uk/projects/road-verges/">https://bucksmknep.co.uk/projects/road-verges/</a></p>	<p>480 3.4% cover 6405.4ha</p>	<p>In both Milton Keynes and Bucks there is recognition that <b>Biological Notification Sites</b> (BNS) have yet to go through a review and be either submitted to LWS designation or for them to no longer have a status. They were therefore <b>excluded from the LNRS baseline map</b> until such time that their status</p>
LWS in Milton Keynes	<p>In Milton Keynes, there are 16 Milton Keynes Wildlife Sites</p>	<p>MKCC <a href="#">Biodiversity SPD June 2021 Adopted.pdf</a></p>	<p>21 0.2% cover</p>	

<p>(MKWS) as well as a number of designated Wildlife Corridors, both of which have the same status and Local Wildlife Sites found across Buckinghamshire and Milton Keynes. MKCC'S adopted Biodiversity SPD makes reference to MKWS as 'special places recognised for having high wildlife value or containing rare or threatened habitats and species'</p>	<p><a href="#">bucks_bioandplanning_lo wres MKENV011.pdf</a></p>	<p>373.5ha</p> <p>review is complete..</p> <p>The local habitat map needs to show 'areas of particular importance for biodiversity 'according to the LNRS guidance; so it was decided to exclude sites designated solely for geological reasons for the baseline mapping. Therefore, Local Geological Sites have also been excluded from the Baseline Map.</p>			
<p><b>TOTAL</b></p>		<table border="1"> <tr> <td data-bbox="1068 1108 1193 1150">501</td> </tr> <tr> <td data-bbox="1068 1150 1193 1224">3.6% cover</td> </tr> <tr> <td data-bbox="1068 1224 1193 1297">6778.9ha</td> </tr> </table>	501	3.6% cover	6778.9ha
501					
3.6% cover					
6778.9ha					

***Irreplaceable Habitats***

Based on the information published by Defra within the Biodiversity Gain Requirements Regulations 2024, the national definition of “irreplaceable habitats” includes the following habitats:

- Ancient Woodland
- Ancient and Veteran Trees
- Blanket Bog
- Limestone Pavements
- Coastal Sand Dunes
- Spartina Saltmarsh Swards
- Mediterranean Saltmarsh Scrub
- Lowland Fens

Blanket Bog, Limestone Pavements, Coastal Sand Dunes, Spartina Saltmarsh Swards, Mediterranean Saltmarsh Scrub do not feature in Buckinghamshire or Milton Keynes. In compliance with the LNRS Step 1 requirements, the habitats above correspond to the following data sources and number of such sites in Buckinghamshire and Milton Keynes, and so are featured in the LNRS Step 1 map:

TABLE 4. Irreplaceable habitats in Buckinghamshire and Milton Keynes.

Site Type / Name	Data Source	Buckinghamshire Sites	Milton Keynes Sites	Number of Local Sites	Deliberation
Ancient & Semi-Natural Woodland	Defra Group. Open data published by Natural England. <a href="https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::ancient-woodland-england/about">https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::ancient-woodland-england/about</a>	3.06% cover	0.23% cover	3.29% cover	Pre-mapped areas of habitat, included as the statutory guidance on the LNRS requires irreplaceable habitats (see above) to be included.
		5,732.8ha	426.1ha	6,158.9ha	
Ancient Replanted Woodland	Defra Group. Open data published by Natural England. <a href="https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::ancient-woodland-england/about">https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::ancient-woodland-england/about</a>	1.94% cover	0.16% cover	2.1% cover	Pre-mapped areas of habitat, included as the statutory guidance on the LNRS requires irreplaceable habitats (see above) to be included.
		3,640.4ha	291.5ha	3,931.9ha	
Ancient Wood Pasture	Defra Group. Open data published by Natural England. <a href="https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::ancient-woodland-england/about">https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::ancient-woodland-england/about</a>	n/a	n/a	n/a	Pre-mapped areas of habitat, included as the statutory guidance on the LNRS requires irreplaceable habitats (see above) to be included.
		0ha	0ha	0ha	
Lowland flushes, Fens and Swamps	BMERC <a href="https://my.lerc.online/Datasets.aspx?src=bm">https://my.lerc.online/Datasets.aspx?src=bm</a>	0.03% cover	0.002% cover	0.04% cover	Pre-mapped areas of habitat, included as the statutory guidance on the LNRS requires irreplaceable habitats (see above) to be included.
		63.1ha	4ha	67.1ha	
<b>TOTAL</b>					



<b>5.04% cover</b>	<b>0.39 % cover</b>	<b>5.42% cover</b>
<b>9,436.3ha</b>	<b>721.6 ha</b>	<b>10,157.9 ha</b>

### ***Additional locally identified irreplaceable habitats***

Based on the Phase 4 and 5 work (see above), the following Table sets out the habitats that local experts in the Mapping and Monitoring group had selected as “irreplaceable”, that are additional to those set out at Table 4, above. This was while using the NPPF definition of irreplaceable habitats and prior to the BNG-related definition being released. The NPPF definition of irreplaceable habitats identifies them as: “Habitats which would be technically very difficult (or take a very significant time) to restore, recreate or replace once destroyed, taking into account their age, uniqueness, species diversity or rarity. They include ancient woodland, ancient and veteran trees, blanket bog, limestone pavement, sand dunes, salt marsh and lowland fen’ ([NPPE, pg.68](#)).

**Given this definition, the Mapping Working Group identified a number of local habitats that met the general criteria for irreplaceable habitats.** While the official LNRS Step 1 baseline map will include those in Table 4, above, the following locally-identified irreplaceable habitats will help to inform the final Local Habitat Map as they are considered to be particularly important by LNRS partners.

The group based its decision on whether a habitat was locally “irreplaceable”, on whether a habitat could be re-created within Buckinghamshire or Milton Keynes, based on:

1. The availability of alternative suitable land; and
2. The timeframe in which the habitat takes to establish

The information at Table 5, below provides details regarding this deliberation process and regarding the additional habitats, besides those featured in the table above.

Table 5: Habitats in addition to those included in the Step 1 map that local experts deemed as “irreplaceable”.

<b>Site Type / Name</b>	<b>Data Source</b>	<b>Buckinghamshire Sites</b>	<b>Milton Keynes Sites</b>	<b>Number of Local Sites</b>
	BMERC			

Coastal and Floodplain Grazing Marsh	<a href="https://my.lerc.online/Datasets.aspx?src=bm">https://my.lerc.online/Datasets.aspx?src=bm</a>	0.13% cover 251.6ha	0.05% cover 84.5ha	0.18% cover 336.1ha
Lowland Heathland	BMERC <a href="https://my.lerc.online/Datasets.aspx?src=bm">https://my.lerc.online/Datasets.aspx?src=bm</a>	0.04% cover 74.2ha	0.0003% cover 0.51ha	0.04% cover 74.7ha
Lowland Beech and Yew Woodland	BMERC <a href="https://my.lerc.online/Datasets.aspx?src=bm">https://my.lerc.online/Datasets.aspx?src=bm</a>	0.64% cover 1,191.6ha	n/a n/a	0.64% cover 1,191.6ha
Lowland Calcareous Grassland	BMERC <a href="https://my.lerc.online/Datasets.aspx?src=bm">https://my.lerc.online/Datasets.aspx?src=bm</a>	0.18% cover 341.6ha	0.001% cover 2.76ha	0.18% cover 344.4ha
Lowland Dry Acid Grassland	BMERC <a href="https://my.lerc.online/Datasets.aspx?src=bm">https://my.lerc.online/Datasets.aspx?src=bm</a>	0.02% cover 29.8ha	0.001% cover 1.97ha	0.02% cover 31.8ha
Lowland Meadows	BMERC <a href="https://my.lerc.online/Datasets.aspx?src=bm">https://my.lerc.online/Datasets.aspx?src=bm</a>	0.2% cover 371.7ha	0.005% cover 9.9ha	0.2% cover 381.6ha
Lowland Mixed Deciduous Woodland	BMERC <a href="https://my.lerc.online/Datasets.aspx?src=bm">https://my.lerc.online/Datasets.aspx?src=bm</a>	0.7% cover 1,317.5ha	0.14% 258ha	0.84% cover 1,575.5ha
Lowland Wood - Pasture	BMERC <a href="https://my.lerc.online/Datasets.aspx?src=bm">https://my.lerc.online/Datasets.aspx?src=bm</a>	0.22% cover 415.3ha	0.06% cover 121ha	0.29% cover 536.3ha

e and Parkland				
Reedbeds	BMERC <a href="https://my.lerc.online/Datasets.aspx?src=bm">https://my.lerc.online/Datasets.aspx?src=bm</a>	0.007% cover 12.7ha	0.006% cover 12.0ha	0.01% cover 24.7ha
Rivers and Streams (Including Chalk Streams)	BMERC <a href="https://my.lerc.online/Datasets.aspx?src=bm">https://my.lerc.online/Datasets.aspx?src=bm</a>	0.04% cover 74ha	n/a n/a	0.04% cover 74.2ha
Wet Woodland	BMERC <a href="https://my.lerc.online/Datasets.aspx?src=bm">https://my.lerc.online/Datasets.aspx?src=bm</a>	0.11% cover 201.2ha	0.0004% cover 0.8ha	0.11% cover 202ha
<b>TOTAL</b>		<b>2.28% cover 4,281.2Ha</b>	<b>0.26% cover 491.4ha</b>	<b>2.55% cover 4,772.6Ha</b>

Although these additional habitats were not used in the basemap, they were used to inform the Local Habitat Map to identify opportunities for habitat enhancement and connectivity.

***Areas of deliberation and conclusions reached***

The additional habitats are Priority Habitats, which are featured in the list of priority habitats and species in England ([‘Section 41 habitats and species’](#)). The lists were cross-referenced with BMERC data on which habitats from these lists feature in the area, as well as which of these habitats were referenced in the [NEP’s “Forward to 2030” Biodiversity Action Plan](#).

Other points of deliberation to note:

- **Arable field margins** were deliberately **avoided** because of the similarity they bear with hedgerows.
- **Traditional orchards** - while some traditional orchards may be irreplaceable (because of their species composition and structure), data is not available on which specific traditional orchards are actually irreplaceable. Not being able to distinguish between irreplaceable and non-irreplaceable orchards, the expert decided the most prudent action was to **exclude** this habitat from the APIB mapping.

- **Rivers and streams, including chalk streams** - were deemed locally as important **irreplaceable habitats**, and were thus included in the additional habitats list. There was deliberation as to whether aquifer-fed naturally-fluctuating water bodies should be included, and whether Chalk Streams should be included as a separate category, but it was agreed that these should all be covered under irreplaceable ‘Rivers and Streams’).
- **Specific sites** - There was discussion around whether particular areas, such as **Bernwood Forest, Whaddon Chase and Salcey Forest** could be considered irreplaceable, given they may not be irreplaceable in ecology, but have a rich history (historic hunting grounds) and notable tree stands, old tree resources and interlinkages with various elements like old hedge lines and green lanes, i.e. generally important for the local area. It was clarified that "forest" in this context referred to a legal definition of an area managed for hunting purposes. Similarly, **Clay River Valleys and the Vale of Aylesbury** were also brought up, explaining their significance due to their unique geological features and biodiversity. It was agreed that these sites are more accurately defined as **‘key biodiversity features’ rather than irreplaceable habitats**. Therefore, it was concluded not to include these particular sites under additional irreplaceable habitats, but that they could be used to inform the Step 5 Local Habitat Map, which identifies area that could become of particular importance for biodiversity.
- **Canals** - there was concern expressed around the inclusion of canals in the list. It was explained that canals and old railway lines crisscross the county and could potentially be created anew, and since we want to align the list with the national reference lists, it was concluded not to include them.

<sup>[i]</sup> Source: <https://www.gov.uk/check-your-business-protected-area>

<sup>[ii]</sup> Source: <https://www.gov.uk/government/collections/national-nature-reserves-in-england>

<sup>[iii]</sup> Source: [https://www.ramsar.org/sites/default/files/documents/library/gwo\\_2021\\_e.pdf](https://www.ramsar.org/sites/default/files/documents/library/gwo_2021_e.pdf)

<sup>[iv]</sup> Source: <https://www.gov.uk/guidance/sites-of-special-scientific-interest-and-historical-monuments>

<sup>[v]</sup> Source: <https://jncc.gov.uk/our-work/special-areas-of-conservation/>

<sup>[vi]</sup> Source: Special Protection Areas (SPAs) are protected areas for birds in the UK.

<sup>[vii]</sup> Source: <https://www.data.gov.uk/dataset/16f1fd72-5e6a-4809-b0cd-12cdac37ffac/local-nature-reserves>

<sup>[viii]</sup> Source: <https://www.buckinghamshire.gov.uk/environment/ecology-and-biodiversity/ecology-projects/roadside-verge-nature-reserves/>

<sup>[ix]</sup> Source: <https://www.bucksmkerc.org.uk/local-wildlife-sites/>

<sup>[x]</sup> Source: <https://www.wildlifetrusts.org/habitats/wetlands/lowland-fen>

# 6) Step 5: Mapping of Measures

## Methodology

Here we present the methodology used to map the measures identified in the Buckinghamshire and Milton Keynes LNRS. This required a series of steps that are described in Section 1. Details on the methodology for each individual measure are then presented in Section 2.

### 6.1. Habitat and ecosystem services mapping

Mapping for the Buckinghamshire and Milton Keynes LNRS began with detailed mapping of habitats, ecosystem services and habitat opportunity mapping. Relevant approaches are presented here.

#### 6.1a. Approach to mapping habitats

The first step was to produce a detailed map of the habitats present across the area. To do this, we used Ordnance Survey Mastermap polygons as the underlying mapping unit, and then a series of different data sets to classify each polygon to a detailed habitat type, and to associate a range of additional data (such as designations, public accessibility, elevation) with each polygon. The complete data that were used to classify habitats is shown in Box 1.

**Box 1: Data used to classify habitats in the basemap:**

- OS Mastermap Topography layer
- OS VectorMap District
- Combined habitat map – supplied by Buckinghamshire and Milton Keynes Environmental Records Centre (BMERC)
- Additional habitat layers (e.g. traditional orchards) supplied by BMERC
- Natural England Priority Habitats Inventory
- Natural England statutory sites information (for SSSI, NNR, LNR, SAC, SPA and Ramsar)
- Local Wildlife Sites, Biological Notification Sites and Road Verge Nature Reserves supplied by BMERC
- Biodiversity Opportunity Areas (BOAs) supplied by BMERC
- OS Open Greenspace data
- Open spaces (green infrastructure) data sets for both local authority areas
- National Forest Inventory data
- Ancient Woodland Inventory data
- Crop Map of England (CROME)
- Corrine European Habitat data
- Built-up Area Boundaries data

We mapped the whole of Buckinghamshire and Milton Keynes with a 3km buffer applied, so that we mapped habitats in the immediate vicinity of the LNRS area. This meant that opportunity mapping would take into account habitats that were just across the border in neighbouring counties. Polygons were classified into Phase 1 habitat types and were also classified into broader habitat groups. In total the basemap (including the buffer) covered 282,800 ha (2,828 km<sup>2</sup>) and contained 2.54 million polygons, each classified to an appropriate habitat type.

Note that the basemap provides the best approximation of habitat types that can be achieved based on available data, and although carefully checked manually, has not been ground-truthed and will inevitably contain errors. The supplied habitat data varies in age, with some more than a decade old, so some changes are inevitable and could only be partially checked. A particular challenge was classifying polygons where more than one habitat was present. Mixed habitats containing woodland and scrub, or grassland with woodland were classified in detail, but not all combinations of habitats could be accommodated. Other areas, where there was a mismatch between data sources, or land use is changing rapidly, remained a challenge.

## 6.1b. Modelling and mapping ecosystem services (benefits)

Once a detailed habitat basemap had been created for the area, it was then possible to quantify and map the environmental benefits and co-benefits that these habitats (natural capital) provide to people. The ecosystem services mapped that were relevant to the Buckinghamshire and Milton Keynes LNRS are outlined in Box 2.

#### **Box 2: Ecosystem services mapped**

- **Air purification** (air quality regulation) estimates the relative ability of vegetation to trap airborne pollutants or ameliorate air pollution. Woodland habitats are by far the most effective habitat type at providing this service, but all woody habitats including hedgerows and scattered trees have some effect.
- **Noise regulation** is the capacity of the land to diffuse and absorb noise pollution. Complex vegetation cover, such as woodland, trees and scrub, is considered to be most effective, and the effectiveness of vegetation increases with width.
- **Local climate regulation** estimates the capacity of an ecosystem to cool the local environment and cause a reduction in urban heat maxima. Natural vegetation, especially trees / woodland and water bodies, are able to have a moderating effect on local climate, making nearby areas cooler in summer and warmer in winter.
- **Water flow regulation** is the capacity of the land to slow water runoff and thereby potentially reduce flood risk downstream. The model is based on roughness (dependent on habitat type), slope, and imperviousness (based on soil type).
- **Water quality (soil erosion) regulation** maps the risk of surface runoff becoming contaminated with high sediment loads before entering a watercourse, with a higher water quality capacity indicating that water is likely to be less contaminated. The model focuses on sedimentation risk from agricultural land, rather than urban diffuse pollution.
- **Accessible nature capacity** maps the availability (public access) of natural areas and scores them by their perceived level of naturalness.

For every ecosystem service listed in Box 2, the capacity of the natural environment to deliver that service – or the current supply – was mapped. For air quality regulation, noise regulation, local climate regulation, and accessible nature, it was also possible to map the local demand (the beneficiaries) for these services. The importance and value of ecosystem services can often be dependent upon its location in relation to the demand for that service, hence capturing this information provides useful additional insight and was used in the ecosystem services opportunity mapping (Section 1.4).

The capacity models were applied at a 5m by 5m resolution, while the demand models were mapped at 10m resolution providing fine scale mapping across the area. The models are based on the detailed habitat information determined in the basemap, together with a variety of other external data sets (e.g. digital terrain model, UK census data, open space data, and many

other data sets and models). Note, however, that many of the models are indicative (showing that certain areas have higher capacity or demand than other areas) and in all cases the capacity and demand for ES is mapped relative to the values present within the wider study area (Buckinghamshire and Milton Keynes).

### 6.1c. Biodiversity opportunity maps

The importance of landscape-scale conservation and ecological networks has become increasingly recognised over recent years. Many wildlife sites have become isolated in a landscape of unsuitable habitats and efforts are now being directed towards enlarging existing sites, linking existing habitat patches, and increasing connectivity, in line with the Lawton principles. Species are more likely to survive in larger habitat networks, are able to move and colonise new sites, and are more resilient to climate change and other detrimental impacts.

Habitat opportunity mapping to enhance biodiversity follows this ethos by using ecological networks to identify potential areas for new habitats. Identified areas will be ecologically connected to existing habitats, thereby expanding the size of the existing network, increasing connectivity and resilience, and potentially increasing the ecological quality of the new site.

The approach used here identifies three categories of opportunity, indicating three priority levels of importance for each habitat and ecosystem service mapped. It was performed for three key habitat groupings, incorporating the main semi-natural habitats found in Buckinghamshire and Milton Keynes. The broad habitats and their constituent types are shown below:

Broad habitat	Specific habitats included
Semi-natural grassland	Neutral, acid, calcareous, rough and semi-improved grasslands
Wet grassland and wetland	Marshy grassland, floodplain grazing marsh, lowland fen and swamp (reedbed)
Woodland	Broadleaved and mixed woodland types (excludes coniferous woodland, parkland or individual trees)

In the mapping of measures (Section 2), opportunity mapping was also run for more specific habitat types, which were usually a subset of the above categories. This included ancient woodlands (as a subset of woodland), lowland meadows, calcareous grassland, floodplain grazing marsh and other individual habitat types. Heathland opportunities were also mapped, grouped alongside acid grassland, which can often be interchangeable.



Biodiversity opportunity mapping followed a four-step process, and was based on the approach developed by Catchpole (2006)<sup>1</sup> and Watts et al. (2010)<sup>2</sup>. It is based on estimating the permeability of the landscape for typical species of each habitat type and the distance that species would move through the landscape. In all cases, constrained areas (areas where new habitat could not be created) were excluded and typically included existing buildings, gardens, infrastructure and water, existing high-quality habitats, heritage features, and gas pipelines and overhead cables (for woodland only). Note that opportunity areas for the three broad habitats often overlap. The mapping identifies two different opportunity zones:

- **Buffer** – areas that are immediately adjacent to existing habitat patches and will usually be the priority for habitat creation.
- **Stepping stone** – areas that are slightly further away from existing habitats, but are close enough to be ecologically connected, and could potentially be used to create stepping-stone habitats that could link up more distant habitat patches.

Three different priority levels are also identified:

- **Priority 1** – buffer and stepping stones close to existing nationally designated sites (e.g. SSSI's) or ancient woodland (for woodland opportunity map only).
- **Priority 2** – areas close to existing locally designated sites (either Local Nature Reserves or Local Wildlife sites).
- **Priority 3** – areas close to undesignated sites in the wider countryside.

As the buffer and stepping stone areas identify portions of land in relation to the ecological network for each habitat, it often results in thin slivers of land being identified adjacent to existing habitats, which bear no relationship to existing fields and boundaries. As habitat creation or restoration projects usually operate on whole fields, an additional step was taken to identify those fields that present buffer and stepping stone opportunities.

### 6.1d. Ecosystem services opportunity maps

Ecosystem services opportunity mapping is a Geographic Information System (GIS) based approach used to identify potential areas for the expansion of key habitats to meet different environmental objectives, whilst taking constraints into account. Opportunities have been mapped to:

- **reduce surface water runoff** (and hence flood risk),
- **reduce soil erosion and improve water quality,**
- **ameliorate air pollution,**
- **reduce noise pollution,**

- **reduce urban heat,**
- **enhance public access to natural greenspace.**

The mapping highlights the top 5%, 10%, 10-25% and 25-50% best opportunity areas for each respective service, indicating four levels of importance, based on the ecosystem services maps. Constrained areas are excluded and, as for the biodiversity opportunity maps, consisted of existing buildings, infrastructure, gardens and water, existing areas of high-quality habitats, and listed heritage assets. Initial opportunity layers were converted into field-scale maps.

The water flow regulation opportunity map identified areas where runoff is currently high and could be reduced through changing land use or habitats. The greatest number and highest priority opportunities generally corresponded to areas with relatively steeper slopes. Areas of bare soils, such as quarries and mineral extraction sites, are also highlighted as priorities throughout the study area.

The water quality (soil erosion) regulation opportunity map focussed on areas where soil erosion is currently high and could be reduced through habitat change. To further prioritise the opportunity areas identified, we gathered information on the overall waterbody status from the Water Framework Directive, for each river waterbody catchment. This data was used to weight the opportunity map, with catchments with worse water quality given greater weighting. Opportunities are focussed close to watercourses and especially on arable land, which is a significant source of soil erosion.

The air pollution regulation opportunity map is demand led, so areas highlighted are those with the highest demand, but currently low supply of the service. This tends to be urban areas and close to main roads, with no existing tree cover.

The noise regulation opportunity map is also demand led, so areas highlighted are those with the highest demand, but currently low supply of the service. As for air pollution regulation, this tends to be urban areas close to main roads, with no existing tree cover.

The local climate (urban heat) regulation opportunity map works in a similar way to the previous two and highlighted areas with the highest demand, but currently low supply of the service. The urban heat island effect is entirely focussed in the larger urban areas, so this map highlights locations in and immediately adjacent to these urban areas which are not currently constrained by buildings and infrastructure, and with no existing tree cover or lakes/ivers.

The accessible natural greenspace opportunity map also focussed on areas with the highest demand, where supply was low. The best opportunities for increasing access to the natural environment were concentrated around the edges of the urban areas, often in rings around the edges of settlements.

### 6.1e. Combined opportunity maps – delivering multifunctionality

In addition to mapping the individual opportunities, it is also possible to examine multiple opportunities, which are areas where new habitat can be created that provides opportunities to enhance more than one of the services mapped previously. These are areas that could deliver multifunctional outcomes. This is assessed by overlaying individual opportunity maps to determine the degree of overlap, examining each of the main habitat types in turn. Here, if an opportunity falls within the top 10% (highest) opportunity it is given a score of 3, an opportunity in the 10-25% (high) zone is given a score of 2, and an opportunity in the 25-50% (medium) zone is given a score of 1. Biodiversity opportunities (Section 1.3) can also score between 1 and 3, with the highest priority score taking precedence where there is more than one opportunity in the same location. The combined score is summed, with the higher the score indicating the greatest priority in terms of delivering multiple benefits<sup>3</sup>.

The maps can be combined in a number of different ways, depending on the objective. When biodiversity enhancement is the primary objective, as will usually be the case for the LNRS, we have restricted combined opportunities to areas that present a biodiversity opportunity. Hence opportunity areas are only included for locations that are ecologically connected to existing habitats. Some of the measures also focus on specific or combined environmental benefits, such as combining the water flow, water quality and woodland biodiversity opportunities together to highlight the best areas to plant woodland to reduce flood risk and enhance water quality (see next section).

## 6.2. Methods for mapping individual measures

The codes shown here relate to the codes used within the LNRS mapping tool and strategy. Many of the methods use methods or outputs described in Section 1, and we have provided cross references to the appropriate sub-heading. All measure outputs are within the study area of Buckinghamshire and Milton Keynes. Any of the measure outputs that overlapped the HS2 safeguarding area or national designations (SSSI, SAC etc) were removed, with the exception of the following measures: M2, M3, M4, M16, M84, and M115.

***M1: Buffer and connect ancient woodlands, while preserving other Priority Habitats such as chalk grassland, floodplain meadow.***

Method:

Woodland opportunities (Section 1.3) around existing ancient woodlands were selected. Large parts of the Chilterns were identified initially, so following consultation with the CNL, opportunities within the Chilterns and Thames Valley LNRS Zones were filtered by those within the Biodiversity Opportunity Areas (BOAs, BMERC supplied dataset). This would enable opportunities for chalk grassland to take precedence in areas outside of the BOAs.

***M2: Ancient woodlands are sensitively managed to enhance biodiversity***

Method:

Ancient woodlands (that are not PAWS, see M3) were selected from the Ancient Woodland Inventory (Natural England dataset) and those that were not within a SSSI but were within unmanaged woodlands from the Forestry Commission's 'Woodland that is sustainably managed' dataset were identified.

***M3: Sensitively convert plantations on ancient woodland sites (PAWS) back to native broadleaved woodlands where appropriate***

Method:

Ancient woodlands designated as 'PAWS' (Plantation on Ancient Woodland Site) in the ancient woodland inventory dataset (Natural England) were selected.

***M4: Ensure ancient/veteran trees are protected from harm and that positive management is carried out where necessary***

Method:

Ancient trees from the Ancient Tree Inventory, that are not classified as 'Lost' were buffered by their Measured girth \* 15.

***M5: Create new woodlands/expand existing woodland using appropriate native species in areas where it delivers multiple benefits***

Method:

The top 8.75% of woodland combined opportunities (Section 1.5) were selected.

***M7: Bring more woodlands into active management***

Method:

Woodland habitats from the basemap (Section 1.1) that intersected unmanaged woodlands from the Forestry Commission's 'Woodland that is sustainably managed' dataset were selected. Only woodlands larger than 5 ha were retained, as including all woodlands that are not currently managed identified too much land and it was felt that the priority should be given to larger woodlands.

***M10: Manage, and safeguard urban woodlands***

Method:

Woodland habitats from the basemap (Section 1.1) that intersected unmanaged woodlands (greater in size than 0.5 ha) from the Forestry Commission's 'Woodland that is sustainably managed' dataset were selected if they were within built-up areas, defined by the Ordnance Survey Open built up areas dataset.

***M11: Plant new urban woodlands and street trees in urban areas***

Method:

Woodland priority 1 and priority 2 opportunities (Section 1.3) were selected where they were within built-up areas (defined by the Ordnance Survey Open built-up areas dataset) and within areas with an Index of Multiple Deprivation (2019) decile score of 5 or lower (i.e. the most deprived 50% of areas). Outputs with an area less than 1 ha were removed.

***M13: Create wet woodlands in areas of high water table, with appropriate management of water levels, if necessary***

Method:

Woodland priority 1 and priority 2 opportunities (Section 1.3) that were within a floodplain (so suitable hydrological conditions could be created) were selected.

***M15: Connect wood pasture***

Method:

Wood pasture opportunities (Section 1.3) that were not within a SSSI were selected. These were areas that would be ecologically connected to existing wood pasture sites.

***M16: Restore wood pasture***

Method:

Wood pasture habitats from the basemap (Section 1.1) were selected. Along with additional areas around Burnham Beeches from the Natural England wood pasture dataset.

***M20: Create new species-rich grasslands (where possible to expand, buffer or connect existing species-rich grassland) and restore historical/remnant grassland areas***

Method:

Semi-natural grassland priority 1 and priority 2 opportunities (Section 1.3) were selected.

***M21: Create lowland meadow adjacent to existing or historical lowland meadow sites***

Method:

Priority 1 and priority 2 opportunities around existing lowland meadows (Section 1.3) were selected.

***M23: Create a mosaic of heathland habitats (dry heath, wet heath, acid grassland, scrub) in areas where it was historically known to exist***

Method:

Opportunity mapping for combined heathland and acid grassland, was run and priority 1 and priority 2 opportunities (Section 1.3) were selected.

***M24: Restore existing heathland habitats (dry heath, wet heath, acid grassland and scrub).***

Method:

Existing heathland and acid grassland habitats from the basemap (Section 1.1) were selected.

***M26: Create wildlife-rich chalk and limestone grassland in areas with the appropriate soil type***

Method:

This combined opportunity mapping around existing calcareous grassland (selecting priority 1 and 2 opportunities), with existing semi-natural grassland locations identified from the basemap (Section 1.3) that were situated on chalk and limestone geology (from BGS geology

data). The latter are areas that are slightly degraded so do not contain calcareous grassland communities at present, but as they already contain semi-natural communities and lie on the correct geology, are considered suitable target areas for re-creation of calcareous grassland.

***M27: Restore wildlife-rich chalk and limestone grassland to support insects, including pollinators, for greater species diversity***

Method:

Existing calcareous grasslands from the basemap (Section 1.1) were selected.

***M29: Create grassland scrub mosaic habitat***

Method:

This identified where there were overlaps between priority 1 and 2 woodland opportunities and priority 1 and 2 semi-natural grassland opportunities (Section 1.3). Hence these are areas that would be suitable for both habitats and creating a mosaic of habitats (including scrub) would provide the best ecological outcome.

***M30: Restore and better manage orchards, including traditional orchards, by following best practice guidelines to encourage wildlife-rich habitat***

Method:

All orchards, including traditional and commercial orchards, were selected from the basemap (Section 1.1).

***M31: Plant new orchards where appropriate***

Method:

Opportunity mapping (Section 1.3) was run for sites that were identified as traditional orchards. Those within the Chilterns and Thames Valley LNRS Zones were only selected if they were within one of the Biodiversity Opportunity Areas (BMERC supplied dataset). See the description in M1 for further details.

***M32: Restore and maintain existing open mosaic habitats and encourage new areas to establish***

Method:

Open mosaic habitats from the open mosaic dataset from Natural England were selected.

***M40: Improve connectivity of rivers with their floodplains***

Method:

The River, Canal and Surface Water Transfer Water Bodies Cycle 2 (Lines) from the Water Framework Directive dataset were buffered by 50m. This dataset identifies all significant rivers in England.

***M42: Restore and manage floodplain meadows using traditional methods to help to maintain diverse plant and animal communities while supporting natural flood management***

Method:

We did not have a dataset showing floodplain meadows in the area. As a proxy we therefore identified existing neutral grasslands from the basemap (Section 1.1) that were situated within floodplains.

***M43: Restore and maintain a variety of wetland types***

Method:

Wetland habitats from the basemap (Section 1.1) were selected. This included wet grassland, floodplain grazing marsh, lowland fen, swamp (reedbed), and wetland mosaic habitats.

***M44: Create and connect a variety of new wetlands***

Method:

Wetland priority 1 and priority 2 opportunities (Section 1.3) were selected.

***M47: Increase the area of woodlands where they can intercept the flow of surface run-off of water and capture sediment to improve water quality in rivers***

Method:

Woodland biodiversity opportunities were overlain with the top 5% opportunities to reduce soil erosion (enhance water quality), and the top 5% opportunities to reduce surface water runoff (reduce water flow). All identified areas therefore present opportunities for enhancing woodland biodiversity, plus environmental benefits for either water quality or water flow.



***M54: Restore and enhance chalk streams for biodiversity, water retention and to reduce pollution***

Method:

Water courses from the habitat basemap (Section 1.1) and identified as chalk streams by the Natural England dataset were selected.

***M55: Extend chalk streams riparian (edge of watercourse) habitat***

Method:

Water courses identified as chalk streams in M54 (above) were buffered by 50m and the existing water course removed. Constrained areas (including buildings, infrastructure, gardens, existing high quality habitats, and historic sites) within these buffers were then deleted from the area selected.

***M58: Enhance existing areas of floodplain grazing marsh***

Method:

Floodplain grazing marsh habitats from the basemap (Section 1.1) were selected.

***M59: Create new areas of floodplain grazing marsh***

Method:

Opportunity mapping for floodplain grazing marsh and wet grassland was carried out (Section 1.3) and priority 1 and priority 2 opportunities were selected.

***M73: Manage farmed floodplains less intensively to improve their value for biodiversity***

Method:

Arable and improved (agricultural) grassland habitats from the basemap (Section 1.1) were selected if within Flood Zone 2 (Environment Agency flood risk assessment dataset).

***M75: Employ land management practices to slow surface runoff, capture sediment, reduce soil erosion and chemical runoff.***

Method:

Opportunity mapping to reduce soil erosion (enhance water quality), was combined with opportunity mapping to reduce surface water runoff (reduce water flow) (Section 1.4). Only areas that presented very good opportunities to deliver both environmental benefits at the same location (with a score of 5 or 6) were selected

***M77: Manage and maintain existing areas of green space and blue space (e.g. rivers, canals, waterside areas) better for wildlife***

Method:

Green infrastructure was identified using the Natural England GI dataset and features were then selected where they were within built-up areas (defined by the Ordnance Survey Open built-up areas dataset) and within areas with an Index of Multiple Deprivation (2019) decile score of 5 or lower (i.e. the most deprived 50% of areas). Any green infrastructure features with an area less than 1 ha were also removed.

***M83: Create new ponds and restore existing wetland areas on public open space***

Method:

The output of M77 (above) was taken as the starting point (green and blue space in more deprived urban areas), and from these, pond and wetland habitats from the basemap (Section 1.1) that were within the indicative floodplain (identified using EA Flood Zone 2) were selected.

***M84: Manage high quality wildlife sites at risk of development and create and manage reasonable buffer areas to separate high quality wildlife sites from development***

Method:

Areas of Particular Importance to Biodiversity (method defined by the Natural England data standards guidance) that were within or adjacent to site allocations for development across Buckinghamshire and Milton Keynes were identified. Allocations were taken from the most recent published Local Plans across Buckinghamshire and Milton Keynes, as well as the HS2 Safeguarding Zone<sup>4</sup>.

***M107: Employ nature-based solutions such as tree-planting where appropriate to alleviate the impacts of air pollution on nature***

Method:

Woodland biodiversity opportunities were combined with the top 5% of air quality regulation opportunities (Section 1.5).

***M115: Take action to restore nature in target areas for important species.***

Method:

Target areas defined by BMERC were selected. The methodology for the creation of the target areas is explained in the species methodology appendix.