Local Nature Recovery Strategy

for Hampshire

2025

Part 1: Introduction and Description of Strategy Area

Hampshire County Council

hants.gov.uk

Contents

Acknowledgements 3

Forewords 4

Executive Summary 6

1. Introduction 9

What is the Local Nature Recovery Strategy for Hampshire? 10

Who has helped prepare the LNRS? 14

Delivering the LNRS 14

Delivering wider environmental benefits 15

Enabling partners to deliver nature recovery 16

Areas where nature recovery action has been or is being taken 18

2. Description of the strategy area and its biodiversity 19

2.1. Summary of Hampshire's natural environment 20

National Character Areas (NCA) 20

Sites designated for their nature conservation importance 22

Protected landscapes and National Trails 23

Rivers and wetlands 25

Coastal and marine 26

Woodland and Wood Pasture 27

Heathlands 29

Grasslands 30

Farmland 31

Open mosaic habitat on previously developed (brownfield) land 32

Species 33

2.2. Workshop-focused areas,habitats and themes 34

Thames Basin Heaths and Lowlands and Wealden Heaths 35

Central Chalk Belt 42

North Hampshire 48

New Forest and Eastern Dorset Heaths 53

South Hampshire Lowlands and South Coast Plain 60

Rivers and wetlands 67

Coastal and marine 73

Woodlands and forestry 79

Greenspace, health and access to nature 83

Species recovery 89

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Hampshire County Council would also like to thank the many additional individuals and organisations who contributed significant time, energy and enthusiasm to the preparation of the LNRS through the sharing of their expertise, data, and more.

Forewords

"As the Leader of Hampshire County Council, I am proud to support our Local Nature Recovery Strategy. This initiative is crucial for preserving Hampshire's rich biodiversity and ensuring a sustainable future for our communities. By working together, we can restore natural habitats, protect wildlife, and enhance the beauty of our countryside for generations to come."

Cllr Nick Adams-King, Leader of Hampshire County Council

"The New Forest National Park Authority welcomes the production of the LNRS for Hampshire, which will help nature to recover through partnership working across the county. Hampshire's natural environment delivers a wide range of benefits to local communities and businesses and the National Park Authority welcomes the targeted priorities set out in the Strategy."

Alison Barnes, Chief Executive of New Forest National Park Authority

"Nature is in crisis and we only have a short time left to halt biodiversity decline and protect 30% of land and sea for nature by 2030. The Local Nature Recovery Strategy for Hampshire (LNRS) is a vital tool to drive real, urgent action, including influencing planning and investment decisions across the county. To succeed, the LNRS must be supported by robust delivery mechanisms, ambitious targets, and strong monitoring to track progress, along with clear accountability and good governance. We look forward to seeing the LNRS becoming a real road map to recovery, driving forward the restoration of ecosystems, improving the protection of our unique landscapes and supporting a resilient, prosperous, healthy nature-positive economy."

Debbie Tann MBE, Chief Executive of Hampshire & Isle of Wight Wildlife Trust

"We really welcome this opportunity to contribute towards the formation of the first Local Nature Recovery Strategy for Hampshire. The National Park, a third of which is in Hampshire, has some very ambitious goals around nature recovery and turning the tide on biodiversity loss. But we know we can't do it alone – and that's why this Strategy is so important as we'll only be able to make a difference by working together. Having a clear plan of action and a robust spatial strategy are absolutely vital to ensuring we have bigger, better and more joined-up habitats to bring about long-lasting nature recovery."

Siôn McGeever, Chief Executive of the South Downs National Park Authority

"Being part of the process of creating the Local Nature Recovery Strategy has been hugely beneficial for the council. The partnership work and information sharing has been insightful and productive, and the end product ties in with our own Nature Improvement Plan (NIP) as part of our response to the Climate and Nature Emergencies as the council moves to become greener faster. Our own NIP will have meaningful, measurable and ambitious targets for nature recovery based on the LNRS."

Rick Smith, Service Lead, Sustainability and Natural Environment at Winchester City Council

"East Hampshire District Council has worked closely with the County Council in our role as a Supporting Authority. It is important for the council to help shape the content of the LNRS based on the priorities within our local area and the key role we will have in helping to deliver the LNRS. We have provided local information to help inform the plan and, in turn, the LNRS will help inform the best places for Biodiversity Net Gain offsite habitat creation and enhancement in East Hampshire as well as nature recovery more widely."

Julia Nethercott, Principal Ecologist at East Hampshire District Council

"The LNRS is key for providing a vision for nature recovery across Hampshire"

Jayson Grygiel, Planning Policy Manager at Gosport Borough Council

"The LNRS for Hampshire is there to help landowners, local authorities, developers and anyone else who manages land, to take action for nature. It is a thorough and well evidenced strategy, informed by the people and organisations who understand our local landscapes. It identifies areas and suggests measures to protect and enhance biodiversity, and Basingstoke and Deane Borough Council welcomes it as a useful aid to deliver actions under our Biodiversity Strategy 2023-29, such as achieving biodiversity net gain and wider nature recovery in the borough."

Cllr Chris Tomblin, Cabinet Member for Climate and Ecological Emergency at Basingstoke and Deane Borough Council

"Southampton City Council is very proud to have supported Hampshire County Council in this extremely important piece of work. The LNRS will help deliver Southampton's Green Infrastructure Strategy, guide BNG in areas of the city that most need it, and strengthen the message around the importance of nature and the urgency of nature recovery. I look forward to seeing the effects of this strategy in Southampton."

Cllr John Savage, Cabinet Member for Environment and Net Zero at Southampton City Council

Executive Summary

Hampshire has a beautiful and varied landscape with an impressive diversity of unique and important habitats. These include ancient woodlands, wildflower meadows, iconic chalk streams, species-rich downland, important heathland mosaics including the New Forest, and coastal and marine habitats. The variety of habitat types within Hampshire is reflected in its rich flora and fauna. The description of the area's natural environment, set out in this Local Nature Recovery Strategy (LNRS), confirms the importance and value of Hampshire for biodiversity and nature conservation.

- Like the rest of the UK, the natural environment and biodiversity across the area has declined significantly over the last 50 years and is under continued threat. There has been a decline in the quality, variety, and quantity of natural areas in Hampshire due to multiple pressures from a growing human population. These threats include increased development, agricultural and land use changes, invasive species, pollution, recreational pressure, and climate change.

- LNRSs, introduced by the Environment Act 2021, are a new system of plans for nature recovery. Their role is to provide a nationwide, practical solution for nature recovery. A total of 48 LNRSs have been developed mostly at the county level, which join seamlessly to cover the whole of England. They are a key mechanism for planning and delivering the National Nature Recovery Network.

- LNRSs are evidence-based, locally led, and collaborative, following statutory guidance and meeting LNRS Regulations. They create a network of shared strategies that public, private and voluntary sectors can all help to deliver. They also operate within a national and local policy framework, and should contribute to national environmental objectives, commitments and targets for nature recovery and other environmental goals.

- LNRSs target non-designated sites to prioritise and guide habitat creation, restoration, and enhancement where it will have the most significant impact for nature's recovery. LNRSs aim to build upon and connect designated sites by identifying opportunities on other land, to create a larger, more cohesive ecological network.

- As responsible authority, Hampshire County Council has developed the LNRS for Hampshire by

working closely with the supporting authorities[1]. These include the local planning authorities of Portsmouth and Southampton City Councils, Hampshire district and borough councils, the New Forest and South Downs National Park Authorities, and Natural England. We also engaged with other local partners, stakeholders, agencies, organisations and communities to learn about their priorities and how they can support nature recovery.

- Engagement and consultation has included neighbouring responsible authorities to ensure that the LNRS for Hampshire integrates with adjacent LNRSs. These include the Isle of Wight Council, Dorset Council, Wiltshire Council, Royal Borough of Windsor and Maidenhead Council (acting for Berkshire), Surrey County Council, and West Sussex County Council.

- The Strategy identifies locations to create, restore and enhance habitats, providing the best opportunities to deliver nature's recovery. This is determined based on the connectivity of existing habitats and where there are opportunities to improve this further. The strategy will help to target future effort and funding. It also provides a range of options and evidence to inform decisions in the form of recommendations for delivery. The LNRS does not dictate how land is used or limit the choices land managers have on their land.

- In delivering nature recovery, the Strategy also supports wider environmental, social and economic benefits, such as flood protection, cleaner water, better air quality, carbon capture, and improved health and wellbeing.

- Using extensive mapping and data from a wide range of sources, this Strategy confirms existing **A**reas of **P**articular **I**mportance for **B**iodiversity (featured on the APIB[2] map). It then identifies where there are opportunities for recovering and enhancing biodiversity through habitat creation, improved management and better ecological connectivity, known as **A**reas that **C**ould become of importance for **B**iodiversity (featured on the ACB[3] map). Potential measures (actions) that will deliver opportunities for nature recovery are set out in the Measures map[4], which combines both ACBs and non-statutory APIBs that are known to be in poor condition.

- Using this mapping and data, informed by collective expert knowledge, the LNRS identifies where habitats can be, and are being, created or restored. These include woodlands, grasslands, heathlands, freshwater areas, river buffers, coastal zones, and urban habitats.

- Through extensive consultation, the LNRS has developed a set of priority outcomes (the nature recovery outcomes communities want to achieve) and suggest actions (potential measures) to deliver these priorities. These actions will help improve, connect and expand important natural areas. The LNRS provides guidance for organisations and individuals on where to focus their efforts, and what actions to take, and incentivises these actions to achieve nature recovery.

- ACBs comprise habitat opportunity areas, alongside other sites drawn from a variety of plans and strategies, and show where and how we can deliver the Lawton principles of "bigger", "better" and "more connected" spaces for nature, to create resilient and coherent ecological networks.

- Environmental Land Management (ELM) schemes, such as Countryside Stewardship schemes and

1 The LNRS Regulations created the role of 'supporting authority' defined as other local planning authorities (including National Park Authorities) in the Strategy area together with Natural England.
2 APIB map – Areas of Particular Importance for Biodiversity map (Part 2: Priorities and measures)
3 ACB map – Areas that Could become important for Biodiversity map (Part 2: Priorities and measures)
4 Measures map – provided in Part 2: Priorities and measures.

Sustainable Farming Incentive, are available to assist farmers and landowners in implementing nature recovery initiatives. These schemes offer payments for a wide range of actions that support the local natural environment.

- Another important mechanism to support the delivery of the LNRS is biodiversity net gain (BNG). BNG provides developers and landowners the opportunity to contribute positively to the implementation of the LNRS. All sites mapped on the Measures Map offer an uplift in the value of BNG biodiversity units compared with other sites[5]. Additionally, nutrient mitigation funding and Solent wader and brent geese strategy mitigation funding are important delivery mechanisms for biodiversity projects.

- LNRSs will have an important role in planning, with local planning authorities having a legal duty to have regard to the Strategy. This means that the information within the LNRS may be a material consideration when developing plan documents and making planning decisions.

- The LNRS is an essential tool, underpinned by sound evidence, to help everyone who is committed to nature's recovery reverse the decline in Hampshire's habitats and species, and help deliver wider environmental benefits. The LNRS will be periodically updated and its delivery led by a nature recovery partnership, with opportunities for everyone to get involved. Details of how the LNRS will be delivered will be set out on the LNRS for Hampshire website[6].

Credit: Nicky Court

5 See Appendix 3 for more details.

6 **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/hampshire-strategy**

1. Introduction

Introduction

What is the Local Nature Recovery Strategy for Hampshire?

The Local Nature Recovery Strategy (LNRS) for Hampshire is a vision for a joined-up network of terrestrial, freshwater, and coastal habitats where nature and people can thrive. The primary purpose of the Strategy is to identify locations to create, restore and enhance habitats, across Hampshire, that provide the best opportunities to deliver nature's recovery, and with a focus on areas outside of designated sites. This is based on the connectivity of existing habitats and where there are opportunities to improve ecological connectivity further. It is also about driving coordinated, practical action and investment to help nature recover.

England is widely considered to be one of the most nature-depleted countries in the world, following historic and ongoing declines[7]. The decline in the country's biodiversity[8] is primarily due to habitat loss, fragmentation and degradation resulting from human land use competing with nature. These continuing threats include increased development, agricultural and land use changes, invasive species, pollution, recreational pressure, and climate change.

The government has made legally binding commitments to end these declines and to help nature recover. This is important for nature's own sake and for all the things that we rely on nature for, like fresh air, clean water and climate regulation, to food, medicines, and more. Nature recovery provides essential natural capital infrastructure to improve ecological, human and climate resilience. For nature to recover however, targeted, co-ordinated and collaborative action is required.

Local Nature Recovery Strategies (LNRSs), introduced by the Environment Act 2021[9], are a new system of plans for nature recovery. They aim to provide a county-wide, practical solution for nature recovery. A total of 48 LNRSs have been developed at the county level, which join together seamlessly to cover the whole of England[10]. They are key to planning and delivering the National Nature Recovery Network[11].

LNRSs target non-designated sites to prioritise and guide habitat creation, restoration, and enhancement where it will have the most significant impact for nature's recovery. While existing designated sites like Sites of Special Scientific Interest (SSSIs) or Local Wildlife Sites are crucial, LNRSs aim to build upon and connect them by identifying opportunities on other land, to create a larger, more cohesive ecological network.

The Environment Act requires that each Strategy contains:

7 State of Nature: England (2023) - **https://stateofnature.org.uk/wp-content/uploads/2023/09/TP26054-SoN-England-summary-report-v6.pdf**
8 Biodiversity refers to the variety of all life forms, including plants, animals, fungi, and micro-organisms.
9 Environment Act 2021 - **https://www.legislation.gov.uk/ukpga/2021/30/contents**
10 **Map of local nature recovery strategy (LNRS) areas and responsible authorities**
11 The Nature Recovery Network - **https://www.gov.uk/government/publications/nature-recovery-network**

1. A statement of biodiversity priorities, including:

   - A description of the strategy area and its biodiversity.
   - Opportunities for recovering or enhancing biodiversity in the strategy area.
   - Priorities for biodiversity recovery or enhancement, considering contributions to other environmental benefits.
   - Proposals for potential measures related to those priorities.

2. A local habitat map that identifies:

   - Areas that are of particular importance for biodiversity (APIB): nationally and internationally designated sites, local wildlife sites known as Sites of Importance for Nature Conservation (SINCs), Local Nature Reserves (LNRs), and irreplaceable habitats such as ancient woodland, lowland fen and coastal saltmarsh and sand dune.

   - Areas that could become of particular importance for biodiversity (ACB) and could make a contribution to other environmental benefits.

   - Actions that are required to achieve the priorities mapped on the Measures map.

LNRSs are evidence-based, locally led, collaborative, and follow statutory guidance[12], and meet LNRS Regulations[13]. This creates a network of shared strategies that public, private, and voluntary sectors can all help to deliver. The relationship between LNRSs, national policy and nature recovery objectives is set out in Appendix 1.

LNRSs will have an important role in planning, with local planning authorities having a legal duty to have regard to the Strategy[14]. This means that the information within the LNRS may be a material consideration when developing plan documents and making planning decisions. Planning practice guidance[15] advises that local planning authorities should be aware of those areas mapped and identified in the LNRS, and the measures proposed in them, and consider how these should be reflected in their local plan. In doing so, they should consider what safeguarding would be appropriate to enable the proposed actions to be delivered. This will enable local planning authorities to support the best opportunities to create or improve habitat to conserve and enhance biodiversity, including where this may enable development in other locations. The LNRS can also inform the preparation of Neighbourhood Plans and Spatial Development Strategies.

LNRSs do not designate land for specific uses. Instead, they highlight areas that hold potential for enhancing biodiversity. This process does not restrict development, or prevent land from being used - it aims to support informed decision-making that balances environmental and development needs.

LNRSs also play a critical role in guiding Biodiversity Net Gain (BNG), supporting offsite gains to be delivered in a way that maximises biodiversity benefits. Areas in the LNRS with mapped measures carry 'strategic significance' within the BNG metric which provides additional unit value to those habitats identified. Local planning authorities therefore have an important role in preparing the LNRS for their area to help identify suitable offsite biodiversity gain sites.

Natural England has led the government's involvement and has worked alongside each of the

12 Local nature recovery strategy: what to include - **https://www.gov.uk/government/publications/local-nature-recovery-strategy-what-to-include**
13 The Environment (Local Nature Recovery Strategies) (Procedure) Regulations 2023 - **https://www.legislation.gov.uk/uksi/2023/341/made**
14 The Environment Act 2021 - **https://www.legislation.gov.uk/ukpga/2021/30/section/102**
15 Planning practice guidance - **https://www.gov.uk/guidance/natural-environment**

'responsible authorities'[16] to help shape the strategies and ensure overall consistency of LNRS preparation across England. Hampshire County Council was appointed as the responsible authority for the LNRS for Hampshire. The preparation of each LNRS has also been supported by the Environment Agency and the Forestry Commission, along with the local planning authorities.

The preparation of the LNRS for Hampshire has followed a systematic and rigorous approach. Figure 1.1, below, is an outline of the process undertaken to create and shape the LNRS for Hampshire's priorities, measures and mapping, and follows the five step process proposed by Defra within LNRS regulations and statutory guidance[17].

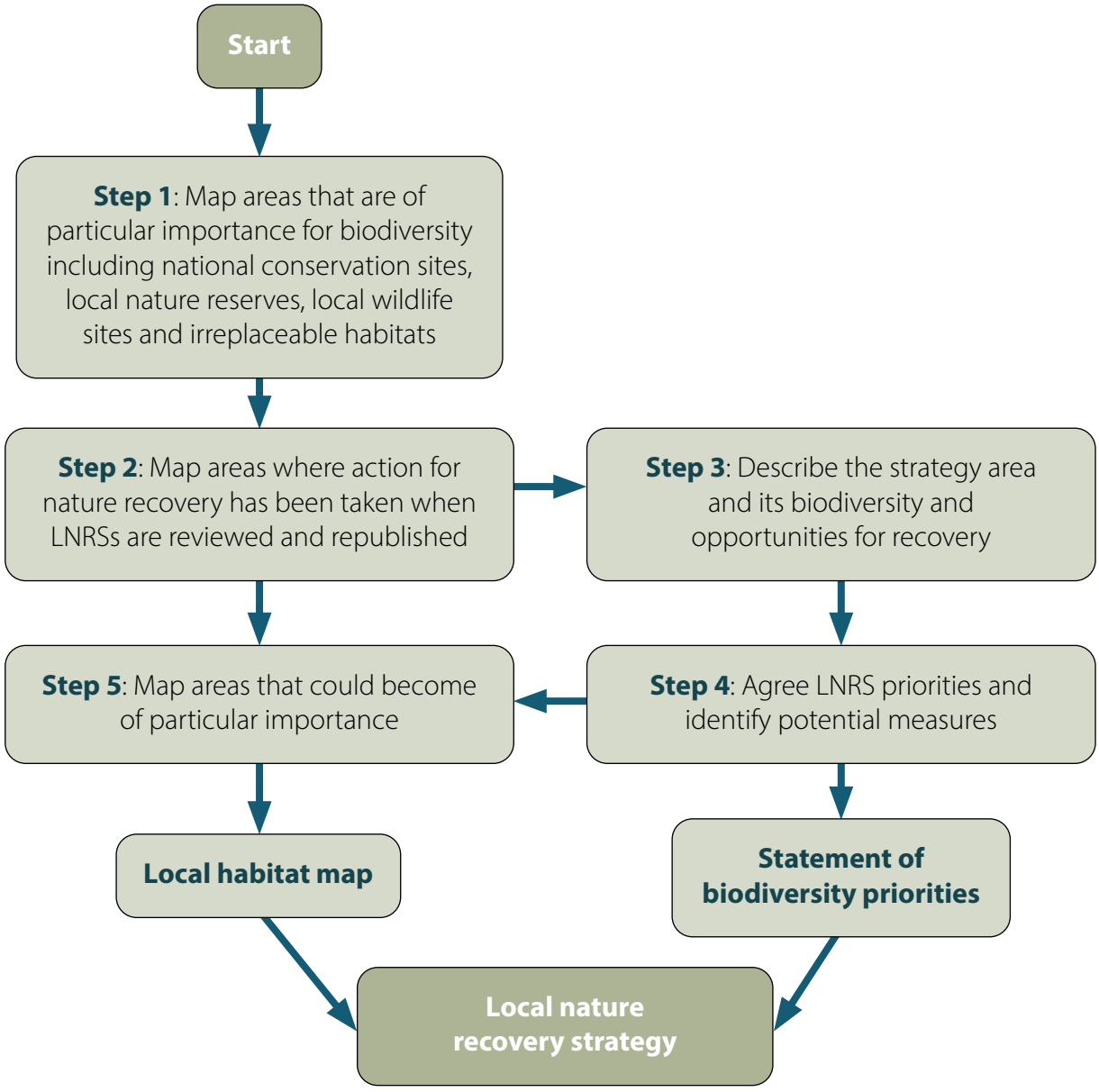

Figure 1.1: LNRS Regulations and Guidance process diagram

16 The Secretary of State for Environment, Food and Rural Affairs (DEFRA) has appointed 'responsible authorities' to lead the preparation of the strategy for each area.

17 **https://assets.publishing.service.gov.uk/media/6421a4bdfe97a8001379ecf1/Local_nature_recovery_strategy_statutory_guidance.pdf**

The geographical extent of this LNRS is the county of Hampshire. This includes the two cities of Southampton and Portsmouth and the parts of the New Forest National Park and South Downs National Park within the county. As Hampshire has a coastline, the government has confirmed that the LNRS boundary extends to the intertidal zone as far as the mean low water mark[18]. The total LNRS for Hampshire area constitutes 385,435ha.

Nevertheless, Hampshire's marine environment is summarised in Sections 2.1 and 2.2. This is due to the importance of the Solent and Hampshire's estuaries and harbours for biodiversity, and the impact of land-based activities on the marine environment and vice versa.

As nature does not relate to administrative boundaries, in the preparation of the LNRS, full account has been taken of the natural environment and associated LNRSs of adjacent areas.

The LNRS for Hampshire is split into five parts as follows:

- Part 1: Introduction and description of the strategy area.
- Part 2: Priorities and measures.
- Part 3: Species recovery.
- Part 4: Technical Appendices.
- Glossary

The Statement of Biodiversity Priorities is contained in Parts 1 to 3, and the Local Habitat Map (consisting of a number of maps in static document form), is embedded within Part 2. The Local Habitat Map can also be viewed in an interactive online format on the LNRS webpages[19]. The map includes all geographically located measures.

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18 Defra statutory guidance requires that LNRS follow administrative boundaries into the inter tidal zone only to mean low water. The Marine Management Organisation (MMO) will explore how spatial planning for marine nature recovery might develop in the future.

19 Local Habitat Map - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/hampshire-strategy**

Who has helped prepare the LNRS?

The County Council has developed the LNRS for Hampshire with key local partners and engaged with a wide range of experts, stakeholders, agencies, organisations and communities across Hampshire and adjacent areas who are interested in helping to deliver nature recovery.

As the responsible authority, the County Council has worked closely with the supporting authorities[20] of Portsmouth and Southampton City Councils, local planning authorities in Hampshire, the New Forest National Park Authority, South Downs National Park Authority, and Natural England.

A list of the key stakeholders involved in the preparation of the LNRS is provided in Appendix 2.

The County Council undertook early engagement with key stakeholders through the delivery of a series of formal thematic and community-based workshops. Outputs from the workshops are available on the LNRS for Hampshire webpages[21]. Additionally, informal and formal consultation has been undertaken with supporting authorities and other key stakeholders.

In conjunction with the workshops, a public survey was launched. It ran for three months and explored the views of Hampshire's communities about their priorities for nature recovery and where they would like to see improvements.

Neighbouring LNRS responsible authorities were consulted, including the Isle of Wight Council, Dorset Council, Wiltshire Council, Royal Borough of Windsor and Maidenhead Council (acting on behalf of the Berkshire unitary authorities), Surrey County Council, and West Sussex County Council. Detail of LNRS engagement, including the workshops and consultation exercises, is provided in Appendix 2.

The County Council is also a member of the London and South East England Responsible Authority Network which provides an opportunity for authorities to share information, expertise and best practice, during LNRS preparation and beyond.

Delivering the LNRS

The Strategy will be in place for between three and 10 years before it is updated. During that time, the responsible authority has an important role in delivering its priorities. This role includes:

- Leading and convening a partnership focussed on delivering the Strategy, building on existing governance and partnerships.
- Promoting the use of the Strategy in other policy development and decision making.
- Identifying, developing and publicising projects that will contribute to delivery of the Strategy.
- Tracking activities or projects that are delivering the Strategy's priorities that are being funded outside of central government funding schemes and sharing this information with Natural England.

20 The LNRS Regulations created the role of 'supporting authority' defined as other local planning authorities (including National Park Authorities) in the Strategy area together with Natural England.

21 **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**

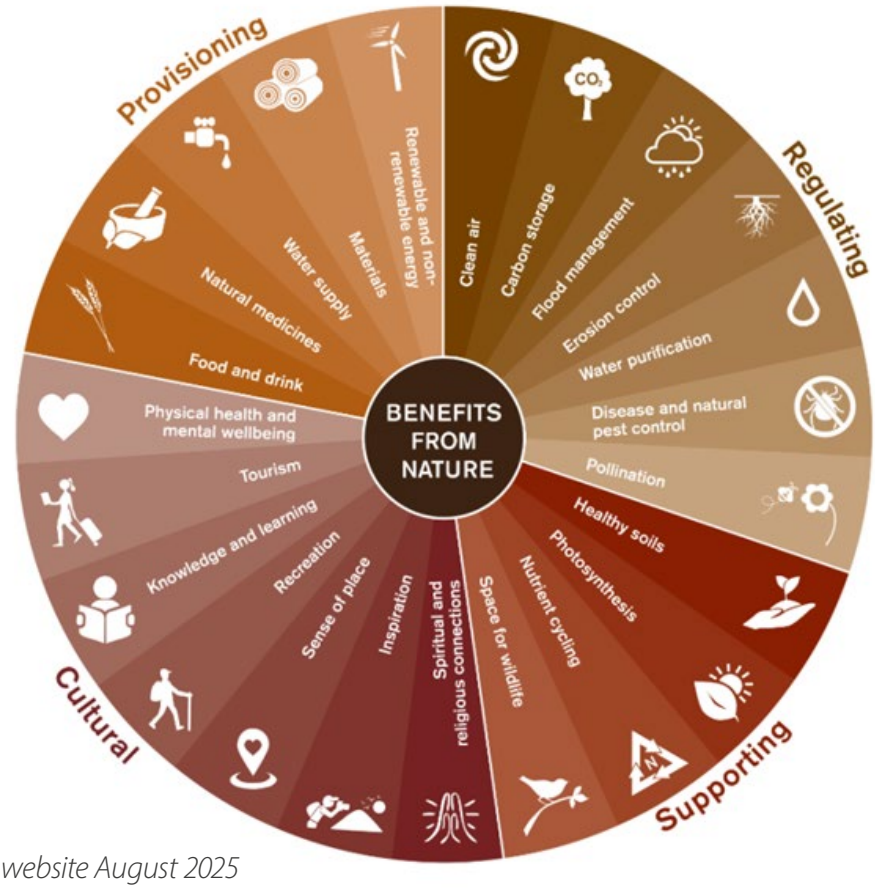
Defra has provided funding to enable work on the transition to delivery, to start following publication of the Strategy. Collaboration across Hampshire is well established in this space, providing a good foundation to facilitate delivery of nature recovery projects across the county.

Delivering wider environmental benefits

In delivering nature recovery, the Strategy also seeks to deliver wider environmental, social and economic benefits, such as flood protection, cleaner water, better air quality, resilience to climate change, carbon capture, and improved health and wellbeing. In this LNRS, these will simply be referred to as wider environmental benefits. They are also referenced throughout the Strategy and are listed in detail in Part 2: Priorities and measures, against each priority outcome. As such, in addition to recovering nature, the Strategy will contribute to thriving communities.

Nature recovery significantly enhances the ecosystem services (benefits that individuals and communities receive) from nature. Figure 1.2 shows the range of ecosystem services delivered by nature. Nature recovery also increases resilience to a number of environmental and man-made pressures and threats, for both people and wildlife.

Figure 1.2: Land ecosystem services wheel



Source: NatureScot website August 2025

Nature recovery provides opportunities to apply nature-based solutions (NbS) to a range of societal issues, such as flooding, by providing natural alternatives to engineered and artificial solutions, including sustainable drainage systems (SuDS). Working with nature in this way provides a more cost-effective and sustainable approach, which at the same time helps to recover nature.

Restoring natural habitats boosts biodiversity, which in turn supports essential functions like pollination, water purification, and soil fertility. This biodiversity creates ecosystems that are better able to withstand environmental and man-made stressors such as climate change and pollution. Additionally, diverse plant communities:

- Sequester more carbon, helping to mitigate climate change.
- Regulate water cycles, which reduces flood and drought risk.
- Reduce soil erosion, which maintains productivity of farm businesses.
- Improves air quality, which benefits overall environmental health and human well-being.
- Provides cooling in periods of high temperatures.

Restoring degraded landscapes, urban and rural, through nature recovery transforms them into more biodiversity-rich multifunctional spaces. These landscapes then offer recreational and educational opportunities, fostering community connections with nature and raising conservation awareness.

Greater access to nature provides significant health benefits, ranging from reduced stress to improvements in physical health. Additionally, by enhancing aesthetic, cultural and recreational values, nature recovery can promote ecotourism, which generates economic benefits while encouraging sustainable land use. Overall, nature recovery supports more resilient ecosystems and communities, helping to address global environmental challenges.

The nature recovery and wider environment benefits that the LNRS seeks to deliver are listed against each priority outcome in Table 1 of Part 2: Priorities and measures.

Enabling partners to deliver nature recovery

The Strategy will help to target future effort and funding. It therefore provides a range of options and evidence to inform decisions in the form of recommendations for delivery. The LNRS does not dictate how land is used or limit the choices land managers have on their land. It also does not provide new protections for the habitats, species or places that are collectively prioritised.

The LNRS will:

- Guide investment into local priorities for protection and enhancement.
- Help shape how future funding for farming and land management such as the Environment Land Management (ELM) schemes will be used.
- Map areas of opportunity for the use of nature-based solutions to wider environmental problems like flooding, climate change mitigation and adaptation or poor water quality.
- Guide the delivery of mandatory biodiversity net gain (BNG) investments across the strategy area (see Appendix 3).
- Provide a source of evidence for local planning authorities, helping these authorities understand locations important for conserving and restoring biodiversity.

For landowners and farmers, the LNRS:

- Identifies the highest priority areas for habitat restoration, creation and connectivity.
- Aids in pinpointing habitat opportunities across farmland, offering initial guidance on the most suitable habitat types for those areas.
- Provides guidance on actions to take forward on farmland and woodland to achieve nature recovery and to transition towards more

sustainable farming practices.

- Could provide a focus for ELM schemes[22] such as the Landscape Recovery and Countryside Stewardship.

For community groups and individuals, the LNRS:

- Assists in pinpointing areas within the local community to prioritise for nature recovery efforts.
- Provides guidance for focusing on habitat creation and enhancement initiatives.
- Aids in aligning neighbourhood plans with their objectives.
- Can support funding applications for nature recovery projects.
- Aids in the establishment of new local community groups dedicated to nature recovery efforts.
- Provides health benefits and nature connection for wellbeing.

For local authorities, the LNRS:

- Helps in determining locations of on-site and off-site potential for BNG[23], nutrient mitigation, and mitigation for important wader and brent geese[24] sites that support the Solent Special Protection Areas (SPAs).
- Assists in aligning local plan green and blue infrastructure delivery with LNRS goals, contributing to a Hampshire-wide, collaborative plan between local authorities.
- Aids in planning and site allocation decisions through data-driven site identification for nature recovery.
- Helps in identifying sites for green and blue space delivery, assisting in meeting local targets.

22 Environmental Land Management (ELM) scheme – see Appendix 3
23 See Appendix 3
24 There are three sub-species of brent geese. Only the sub-species: dark-bellied brent geese (Branta bernicla bernicla) occurs regularly in the Solent. For ease, reference to this species uses simply brent geese.

For environmental non-governmental organisations (NGOs), the LNRS:

- Prioritises areas for nature recovery.
- Aids in advancing the delivery of their projects.
- Fosters collaborative efforts across the county, generating greater ambition for nature recovery.
- Supports funded schemes such as ELM schemes, enabling large-scale positive changes for nature.
- Furthers the promotion of their efforts for nature and wildlife recovery.
- Facilitates the connection of long-term goals for nature's recovery.

For developers, the LNRS:

- Provides guidance on biodiversity priorities and measures to be incorporated into development projects.
- Provides support with delivering BNG[25], by highlighting key land for nature recovery delivery, which could also be suitable sites for off-site BNG.
- Provides a series of potential measures for embedding nature into urban infrastructure. These can have multiple benefits for new developments, including stormwater management, climate resilience, urban cooling, and overall enhancing the quality and sustainability of built environments.

Some of the mechanisms available to help support developers, landowners, farmers, communities and others to improve biodiversity, are set out in Appendix 3.

The maps (Part 2: Priorities and measures) indicate where actions could be carried out that will restore, create, expand and connect existing spaces for nature. These maps are also available in an online interactive format on the LNRS for Hampshire website[26], providing greater detail.

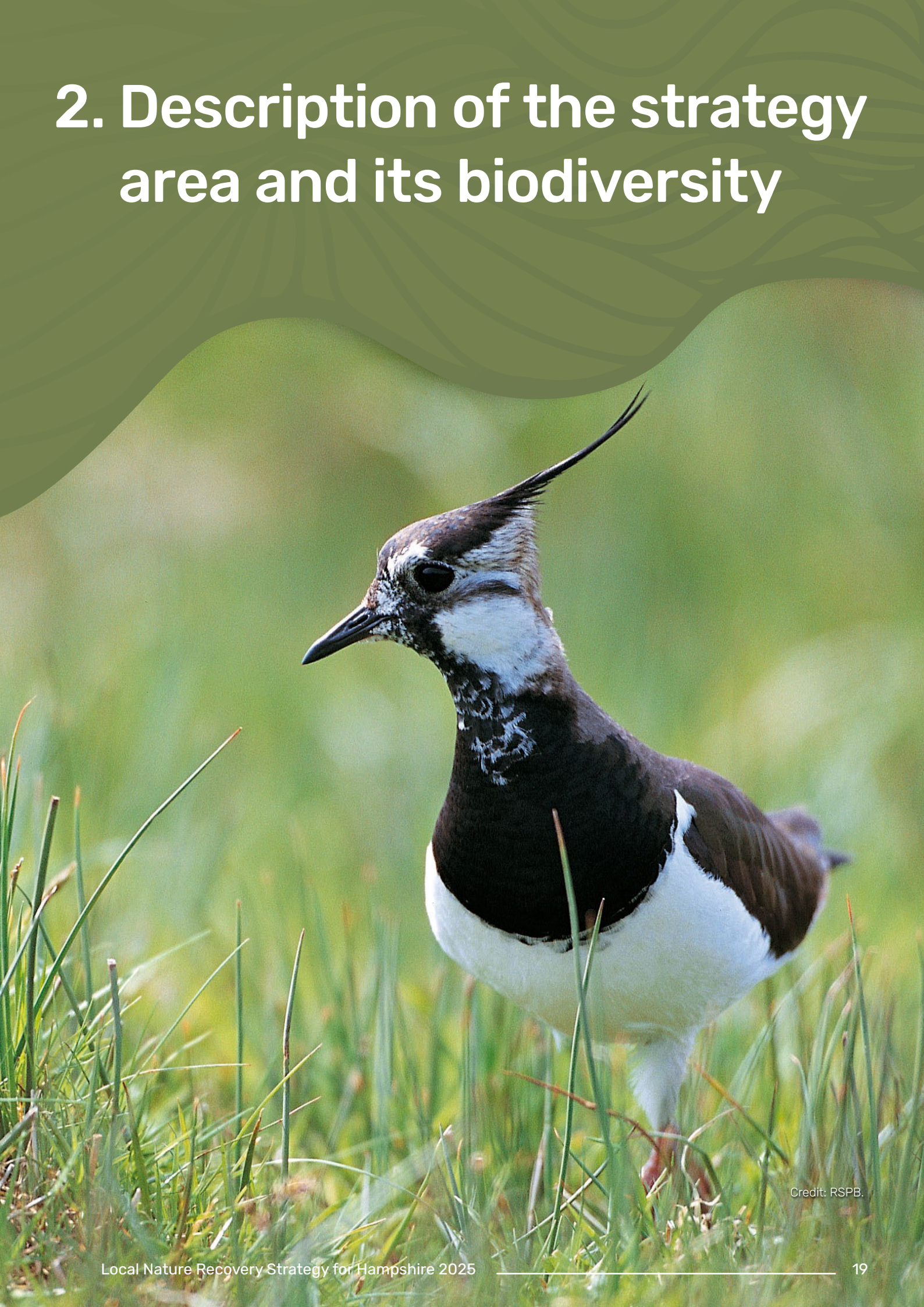
Areas where nature recovery action has been or is being taken

Information from a range of sources has been used to identify areas where action for nature recovery within the strategy area has been, is being and will be taken. These sources have included information provided by a wide range of local partners, the outputs of the LNRS workshops, and published sources. Current projects and schemes across the strategy area are set out in Appendix 4. Many of these areas are included in the Measures and ACB maps in Part 2: Priorities and Measures, where specific action is being undertaken and is mapped. Sources of evidence considered in the preparation of this strategy are set out in Appendix 5.

When this LNRS is reviewed, the actions (potential measures) proposed in this Strategy, which have been undertaken, will be included in the next iteration of the habitats map along with any new potential measures. This activity will be tracked and monitored by the responsible authority, although details of how this will be achieved are yet to be determined.

25 See Appendix 3
26 LNRS for Hampshire webpages - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/hampshire-strategy**

2. Description of the strategy area and its biodiversity



Credit: RSPB.

2. Description of the strategy area and its biodiversity

2.1. Summary of Hampshire's natural environment

Hampshire has a beautiful and varied landscape with an impressive diversity of unique and important habitats. These include ancient woodlands, wildflower meadows, iconic chalk streams, wetlands, species-rich downland, heathlands and pasture woodland like those in the New Forest, and coastal and marine habitats[27]. River valleys, ancient hedgerows, and flower-rich verges help provide a connecting network for wildlife. The variety of habitat types within Hampshire is reflected in a rich flora and fauna. However, whilst priority habitats cover 21% of Hampshire's area, 50% of which are woodlands, many sites are in poor condition and are fragmented.

Like the rest of the UK, the natural environment and biodiversity across Hampshire has declined significantly over the last 50 years and is under continued threat[28]. There has been a decline in the quality, variety, and quantity of natural areas due to multiple pressures from a growing human population. These include increased development, agricultural and land use changes, invasive species, pollution, recreational pressure, and climate change. Nature needs more space that is better connected as part of a Nature Recovery Network, to allow it to move, adapt, and thrive.

National Character Areas (NCA)

England is subdivided into 159 National Character Areas (NCAs). These are broad divisions of landscape that form the basic units of cohesive countryside character, on which ecological strategies can be based. NCAs are areas that share similar landscape characteristics, and which follow natural lines in the landscape, making them an effective decision-making framework for the natural environment. The Character Area framework is used to describe and shape objectives for the countryside, its planning and management and is maintained by Natural England.

Within Hampshire, 11 areas have been defined by Natural England as NCAs[29]. These can be seen in figure 2.1 and are:

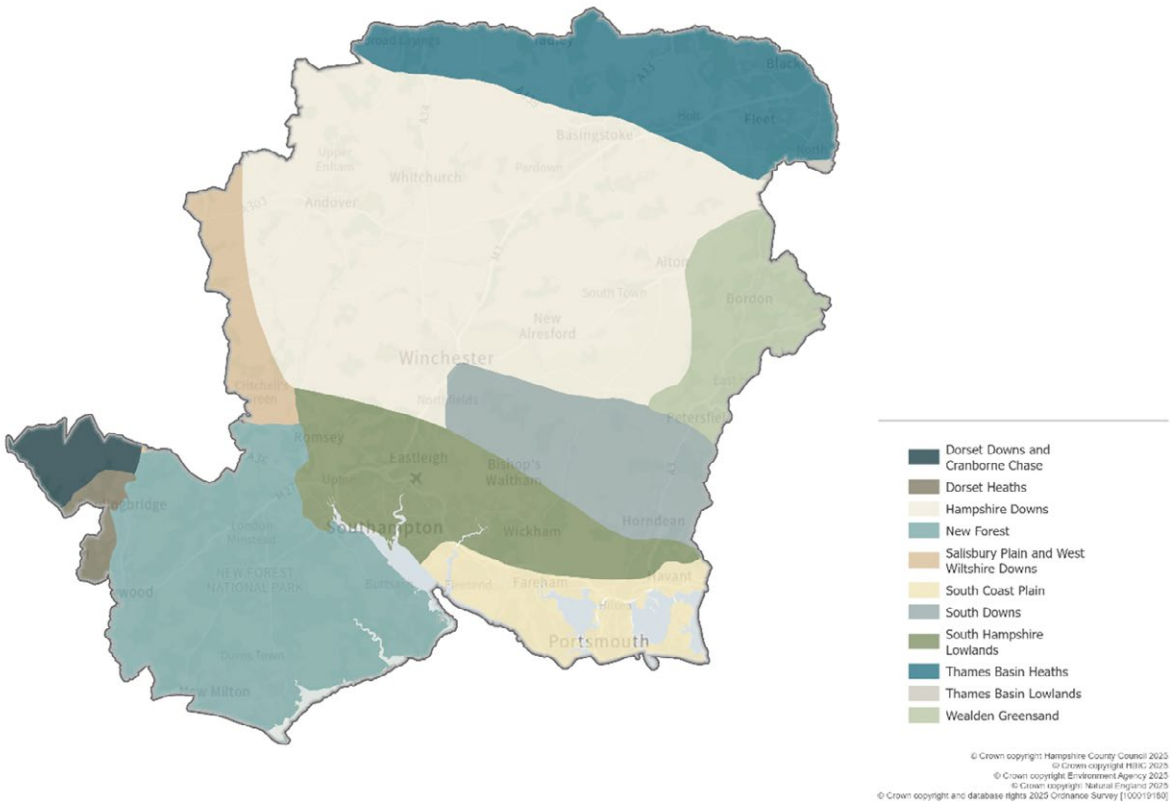
27 Hampshire and Isle of Wight's Natural Wealth (2022) - **https://hantswightlnp.wordpress.com/wp-content/uploads/2022/05/2022_04_natural-wealth_lnp_final.pdf**

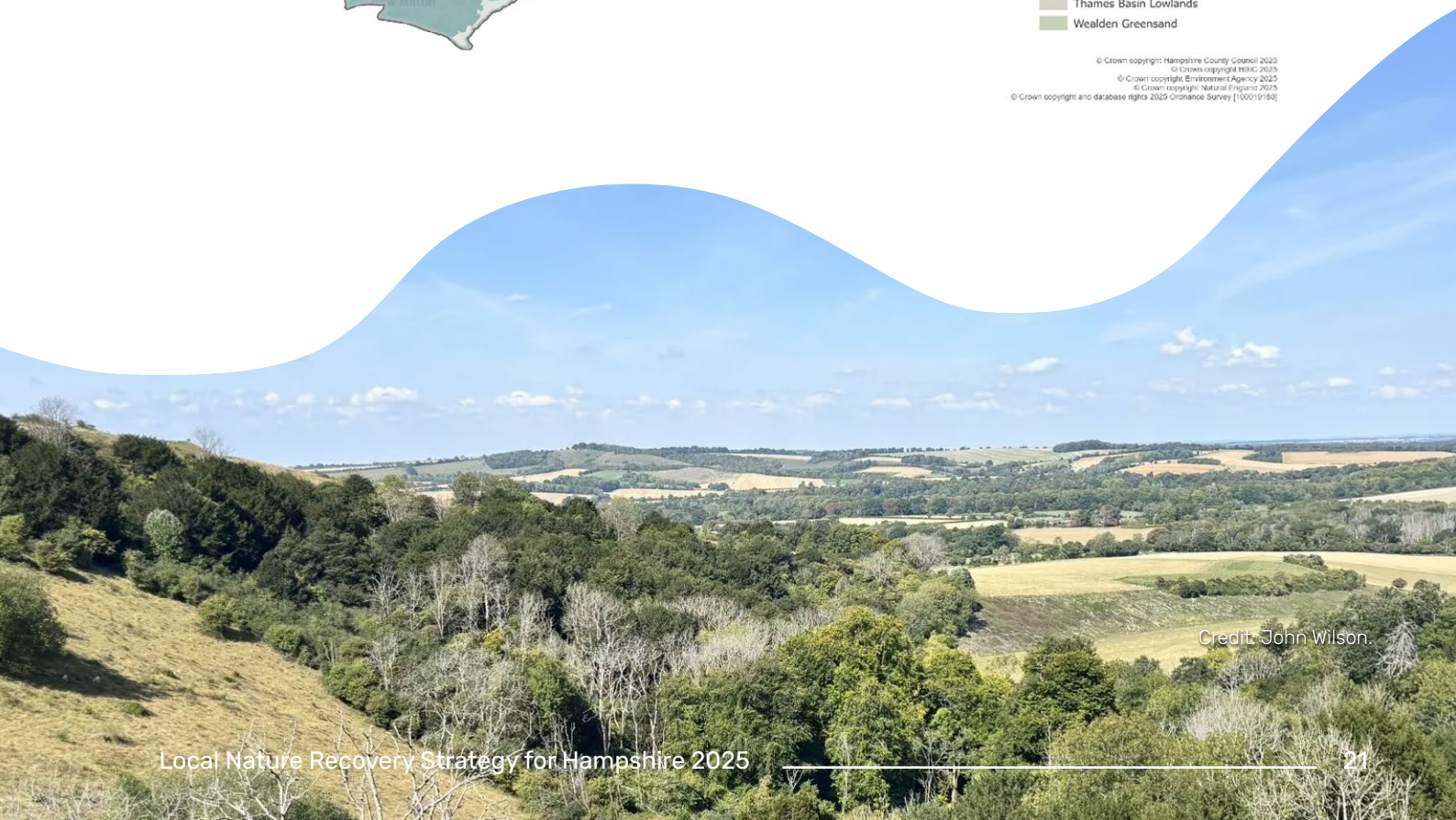
28 State of Nature: England (2023) - **https://stateofnature.org.uk/wp-content/uploads/2023/09/TP26054-SoN-England-summary-report-v6.pdf**

29 National Character Area Profiles - **https://nationalcharacterareas.co.uk/"**

- Dorset Downs and Cranborne Chase.
- Dorset Heaths.
- Hampshire Downs.
- New Forest.
- Salisbury Plain and West Wiltshire Downs.
- South Coast Plain.
- South Downs.
- South Hampshire Lowlands.
- Thames Basin Heaths.
- Thames Basin Lowlands.
- Wealden Greensand.

Figure 2.1: Distribution of National Character Areas across Hampshire





Credit: John Wilson.

Sites designated for their nature conservation importance

Half of all priority habitat across Hampshire is designated as internationally important for nature conservation. This includes designated areas that comprise the UK's National Site Network (NSN) - Special Areas of Conservation (SAC) and Special Protection Areas (SPA), together with Ramsar sites. These include the New Forest, much of the Hampshire coastline, two of our chalk streams, the Thames Basin Heaths, Wealden Heaths, and several chalk grassland sites. The Mottisfont Bats SAC is designated for its population of rare barbastelle bats.

There are 125 nationally important Sites of Special Scientific Interest (SSSIs) in Hampshire. This makes up 13.2% of the county's land area, twice that of any other lowland county. 93% of these SSSIs are in favourable or unfavourable recovering condition. There have been no new SSSIs designated in Hampshire for nearly 20 years. Some of the best examples of SSSIs in the area are also designated as National Nature Reserves (NNRs), which represent some of the best SSSIs and additionally allow for sensitive public access.

Hampshire also has over 4,000 locally designated Sites of Importance for Nature Conservation (SINCs) covering 9.4% of the area. These are generically referred to as Local Wildlife Sites in national planning policy. Whilst SSSIs represent the best examples of a range of priority habitats, many sites of similar quality have instead been designated as SINCs. 82% of SINCs support ancient and other native woodland, with species rich grasslands and fen only accounting for 8%. These account for less than 0.5% of Hampshire's land cover and remain our most threatened habitat types. 90% of grassland SINCs surveyed saw a decline in their condition between 2010 and 2019.

0.63% of Hampshire's land area is designated as Local Nature Reserves (LNRs). Local authorities or town and parish councils designate LNRs in their local areas and are responsible for their management. These sites are designated on the basis of their importance for wildlife, geology, education or enjoyment (without disturbing wildlife). Indeed the majority are already designated as SSSIs or SINCs. There are 72 individual LNRs across the area. The area also benefits from a number of Hampshire & Isle of Wight Wildlife Trust reserves and other private nature reserves.

Although much of Hampshire is covered by various nature conservation designations, this does not mean that this land is well managed for nature or that nature is recovering in these areas.

Designated sites across Hampshire are shown on the APIB (Areas of Particular Importance for Biodiversity) map in Part 2: Priorities and measures.

Protected landscapes and National Trails

Approximately 38% of Hampshire's land area is covered by statutory landscape designation, including two National Parks and three National Landscapes[30]. These protected landscapes include areas of international, national and local importance for nature conservation, provide significant opportunities for biodiversity enhancement, and deliver landscape-scale nature recovery through the implementation of their statutory management plans.

Protected landscapes governance bodies have developed their own strategies and plans for nature recovery for their areas (see Appendix 5) and these have informed the preparation of this LNRS.

Protected landscapes relevant to Hampshire include the New Forest National Park, South Downs National Park, North Wessex Downs National Landscape, Cranborne Chase National Landscape[31], Chichester Harbour National Landscape, and the adjacent Surrey Hills National Landscape[32].

Long Distance Routes (now called National Trails in England and Wales)[33] were introduced by the same legislation that led to the establishment of the country's network of protected landscapes. National Trails provide both access to nature for people and opportunities for nature recovery. National Trails pass through areas of nature conservation importance and provide landscape scale ecological connectivity. Nature conservation is an important objective in their management. In Hampshire these include:

- South Downs Way - 100 miles (160 Km) long National Trail that follows the old routes and droveways along the chalk escarpment and ridges of the South Downs between Winchester, Hampshire and Eastbourne, East Sussex (30 miles (48 Km) of the National Trail is within Hampshire).
- King Charles III England Coastal Path – 2,700 mile (4,345 Km) long coastal path around England and the world's longest managed coastal path when finished (130 miles (208 Km) of the National Trail is within Hampshire).

The England Coastal Path is unique to other National Trails as its designation came alongside the Marine and Coastal Access Act 2009[34], which created the coastal margin[35] – an area generally defined as the strip of land between the path and mean low water mark. This coastal margin also provides additional opportunities for nature recovery and ecological connectivity.

Figure 2.2 shows the location and extent of designated landscapes and National Trails across Hampshire.

30 On 22 November 2023 in England and Wales, AONBs were formally rebranded as 'National Landscapes'. These nationally protected landscapes are still referred to as AONBs in legislation, national planning policy and guidance, until such time as these are updated/amended.

31 Note: the full name of the Cranborne Chase National Landscape is 'Cranborne Chase and West Wiltshire Downs' National Landscape. The shortened version is used in most literature for convenience.

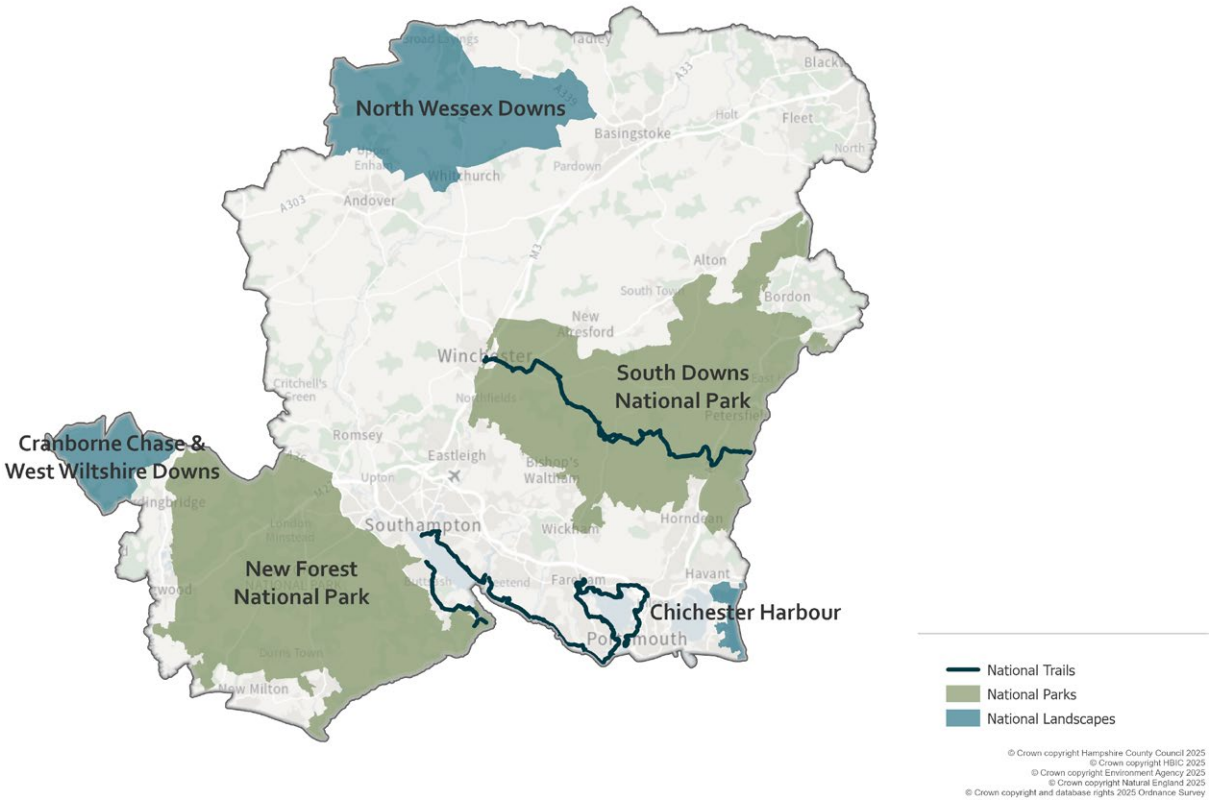
32 The Surrey Hills National Landscape currently abuts the eastern boundary of the county of Hampshire. As such, a small part of Hampshire is within the 'setting' of the National Landscape. A proposed minor extension of this National Landscape into Hampshire is currently being considered.

33 National Trails - **https://www.nationaltrail.co.uk/en_GB/**

34 Marine and Coastal Access Act 2009 - **https://www.legislation.gov.uk/ukpga/2009/23/contents**

35 England Coastal Path coastal margin - **https://www.nationaltrails.uk/news/coastal-margin-national-trails-in-local-nature-recovery-strategies-england**

Figure 2.2: Designated landscapes and National Trails across Hampshire



Please note: Some sections of the England Coastal Path are yet to be completed with the specific route of those sections yet to be confirmed.

Credit: Paula Knight.

Rivers and wetlands

Hampshire is intersected by an extensive network of river systems and other watercourses, which also includes eight chalk streams and their associated tributaries. 85% of all chalk streams in the world are found in the UK and a significant proportion of these are in Hampshire. Notable waterways include:

- Hampshire Avon.
- New Forest Rivers and Streams including the Lymington and Beaulieu rivers.
- River Test and its tributaries the Wallop Brook, Anton, Dever and Bourne Rivulet.
- River Itchen and its tributaries the Candover Brook, Arle and Cheriton Stream.
- River Meon.
- Rivers Loddon and Lyde, Whitewater and Hart.
- Basingstoke Canal, which runs for 51 km from Basingstoke in the west to Byfleet in Surrey in the east.
- River Wey.
- River Rother.
- Lavant catchment: Lavant Stream, River Ems and Hermitage Stream.
- River Enborne.
- River Alver.
- River Hamble.

The Hampshire Avon and River Itchen are internationally designated as SACs (and SSSIs) for their importance to nature conservation. The River Test, Lymington River and the Basingstoke Canal are designated as SSSIs. The rivers Meon, Whitewater, Loddon, Lyde, and Anton are designated as SINCs. The River Meon and River Test (and some of its tributaries) provide compensatory SAC habitat for protected features of the River Itchen SAC, which will suffer adverse impacts as a result of abstraction in drought situations. All rivers within the New Forest are within the New Forest SSSI, SAC, SPA and Ramsar.

These river systems provides rich habitats for wildlife, water resources for communities, opportunities for flood management, cultural and artistic inspiration, and recreational opportunities.

In 2023, 75% of water in Hampshire's rivers, streams, and lakes (i.e. surface water) failed to reach good ecological status, as defined by the Water Framework Directive (WFD), compared with 84% in the UK. The overall ecological status of Hampshire's surface water has improved since 2016. However, there remain two watercourses which have bad ecological status and 14 that are poor. No watercourses have reached high ecological status. The issues preventing surface waters reaching good status in Hampshire are primarily ongoing physical channel modifications, agricultural pollution from rural areas, chemical contaminants from cities and towns, and associated wastewater.

Only 10% of Hampshire's river SSSIs and their associated wetland habitats are in favourable condition.

Figures 2.18 and 2.19 in section 2.2 below show the main river network and river catchments for Hampshire, respectively.

Hampshire has a wealth of wetland habitats alongside its important river network. Wetlands in good condition are amongst the most biodiverse habitats as they support an abundance of plant life, which in turn provide shelter, nurseries and breeding grounds for birds, mammals, fish, and insects. They also slow the flow of water, process excessive nutrients such as nitrates, and reduce flood risk downstream.

Furthermore, decaying plant material accumulating in the waterlogged conditions of wetlands is hugely important for sequestering carbon. However, the ability of a freshwater wetland habitat to capture carbon varies according to the condition of the wetland. Peatland habitats, such as fens, are incredibly important for storage and sequestration but until now very little had been mapped. In May 2025 Natural

England launched a new nationwide map of peat and peaty soils, the England Peat Map[36]. The map has detailed coverage of peat depth drawn from a variety of sources including AI modelling and could be used in conjunction with local habitat based evidence for site-level decisions guided by the Measures map,

Good management is critical to ensuring that wetland habitat can store more carbon for years to come. It is also vital that these remaining high-quality habitats are protected, as it can take decades for restored wetlands to be able to draw down carbon at the same rate as natural wetlands. Draining wetlands releases substantial carbon trapped in the soil into our atmosphere. In some areas of the UK, we have lost over 90% of our wetland habitat. Between 2006 and 2012, over 1,000ha of wetland was converted to urban surfaces.

Across Hampshire, 39% of fen, marsh, and swamp SSSI habitats are in favourable condition and 55% in unfavourable recovering condition.

Hampshire's wetlands are subject to a number of threats and pressures. These include:

- Artificial drainage.
- Forestry and scrub encroachment.
- Declining or fluctuating water levels.
- Changes in rainfall pattern and extreme events.
- Saline intrusion and loss to sea level rise.
- Coastal erosion of coastal wetlands.

Further detail relating to Hampshire's river and wetland habitats and associated rivers and wetlands workshop is provided in the rivers and wetlands habitat theme in section 2.2.

Coastal and marine

Although Hampshire has a coastline, Department for the Environment, Food and Rural Affairs (Defra) statutory guidance requires that coastal LNRSs follow administrative boundaries into the inter tidal zone only to mean low water mark. The Marine Management Organisation (MMO) will explore how spatial planning for marine nature recovery might develop in the future. Nevertheless, Hampshire's marine environment is referenced in this LNRS, due, in particular, to the importance of the Solent and county's estuaries and harbours for biodiversity, and the impact of land-based activities on the marine environment and vice versa. The Solent Seascapes project is a collaborative long-term initiative, working to restore multiple habitats across the Solent strait. They have recently produced a Solent State of Nature Report[37].

Hampshire's coastline stretches for approximately 230 miles (370 km) from Highcliffe in the west of the county to Chichester Harbour in the east. The components of this system include the Solent and its approaches; the eastern harbours of Portsmouth, Langstone and Chichester; Southampton Water; and other small tributary rivers such as the River Beaulieu, Hamble and Lymington. These waters form the Solent Marine Site (SEMS), designated for its international importance for habitats and species.

This coastline is dominated by sheltered mudflats and muddy gravels, with extensive areas of saltmarsh and grazing marsh. Interspersed within these habitats are stretches of shingle and sand, soft cliffs, and a small number of saline lagoons contained by spits or seawalls.

36 **A new peat map for England – Natural England**
37 **Solent State of Nature Report | Solent Seascape Project**

All these coastal habitats are of national or international importance. The mudflats and saltmarshes are designated for their internationally important populations of overwintering waders and wildfowl, along with nationally important seabird colonies nesting on the shingle spits and offshore islands.

Saltmarsh and seagrass are important for carbon sequestration and storage. However, water quality within estuaries is a concern. High nutrient levels have been reported as a result of the use of fertilisers and from human waste. This has resulted in the proliferation of green algae, affecting the ecosystem balance. High levels of nutrients can limit the ability of saltmarsh and seagrass to sequester carbon.

Solent coastal habitats store about 4,000 tonnes of nitrogen and phosphorus every year, equating to £1.1 billion in environmental benefits[38].

Hampshire's marine environment provides significant benefits to the area's economy with commercial landings consisting of 50% crab and lobster, 25% finfish, and 25% other shellfish.

Over the last 70 years, the Solent has lost 65% of its saltmarsh and 85% of its oyster beds and reef habitats.

Further detail on Hampshire's coastal and marine habitats and associated coast and marine workshop is provided in the coastal and marine habitat theme in Section 2.2.

Woodland and Wood Pasture

Hampshire's woodlands represent an important part of the area's natural environment, providing a diverse range of woodland habitat types for many different species. It includes the internationally important East Hampshire Hangers and the New Forest. Key statistics on the area's woodlands include:

- 19.4% of Hampshire is wooded (circa 73,078ha), compared to 10% in England.
- 19,333ha is managed by Forestry England.
- 29,221ha is identified as ancient woodland (40% of all woodland in Hampshire).
- Hampshire's ancient woodland is predominantly semi-natural (65%) with the remainder (35%) replanted.
- 39% of native woodland SSSIs are in favourable condition, 58% in unfavourable recovering condition.
- Hampshire's woodlands are growing at the rate of approximately 350,000 m^3/yr, which is equivalent to 300,000 tonnes CO2e[39] (harvested timber in long-term use provides additional carbon storage).

Hampshire's ancient woodland includes nearly 5,000ha of unenclosed ancient wood pasture within the New Forest. There are also many oak-ash-hazel woods on the chalk, and the oak-birch woodland of the clays and sands in south and north-east Hampshire, and all surviving fragments of the Royal Forests that once covered Hampshire: the Forest of

38 State of Hampshire's Natural Environment. Hampshire County Council (2020) - **https://documents.hants.gov.uk/hampshire2050/StateofNaturalEnvironmentReport.pdf**

39 CO2e - means "carbon dioxide equivalent". CO2e is a measurement of the total greenhouse gases emitted, expressed in terms of the equivalent measurement of carbon dioxide.

Bere, Woolmer, Chute, Pamber etc. The extent of woodland in the area appears relatively stable, with small losses offset by gains through new planting and natural regeneration.

Woodlands and wood pasture provide important ecosystem services for the Hampshire area. These include carbon storage and sequestration, air and water quality improvements, soil stabilisation, flood risk management, the provision of important biodiversity, cultural and tourism benefits, and a supply of home-grown, renewable products like food, timber, fuel, and a range of coppice products for agricultural, horticultural and domestic uses.

Woodland and coppice products include: fenceposts, ramial woodchip (mulch/soil improver), biochar (soil improver), beanpoles and hurdles for gardens and allotments, and brash bundles ('faggots') as nature-based solutions to flood and pollution runoff issues. Other coppice products like thatching spars, hedging stakes and binders also support allied trades such as hedge laying and thatching.

However, the area's woodlands face many threats, including:

- Recreational pressures.
- Lack of or inadequate management.
- Deer and grey squirrel damage.
- Pests and disease.
- Additional and compounding stresses of climate change.

Climate change increases the vulnerability of woodlands through changes in temperature, rainfall and the frequency and severity of storm events. The arrival of many new pests and diseases have far reaching consequences, changing the future composition of the area's woodlands.

Further detail of the environmental value of Hampshire's woodlands for nature, and the outputs of the woodlands and forestry workshop, are provided in the woodland and forestry habitat theme in section 2.2.

Heathlands

Lowland heathland is characterised by open expanses of heather and gorse on acidic soils. Hampshire's lowland heaths are of international importance comprising about 13% of the heathland left in Europe and 30% of the UK total. The most significant areas of heathland in Hampshire are the Thames Basin Heaths, Wealden Heaths and New Forest. Heathland sites have a good level of protection from development through their nature conservation designations. However adverse impacts from recreational use, lack of appropriate management, fragmentation, and isolation remain. Policies for the provision for alternative natural greenspace have successfully been implemented in recent years. These aim to reduce disturbance to sensitive species such as ground nesting birds.

The New Forest, Thames Basin Heaths, and Wealden Heaths are designated SPAs with their lowland heaths supporting internationally important populations of Dartford warbler, nightjar and woodlark, all of which are vulnerable ground-nesting birds.

Heathlands that fall outside the SSSI and SPA networks are smaller and less well protected or managed. They are therefore the most vulnerable to development and degradation, in particular from edge effects and succession. Traditional management techniques are also much harder to re-establish and sustain. The commoning system that has operated successfully in the New Forest over generations is vital to the survival of the heaths there.

Hampshire's heathlands support biodiversity, unique cultural heritage, tourism, carbon storage and sequestration, and flood risk management

Across Hampshire, 71% of heathland SSSIs are in favourable condition and 26% in unfavourable recovering condition.

Further detail about heathland habitats is provided in the area description in section 2.2, particularly: Thames Basin and Wealden Heaths, and New Forest and Eastern Dorset Heaths.

As part of the programme of LNRS engagement, area-based workshops were held for the Thames Basin and Wealden Heaths, and the New Forest and Eastern Dorset Heaths. The workshop reports are available on the LNRS webpages[40]. The workshops brought together a wide range of key stakeholders and individuals interested in the biodiversity and land management of these areas. Key issues for nature and opportunities for nature recovery identified in the workshops are set out in the 'Thames Basin Heaths and Lowlands and Wealden Heaths', and 'New Forest and Eastern Dorset Heaths' area descriptions in section 2.2.

40 Thames Basin and Wealden Heaths workshop and New Forest and forest fringes workshop (February 2024) - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**

Grasslands

Species-rich unimproved grassland is one of the rarest habitats in the UK. During the 20th century, 90% of lowland grasslands were lost. In Hampshire, lowland grasslands are either calcareous, neutral, or acidic, and can be wet or dry, often occurring as mosaics, with each type supporting their own specific plant and invertebrate communities. For example, the Duke of Burgundy butterfly, whose larval food plant the cowslip, is found in unimproved chalk grassland, where rough grassland and scrub provide important shelter. Collectively, grasslands support a wide range of native plants and provide valuable food and shelter for many species of birds, invertebrates, and small mammals.

The greater variety of plants from traditionally managed lowland meadows provide high quality herbage for livestock. Flower-rich meadows are important for pollinators, and the additional species diversity they support increases crop resilience to agricultural pests and disease. Grasslands also provide soil stabilisation and numerous cultural benefits.

UK grasslands are often overlooked as carbon stores, but they have huge potential. This is not only within the plants, but also through the relationships between the plants, fungi, bacteria and other species which help enrich the soil and humic layers. However, these relationships are vulnerable to disturbance. When managed carefully, for instance through the maintenance of herb-rich leys and sensitive grazing, grasslands can both lock in carbon and boost biodiversity.

It is also worth noting that while the total carbon storage and sequestration for improved grassland looks impressive, there could still be significant gains to be made by restoring this habitat to flower rich grassland. If we converted all improved grassland to flower rich grassland across Hampshire and the Isle of Wight, we could sequester an additional 239,145 tonnes of CO2 per year[41].

Road verges are an increasingly important source of grassland species. There are over 10,000km of highway verges across Hampshire. Some 225 of these verges have been designated as Road Verges of Ecological Importance (RVEI) for supporting flower-rich grassland communities and rare invertebrate species such as the striped lychnis moth, a Hampshire stronghold.

In Hampshire, 37% of neutral grassland, 34% of calcareous grassland and 28% of acid grassland SSSIs are in favourable condition. 23% of neutral grassland, 65% of calcareous grassland and 69% of acid grassland SSSIs are in unfavourable recovering condition.

Across Hampshire, grasslands are subject to a range of threats and pressures including:

- Fragmentation and edge effects.
- Decreasing size and isolation.
- Enrichment from agricultural practices and run-off.
- Inadequate or absence of appropriate grazing.
- Abandonment.
- Disturbance.
- Sub-optimal road verge management.

Further detail about grassland habitats, including key issues for nature and opportunities for nature recovery, is provided in the area descriptions in section 2.2.

41 Hampshire and Isle of Wight's Natural Wealth (April 2022) - **https://hantswightlnp.wordpress.com/wp-content/uploads/2022/05/2022_04_natural-wealth_lnp_final.pdf**

Farmland

Agriculture is the largest land use in Hampshire, making up to 70% of total land cover. Arable land forms around 40% of the farmed lowland mosaic, with large arable farms dominating the landscape across the centre of Hampshire in particular[42].

Over time, features such as hedgerows, copses, and ponds have been removed making it more difficult for wildlife to move and thrive in agricultural landscapes. Intensive farming practices have resulted in diminishing soil quality and declines in soil-dwelling organisms such as earthworms and beneficial bacteria. Associated increase in fertiliser use have led to nutrient run-off into the area's river systems, causing eutrophication and pollution problems downstream.

However, changes to farming practices, such as minimum tillage and low input approaches, combined with onsite enhancements, can all benefit wildlife. In fact, farmland is where some of our rarest species can be found, such as rare arable flora which grow on the field margins. Hedgerows are home to farmland birds such as yellowhammers, while fields are vital spaces for ground nesting birds such as skylarks and stone curlews.

Farmland birds are an important part of the grassland and farmland ecosystems. Their prevalence is considered to reflect the general environmental quality of the farmed environment. A total of 19 species have been identified nationally as farmland birds for the purposes of the UK Farmland Bird Indicator[43]. These birds are generally not able to thrive in other habitats. Like the country as a whole, many of Hampshire's farmland bird species are in general decline, reflecting changing practices in the management of farmland.

Considering this dramatic decline in farmland birds locally and nationally, there is a real opportunity for nature-friendly farming methods. These can improve biodiversity which has the potential to reverse the decline of all our farmland bird species and many other species such as small mammals and insects. Management with wildlife in mind can also bring added benefits such as flood attenuation, nutrient capture, soil stability, and carbon storage. Recent research has found that hedgerows hold and sequester a significant amount of carbon.

Across Hampshire, farmland is subject to a range of threats and pressures including soil erosion, pollution, development pressure for housing and alternative energy, agricultural intensification and habitat fragmentation.

Further detail about farmland habitats, including issues for nature and opportunities for nature recovery, identified in the workshops, is provided in the area descriptions in section 2.2.

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42 State of Hampshire's Natural Environment 2020 - **https://documents.hants.gov.uk/hampshire2050/StateofNaturalEnvironmentReport.pdf**

43 **https://jncc.gov.uk/our-work/ukbi-birds-of-the-wider-countryside-and-at-sea/#:~:text=Notes%20about%20Figure%203,7%20species%20are%20farmland%20generalists.**

Open mosaic habitat on previously developed (brownfield) land

Open mosaic habitat on brownfield sites can be extremely diverse, supporting a wide range of terrestrial and aquatic habitats and associated species. This diversity has made them increasingly important within ecological networks for rare and scarce invertebrates as well as lichens, plants, birds, reptiles and amphibians, of conservation concern. The importance of these habitats for the LNRS was confirmed at the opportunity mapping prioritisation workshop held on 4 December 2024 (see Appendix 2).

Brownfield sites with open mosaic habitat show evidence of previous disturbance, either through soil being removed or severely modified by previous use, or the addition of materials such as industrial spoil, with spatial variation developing across the sites. Such habitats may occur on a wide range of brownfield sites, such as railway sidings, quarries, landfill sites and former industrial works, and can be found across Hampshire.

The altered nature of open mosaic habitats leads to fine-scale changes in hydrology, pH and topography, allowing a range of habitats to develop alongside each other. This diversity of habitats is ideal for species which require two or more habitats in close proximity to complete their life cycle, while also attracting specialist and pioneer species for each habitat type alongside more generalist species.

Of particular importance is the presence of bare ground, which creates warm microclimates for thermophilic invertebrates to bask, including those at the northerly limit of their range. Bare areas also provide nesting opportunities for ground nesting species and areas for active predators to hunt. Low nutrient sites tend also to have a strong assemblage of nectar-rich, stress tolerant annuals, which provide an abundance of forage. An absence of management provides yet further opportunities by allowing invertebrates to overwinter in seeds, flower heads, leaves and stems, which is increasingly difficult in the modern day highly managed landscape.

The rich assemblages of invertebrates supported by these habitats has led to 'open mosaic habitats on previously developed land' being added to the UK Biodiversity Action Plan (UK BAP) as a Priority habitat listed on Section 41 of the Natural Environment and Rural Communities Act 2006 (NERC Act)[44].

44 NERC Act 2006 - **https://www.legislation.gov.uk/ukpga/2006/16/contents.**

Species

The variety of habitat types within Hampshire is reflected in the area's rich flora and fauna with 23,462 species recorded[45]. For example, Hampshire supports all 12 of the UK's species of native amphibians and reptiles. 20% of the 11 million species records held by the Hampshire Biodiversity Information Centre are of notable species i.e. are rare, threatened, or declining.

Hampshire's insect and pollinator fauna is extremely diverse. Due to the mild southern climate and varied habitat, Hampshire is one of the best areas for butterflies in the UK, with a total of 46 resident butterfly species recorded. 19 of these species are, however, in decline.

The British Trust for Ornithology (BTO) Wild Bird Indicators[46] have shown that there continues to be an overall decline in UK breeding bird populations. This includes more substantial declines for breeding bird populations associated with farmland, woodland, wetlands and waterways, and for wintering waterbirds.

Overall, 48% of a monitoring sample of 50 of Hampshire's most notable species are in decline[47].

Further details about why Hampshire supports such a rich diversity of species can be found in Section 2.2. The prioritisation of species for recovery is detailed in Part 3: Species Recovery.

45 Records held by the Hampshire Biodiversity Information Centre (HBIC) - **https://www.hants.gov.uk/landplanningandenvironment/environment/biodiversity/informationcentre**

46 British Trust for Ornithology (BTO) Wild Birds Indicator - **https://www.bto.org/our-science/publications/developing-bird-indicators#all_species**

47 HBIC Annual Biodiversity Monitoring Report - **https://www.hants.gov.uk/landplanningandenvironment/environment/biodiversity/informationcentre/whatwedo/reports**

2.2. Workshop-focused areas, habitats and themes

This section builds upon the summary of Hampshire's natural environment, above, but considers in greater detail the geographical area subdivisions and cross-cutting habitats and themes that formed the focus of the programme of LNRS workshops (see Appendix 2 for more detail). Each of the sections below include the key issues for nature and opportunities for nature recovery identified through engagement.

It should be noted that the key issues for nature and opportunities for nature recovery included with the area/theme descriptions, below, are the views of workshop attendees and may not always align with the scope and ambition of the LNRS.

For the area descriptions, Hampshire's natural environment is described in more detail based upon the National Character Area (NCA) system.
NCA elements have been combined to form these area sub-divisions to represent the objectives and outputs of the series of area-based workshops set out in Appendix 2, as follows:

- **Thames Basin Heaths and Lowlands, and Wealden Heaths**
  Part of NCA 129: Thames Basin Heaths; NCA 114: Thames Basin Lowlands; and NCA 120: Wealden Greensand.
- **Central Chalk Belt**
  Part of NCA 125: South Downs; NCA 130: Hampshire Downs; NCA 132: Salisbury Plain and West Wiltshire Downs; and NCA 134: Dorset Downs and Cranborne Chase.
- **North Hampshire**
  Part of NCA 129: Thames Basin Heaths.
- **New Forest and Eastern Dorset Heaths**
  NCA 131: New Forest, and part of NCA 135: Dorset Heaths.
- **South Hampshire Lowlands and South Coast Plain**
  Part of NCA 126: South Coast Plain, and NCA 128: South Hampshire Lowlands.

Supplementing the area descriptions, further descriptions by habitat/theme are included, to represent the objectives and outputs of the series of cross-cutting habitat and theme-based workshops set out in Appendix 2, as follows:

- Rivers and wetlands.
- Coastal and marine.
- Woodlands and forestry.
- Greenspace, health and access to nature.
- Species recovery.

Thames Basin Heaths and Lowlands and Wealden Heaths

Area of NCAs (within the LNRS boundary)	62,812ha
Key priority habitats present	Lowland heathland (wet and dry), acid grassland and valley mire, fragments of chalk grassland, chalk streams, ancient woodland, ancient hedgerows and parkland, and ancient meadows.
'Crown jewel' sites	Thames Basin Heaths SPA including the wetlands at Eelmoor Marsh SSSI and Castle Bottom SSSI, and the Wealden Heaths Phase II SPA which includes Woolmer Forest SSSI/SAC. Also Shortheath Common SSSI/SAC and the East Hampshire Hangers SAC.
Priority species	Dartford warbler, nightjar, woodlark, adder, natterjack toad, grayling butterfly, field cricket, sand lizard, smooth snake, brilliant emerald dragonfly, blunt-leaved pondweed, marsh clubmoss, pillwort, and ancient woodland indicator species.
Potential opportunities for nature recovery	Restoration, expansion and linkage of heathland / acid grassland mosaic. Enhancement of chalk rivers, non-chalk rivers and the Basingstoke Canal as wildlife corridors. Creation of riparian buffer strips. Reduction in fragmentation of semi-natural habitat and enhanced ecological connectivity with the planting of new woodlands. Improved woodland management. Species-rich chalk grassland restoration, expansion and linkage. Expanding and connecting networks of species-rich hedgerows. Enhancing public green space and recreational opportunities for local communities to mitigate impact on SPAs

Part of National Character Areas 129: Thames Basin Heaths[48] (east of Hook); 120: Wealden Greensand[49] ; and 114: Thames Basin Lowlands[50].

48 Thames Basin Heaths NCA profile - **https://nationalcharacterareas.co.uk/Thames-Basin-Heaths/**
49 Wealden Greensand NCA profile - **https://nationalcharacterareas.co.uk/Wealden-Greensand/**
50 Thames Basin Lowlands NCA profile - **https://nationalcharacterareas.co.uk/thames-basin-lowlands/**

Figure 2.3: Area boundary

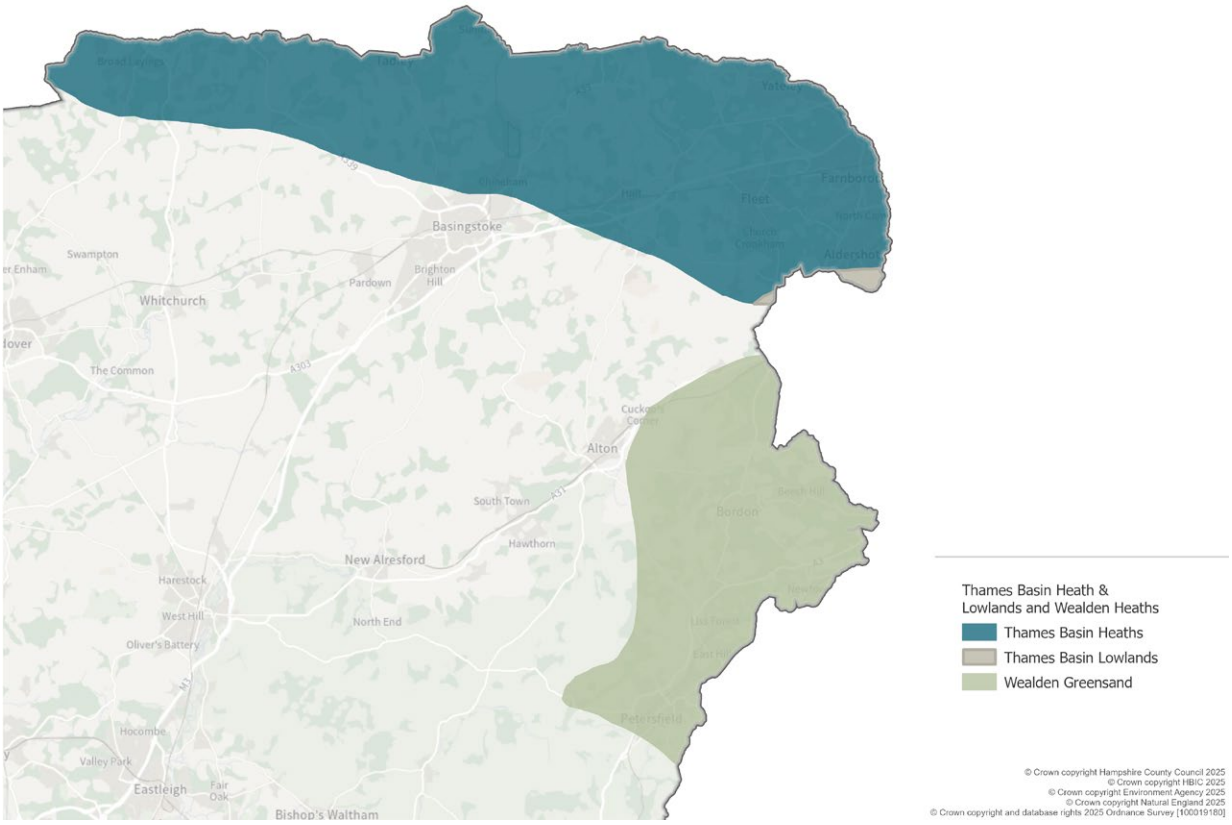


Figure 2.4: Nature conservation designations

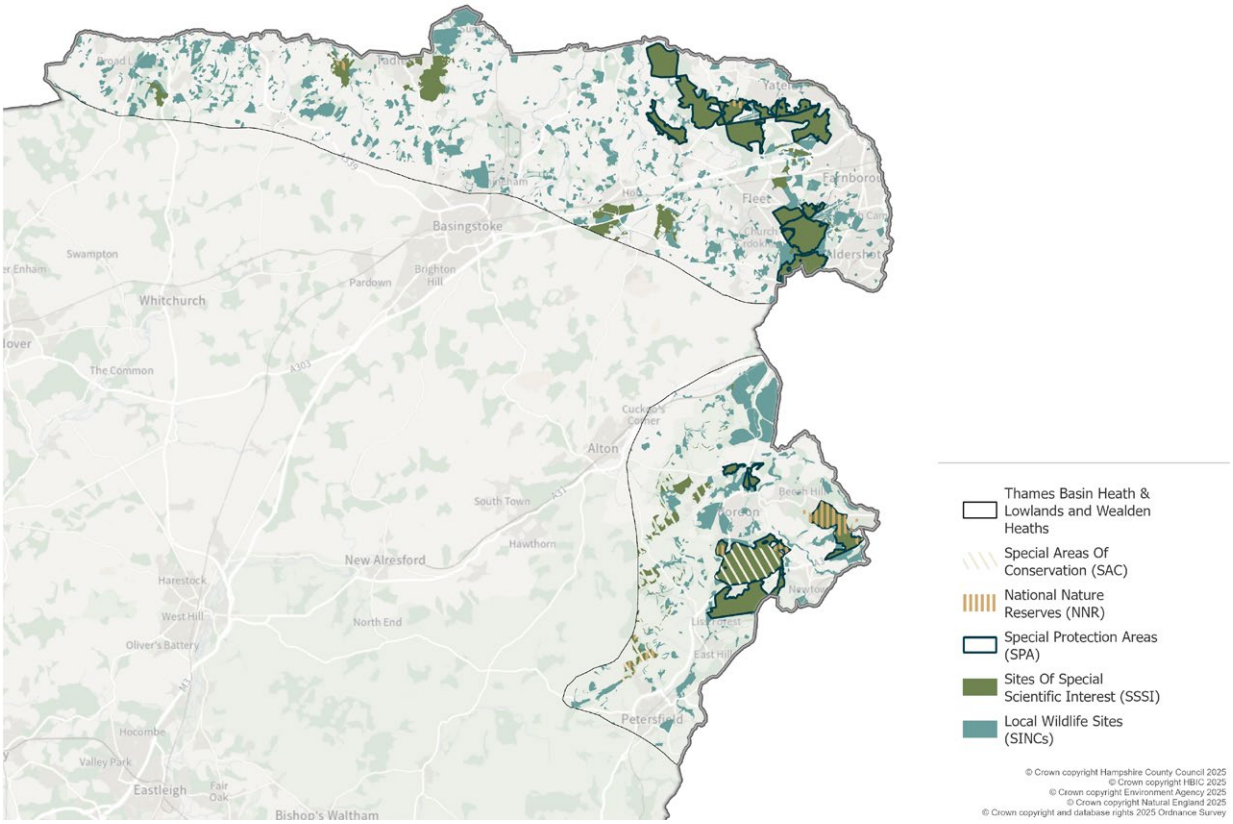
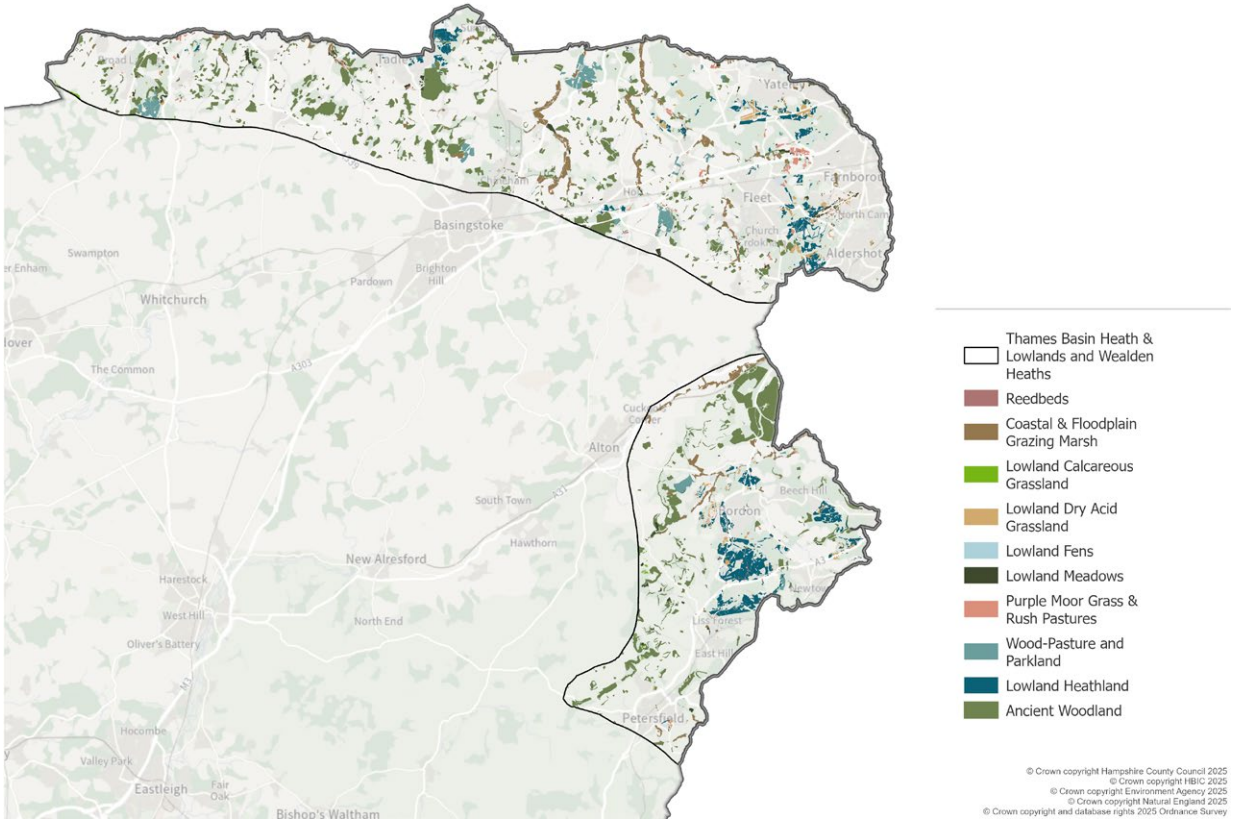


Figure 2.5: Priority habitats including ancient woodland



Description and current value to nature

Thames Basin Heaths

The Thames Basin Heaths is a plateau of Tertiary sands and gravels in the London Basins, with intervening valleys floored by London Clay. It has high woodland cover, where conifer plantations on former heathland are dominant features, along with large areas of open heath and scrub. Heather, gorse, oak, and birch all thrive in this landscape.

Beyond this, there is a patchwork of small fields with ancient woods, ancient hedgerows, and parkland. Ancient meadows and improved pasture remain as fragments along watercourses.

Key sites include the Thames Basin Heaths Special Protection Area (SPA), which protects internationally important populations of woodlark, nightjar, and Dartford warbler.

Wealden Heaths

The Wealden Heaths is a more undulating landscape situated on the greensand with outcrops of Upper Greensand, Gault Clay, and Lower Greensand. Extensive areas of ancient mixed woodland and distinctive fragments of chalk grassland occur within the East Hampshire Hangers reflecting the diverse geology.

Agricultural land comprises a mosaic of mixed farming, with pasture and arable land set within a wooded framework. Orchards are present near Selborne.

Key sites include the Wealden Heaths Phase II SPA, which comprises several distinct areas of wet and dry heathland, valley bogs, broad-leaved and coniferous woodland, acid grassland and open water. These support internationally important populations of woodlark, nightjar and Dartford warbler. Woolmer

Forest is unique in Britain in supporting 12 out of the 13 UK native amphibian and reptile species.

Thames Basin Lowlands

The Thames Basin Lowlands is a low-lying plain within the London Basin, stretching from the London suburbs through the Surrey and Hampshire border into southern Aldershot. The landscape is generally flat but in places is gently undulating. The underlying geology is predominantly London Clay with small outcrops of Bracklesham and Barton Group sand, silt and clay.

This is a highly urban area, with most of the NCA within Hampshire including urban Aldershot. The area also hosts small-scale farmed landscapes interspersed with woodlands, parklands and remnant commons and includes short stretches of the rivers Blackwater and Wey.

As part of the programme of LNRS engagement, a Thames Basin and Wealden Heaths farming and conservation workshop was held on 28 February 2024. The workshop report is available on the LNRS webpages[51]. The workshop brought together a wide range of key stakeholders and individuals interested in farming, land management and conservation across the area.

The workshop identified a number of key issues for nature and opportunities for nature recovery. It should be noted, however, that these issues and opportunities are the views of workshop attendees and may not always align with the scope and ambition of the LNRS.

Key Issues for nature identified through engagement

Climate change

Climate change poses a significant threat to biodiversity and is a major driver in net biodiversity decline. Climate change exacerbates many of those issues for the area's biodiversity listed below.

Heathland management

Management of heathland by grazing alone is problematic. Having the right grazing infrastructure, and the ability to include other management techniques such as mechanical cutting, are important to retain species and habitats. Management for some species does not suit others, for example birds and reptiles can have conflicting management requirements on the same habitat.

There is a shortage of suitable graziers and it is difficult to move cattle across sites due to bovine tuberculosis restrictions. Land ownership is also complex in this area, with common land, mixed ownership, and a high percentage of small holdings making coordinated management difficult.

Farming and conservation context

There has been a significant reduction in farm incomes since 2021, with the progressive loss of the Basic Payment Scheme. Agricultural input costs have increased significantly since Brexit and the beginning of the war in Ukraine. This has resulted in financial vulnerability for many farms. Defra grant schemes are perceived by many farmers and land managers to be complex and difficult to access.

51 Thames Basin and Wealden Heaths farming and conservation workshop (February 2024) - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**

Trees and woodland management

Lack of appropriate management is a significant issue for the maintenance, enhancement and expansion of the area's woodlands, coupled with large numbers of deer in the area.

Habitat fragmentation

Habitat fragmentation is a significant issue across the area. This includes the fragmentation of heathland habitat and ancient woodland, such as at Heron's Wood SINC.

Species recovery

There are threats to populations of notable species and their habitats from development pressures, lack of management, recreational access and disturbance, and associated wildfire risks. Residential pets, particularly cats, can have a significant detrimental effect on local heathland wildlife, through predation.

Lack of collaborative working

There are many small projects doing good work for nature recovery, but there is a lack of an overarching connection and effective communication between them. Equally, there is a lack of effective linkage between the many private landowners, tenants and commoners in the area. This does not encourage partnership and collaboration through, for example, farmer clusters.

Leadership and targets

Clear targets and action plans are considered crucial to deliver the Strategy.

Flooding

Poorly designed drainage schemes have led to a lack of water retention in the catchment and excessive flooding.

Funding

A lack of long-term funding and a shortfall in payments for heathland options in Countryside Stewardship are considered threats to nature recovery in this area.

Dark skies

The detrimental impact of light pollution on light-sensitive species was raised as an issue in the workshop for this area.

Recreational impacts

Recreational impacts, both habitat damage and species disturbance, is seen as a significant issue, particularly for areas of heathland and areas of habitat within or close to urban areas.

Opportunities for nature recovery identified through engagement

Farmer support

Farm clusters support farmer-to farmer learning and showcase existing best practice.

Low-input farming, which includes funded actions to help nature, can be a good choice for farms. This approach is beneficial both environmentally and economically and many farms are already doing this. Support is needed to ensure the right options are chosen for each farming business. Support should be accessible and fit alongside food production.

Ensuring that farmers feel properly engaged in the LNRS process is crucial. Communication is key to this.

Woodlands

Additional incentives for woodland management are needed. Upskilling people in rural crafts and woodland skills, and support for community woodlands, small woods and new woodlands were also mentioned as opportunities by participants.

Grazing management

Local grazing partnerships could support mixed species grazing and better management of heathlands. For example, the Hampshire & Isle of Wight Wildlife Trust is reintroducing grazing near Bordon.

Connectivity and habitat expansion

Connecting and extending habitats was considered crucial to the success of the LNRS. Examples include:

- Heathland restoration, expansion and linkage.
- Species-rich downland restoration, expansion and linkage.
- Improving the ecological value of the Basingstoke Canal and achieving favourable condition for this SSSI.
- Expanding and connecting the network of species-rich hedgerows.
- Adding Pamber Forest and Silchester Common to the SPA.
- Linking SPAs with wildlife corridors.
- Turning forested parts of the SPA back into heathland.
- Creating a corridor from Broxhead to Headley.
- Creating functional ecological corridors across the urban landscape of south Aldershot. Particularly in relation to restoring and enhancing connectivity between the River Blackwater and:
    - Sand and gravel extraction wetlands in its floodplain to the east.
    - Sand and gravel extraction wetland around Tice's Meadow Nature Reserve to the south.

River catchments

Rivers include a wide range of important habitats and species and provide significant opportunities for nature recovery. They are considered to be important wildlife corridors, particularly where they are close to protected sites. Protecting rivers with habitat buffers (riparian strips) and enhancing their floodplains not only benefit biodiversity but also provide many wider environmental benefits, such as the provision of clean water and reduced flood risk.

There is an opportunity to involve local communities and volunteers in large scale river catchment projects, which could enhance knowledge and encourage participation, for example on the headwaters of the River Loddon.

Greenspace and access to nature

Ensuring that urban development is sustainable by focusing on access to public greenspace, e.g. to meet the needs of south Aldershot residents and to provide functional and connected SANG land for the broader protection of the adjacent Thames Basin Heaths SPA.

It was also suggested that SANG areas should be part of an integrated whole, rather than just isolated spaces. North Hart and north-east Basingstoke were mentioned as areas of low development and recreational pressure, with opportunities for nature recovery.

There are opportunities to enhance local community's access to nature, in particular around the built-up areas of north-east Hampshire (e.g. Aldershot, Fleet, Farnborough, Yateley), and north Basingstoke.

Creating and enhancing habitats within and adjacent to urban areas, including urban greenspace and the provision of street trees, will improve the resilience of communities to the effects of climate change. This is particularly relevant to increasing summer temperatures and risk of flooding. These habitats also provide stepping stones across urban areas that provide connectivity with important habitats beyond the urban fringe.

Cross-border approaches

Opportunities to work across the county boundary were considered important, particularly for scarce heathland habitats. This includes working with the Berkshire and Surrey LNRSs.

Private finance

BNG contributions and other sources of private finance were seen as an opportunity to deliver nature recovery.

Community stewardship

Local communities and landowning estates should be encouraged to celebrate their local habitats and take action to protect them.

Species reintroductions

Field cricket reintroductions have taken place on Shortheath Common, and their reintroduction has been proposed at Broxhead Common. There have also been reintroductions of natterjack toads at Blackmoor, grey partridge at Rotherfield, and marsh fritillary butterflies at Foxlease Meadows, with further opportunities for species reintroductions. Suitable habitat management is crucial to maintain and enhance reintroduced populations.

Access to nature

The tranquillity of the river valleys, and their historic environment, is a magnet for informal outdoor recreation. This provides opportunities for contact with nature, as well as increased awareness of the potential threats to the environment and the behavioural changes needed to mitigate them.

Central Chalk Belt

Area of NCAs (within the LNRS boundary)	188,008ha
Key priority habitats present	Chalk grassland, chalk streams, fen meadow, and ancient woodlands.
'Crown jewel' sites	Old Winchester Hill NNR, Beacon Hill NNR at Warnford, Beacon Hill SSSI at Burghclere, Ladle Hill SSSI, St Catherine's Hill SSSI, Martin Down NNR, Butser Hill SAC/NNR, Porton Down SPA, Salisbury Plain SAC, rivers Avon SAC, Test SSSI (and River Test Compensatory SAC habitat), Itchen SAC and Meon SINC and Compensatory SAC habitat.
Priority species	Farmland birds including the stone curlew, rare arable plants such as ground pine and pheasant's-eye, rare bryophytes such as curly beardless-moss and sterile beardless-moss, Duke of Burgundy butterfly, silver spotted skipper, Adonis blue, barred tooth-striped moth, narrow-bordered bee hawkmoth, brown-banded carder bee, southern damselfly, hazel dormouse, cheese snail, white-clawed crayfish, otter, water vole. salmonids, eel, brook lamprey and bullhead,
Potential opportunities for nature recovery	Species-rich chalk grassland restoration, expansion and linkage. Enhancement of chalk rivers and their floodplains as wildlife corridors. Creation of riparian buffer strips. Improved woodland management. Expansion of the farmer cluster network. Species recovery programmes for iconic species. Better linkages in the network of hedgerows and ponds. Introduction of beaver to waterways and wetlands. Removal of non-native invasive species from waterways and wetlands.

Part of National Character Areas 125: South Downs[52]; 130: Hampshire Downs[53]; 132: Salisbury Plain and West Wiltshire Downs[54]; and 134: Dorset Downs and Cranborne Chase[55].

52 South Downs NCA profile - **https://nationalcharacterareas.co.uk/South-Downs/**
53 Hampshire Downs NCA profile - https://nationalcharacterareas.co.uk/Hampshire-Downs/
54 Salisbury Plain and West Wiltshire Downs NCA profile - **https://nationalcharacterareas.co.uk/Salisbury-Plain-and-West-Wiltshire/**
55 Dorset Downs and Cranborne Chase profile - **https://nationalcharacterareas.co.uk/Dorset-Downs-and-Cranborne-Chase/**

Figure 2.6: Area boundary

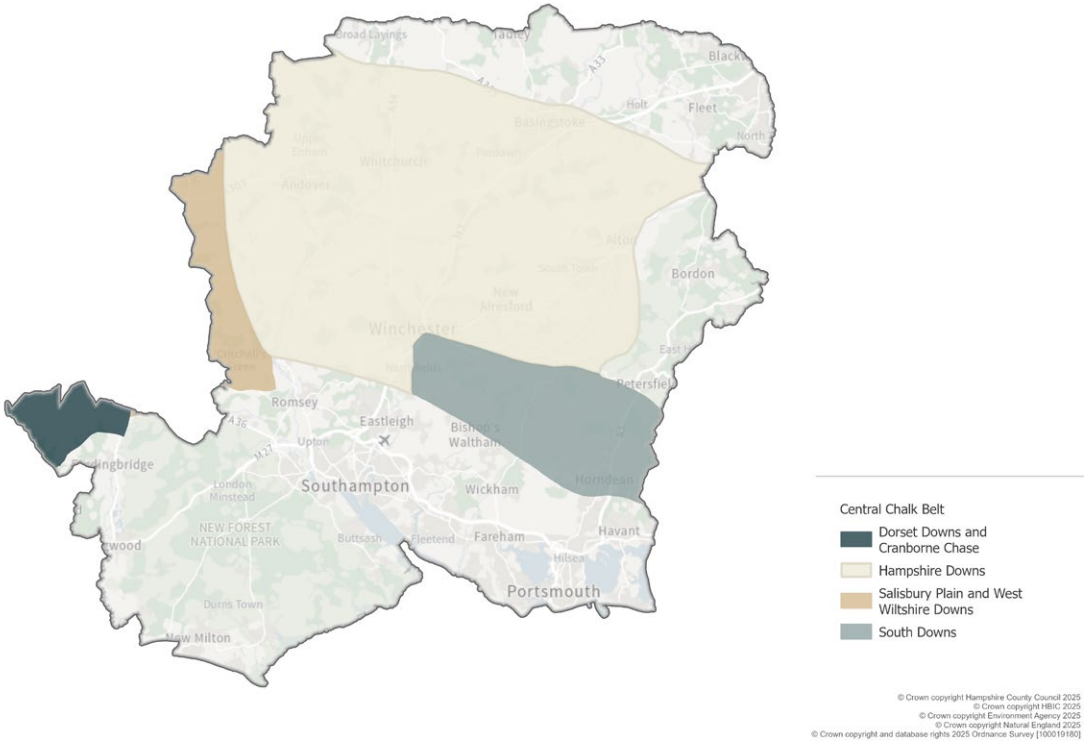


Figure 2.7: Nature conservation designations

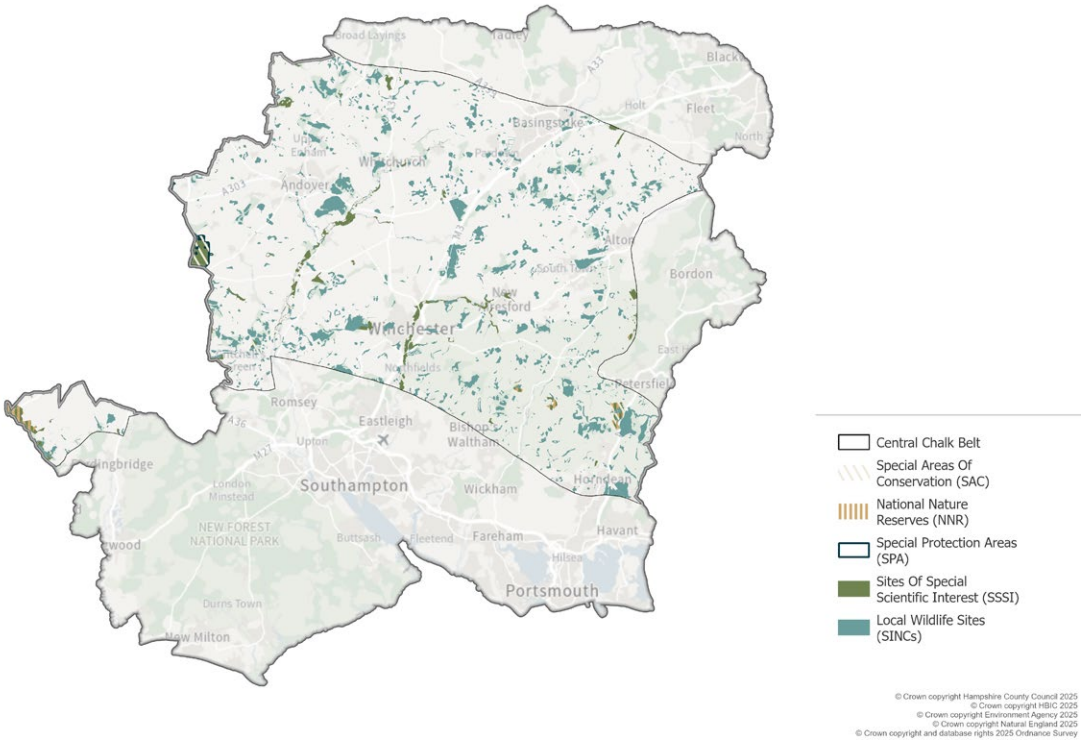
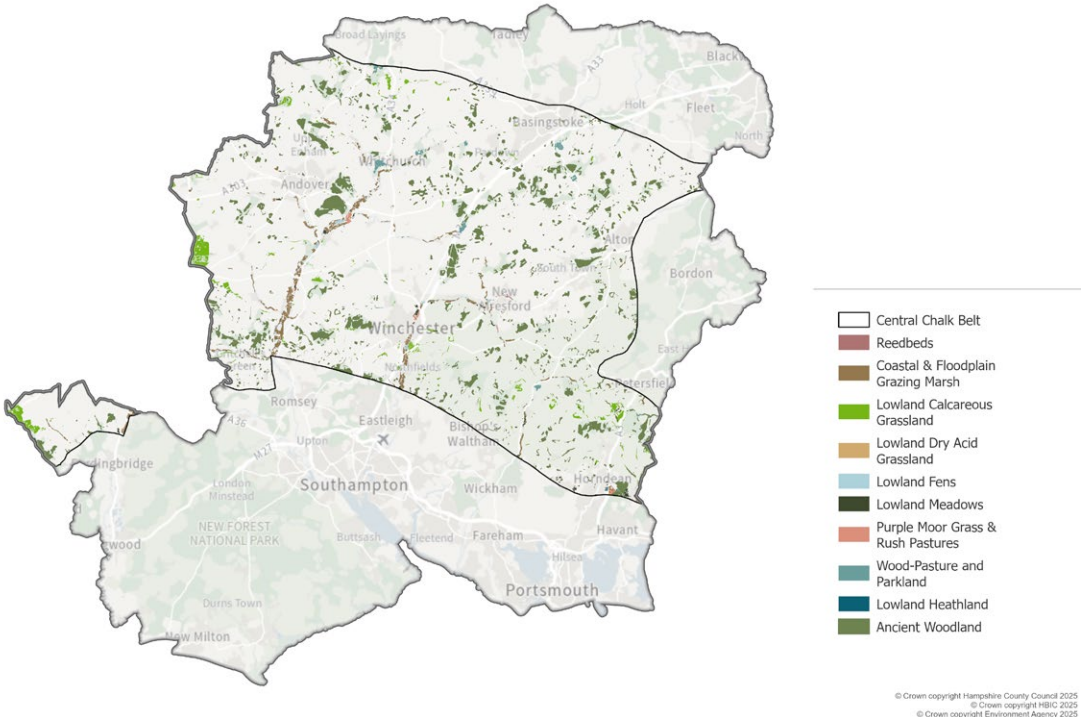


Figure 2.8: Priority habitats including ancient woodland



Description and current value to nature

The area forms part of the central southern England belt of chalk. This comprises an elevated, open, rolling landscape dominated by large arable fields with low hedgerows on thin chalk soils, scattered ancient woodland (mostly on clay-with-flint-caps), and shelterbelts. Flower and invertebrate-rich remnants of calcareous grassland remain, mostly along the northern and eastern scarps and where Salisbury Plain connects with the county's western boundary. A large section of the eastern portion of the area lies within the South Downs National Park. Part of the north-west portion of the area lies within the North Wessex Downs National Landscape. A small portion of the western tip of the area lies within the Cranborne Chase National Landscape.

Cutting across this landscape are numerous chalk rivers and streams, including the Test, Itchen, and Meon, and their associated tributaries and wetland habitats. The chalk is a large and important aquifer. Because of this, groundwater protection and source vulnerability designations cover much of the area, with catchment sensitive farming to control pollution, run-off and soil erosion.

As part of the programme of LNRS engagement, a Hampshire central chalk farming and conservation workshop was held on 21 February 2024. The workshop report is available on the LNRS webpages[56]. The workshop brought together a wide range of key stakeholders and individuals interested in farming, land management and nature recovery across the area.

56 Hampshire central chalk farming and conservation workshop (February 2024) - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**

The workshop identified a number of key issues for nature and opportunities for nature recovery, included below. It should be noted, however, that these issues and opportunities are the views of workshop attendees and may not always align with the scope and ambition of the LNRS.

Key issues for nature identified through engagement

Climate change

Climate change poses a significant threat to biodiversity and is a major driver in net biodiversity decline. Climate change exacerbates many of those issues for the area's biodiversity listed below.

Land use pressures and farmer recognition

Balancing food production and management for wildlife is a key consideration for farmers. Many farmers feel that their efforts to recover nature are currently going unrecognised. Unfunded farm clusters are unable to contribute data to feed into national statistics on the impact of their work.

There has been a large reduction in farm incomes since 2021 with the progressive loss of the Basic Payment Scheme. Agricultural input costs have increased significantly since Brexit and the beginning of the war in Ukraine. This has resulted in the financial viability of many farms to be vulnerable. Defra grant schemes are perceived by many farmers and land managers to be complex and difficult to access.

Lack of incentives to manage woodlands

42% of woodlands were cited as being unmanaged. There is a shortage of woodland management skills, and a lack of financial incentives to manage woodlands effectively. Workshop participants raised the issue of a lack of deer control contributing to poor woodland habitat status.

Accessibility of government schemes

The Rural Payments Agency (RPA) was singled out as being a barrier to farmer uptake of schemes, which have been rolled out too slowly in the face of the loss of the Basic Payment Scheme (BPS). The threat of penalties, the complexity of schemes, and the lack of guidance and support in applying for the right options were all cited as threats to the provision of profitable nature-friendly farming.

Grazing management

A shortage of graziers, and the right kind of livestock to graze certain habitats (e.g. cattle) was raised as an issue. There was a reluctance amongst farmers to graze conservation sites with public access, owing to the potential dangers to livestock from people and dogs. A shortage of layback land was also mentioned as a barrier to effective downland grazing.

Habitat fragmentation and non-native invasive species

Habitat fragmentation was cited as a cause for serious concern, particularly for species rich downland and rivers and wetlands. Also of concern is the risk of non-native species outcompeting native flora and fauna, particularly in the area's waterways and wetlands.

Planning and development

The intensification of farming and continued high levels of population and economic growth in urban areas are considered threats to biodiversity. This includes the associated demands for water, and traffic levels on major trunk roads, including those crossing the South Downs.

Several actions to improve habitats for wildlife, such as creating ponds and butterfly banks, require planning permission, which acts as a barrier to these activities. In contrast, there was thought to be inappropriate development on greenfield sites.

Water quality and quantity

Participants raised the issue of the impacts of water pollution, including nutrients, from wastewater treatment works and run-off into watercourses, particularly impacting the Solent and Rivers Test and Itchen (and their tributaries), as well as over-abstraction. In addition, the impacts of drought and flooding on sensitive habitats was cited as a significant issue, with water meadows and chalk streams specifically mentioned.

Light pollution

Light pollution impacts a number of important species. This was cited as an issue in the South Downs National Park and Butser Hill SAC/NNR.

Baseline data

The current status of many species in the area is not known due to a lack of survey work and baseline data. There is a fear among landowners that finding rare species might result in a restrictive designation.

Opportunities for nature recovery identified through engagement

Farm clusters

Farm clusters were seen as a key way to exchange ideas, carry out practical projects, and achieve real benefits for farmers and wildlife. The idea of a super-cluster was raised, to improve communication between clusters. Participants felt that building on the existing clusters in the area should be a key opportunity supported by the LNRS.

Farmer support

Farm clusters support farmer-to farmer learning and showcase existing best practice.

Low-input farming, which includes funded actions to help nature, can be a good choice for farms. This approach is beneficial both environmentally and economically, and many farms are already doing this. Support is needed to ensure the right options are chosen for each farming business.

Private finance

BNG contributions and other sources of private finance were seen as an opportunity, and the Environmental Farmers Group[57] was cited as an example of this type of work in action.

Farmer engagement

Working more closely with farmers was considered a key opportunity. This should include offering support from trained ecologists, and linking farmers with partner organisations delivering the LNRS. Making stronger links between public procurement and local food producers, so that 75% of food in council offices, schools and hospitals is sourced locally, was also recommended.

Large-scale projects

Large-scale projects were suggested, which could incorporate work by local communities and volunteers in citizen science and project delivery. This would enhance knowledge of farming and the natural environment. It would also encourage participation in projects, leading to better outcomes. Additionally, it would help mitigate the impacts of public access by educating residents and visitors. It was pointed out that pollinators thrive in villages and towns, and that new build developments could support 30% tree cover. Connecting the North Wessex Downs with the South Downs via habitat creation and restoration, for example through the Big Chalk project, was suggested.

57 Environmental Farmers Group - **https://www.environmentalfarmersgroup.co.uk/**

Woodland management

Improving the management of ancient woodlands, to restore habitats and retain carbon, was seen as an opportunity in the area. The addition of trees to pastures (silvopasture) to improve productivity and animal welfare was also mentioned. Supporting woodland-based businesses, for example producing woodchip or fencing materials, was suggested as a way to make woodland management profitable. Coordinated deer control was also a key opportunity but requires a collaborative approach.

Habitat creation, restoration and connectivity

Joining up habitats like hedgerows, ponds, riparian buffer strips, managed road verges, and improving access via a well-maintained footpath network are ways to increase connectivity in the landscape and urban areas. There was a suggestion to link the South Downs National Park and the North Wessex Downs National Landscape through habitat creation and linkage.

Participants cited the need to restore, create and link important habitats in the area to enhance biodiversity and improve the sustainability of such habitats, in particular species-rich downland and flower-rich margins. This would also increase and sustain populations of pollinator insects for the benefit of agricultural productivity.

Species projects

Projects supporting species that are iconic to the area could create enthusiasm from a range of stakeholders to drive nature recovery. For example, the stone curlew was mentioned as a species that could benefit from a targeted approach in the project area. Projects for this species have been supported by farmers and are monitored by the RSPB and the Hampshire Ornithological Society (HOS), showing the benefits of this kind of approach. Other species mentioned include juniper, the corn bunting, the grey partridge, red helleborine, sword-leaved helleborine, and rare arable plants in general. Beaver re-introduction or colonisation from adjacent areas was also cited as a potential benefit for nature recovery in this area.

Access to nature

The tranquillity of the downs and river valleys, and their historic environment, is a magnet for informal outdoor recreation. This provides opportunities for contact with nature, as well as increased awareness of the potential threats to the environment and the behavioural changes needed to mitigate them.

North Hampshire

Area of NCA (within the LNRS boundary)	41,846ha (note, it was primarily the western portion of this area that was considered in the workshop).
Key priority habitats present	Ancient oak woodland, wood pasture, ancient meadows, heathland and acid grassland, rivers and wetlands.
'Crown jewel' sites	Ashford Hill NNR, Highclere Park SSSI, Beacon Hill SSSI, Pamber Forest and Silchester Common SSSI.
Priority species	Adder, great crested newts, dormice, tree pipit, marsh tit, beaver (re-introduction), olive earthtongue, green-flowered helleborine.
Potential opportunities for nature recovery	Expansion and restoration of woodland, hedgerows and lowland meadows to better link the North Wessex Downs and South Downs. Restoration and expansion of heathland and acid grassland. Enhancement of road and rail verges/embankments to provide linear habitat corridors. Use corridors of green and blue spaces to link Basingstoke and the countryside for people and nature.

Part of National Character Area 129: Thames Basin Heaths[58] *(west of Hook).*

58 Thames Basin Heaths NCA profile - **https://nationalcharacterareas.co.uk/Thames-Basin-Heaths/**

Figure 2.9: Area boundary

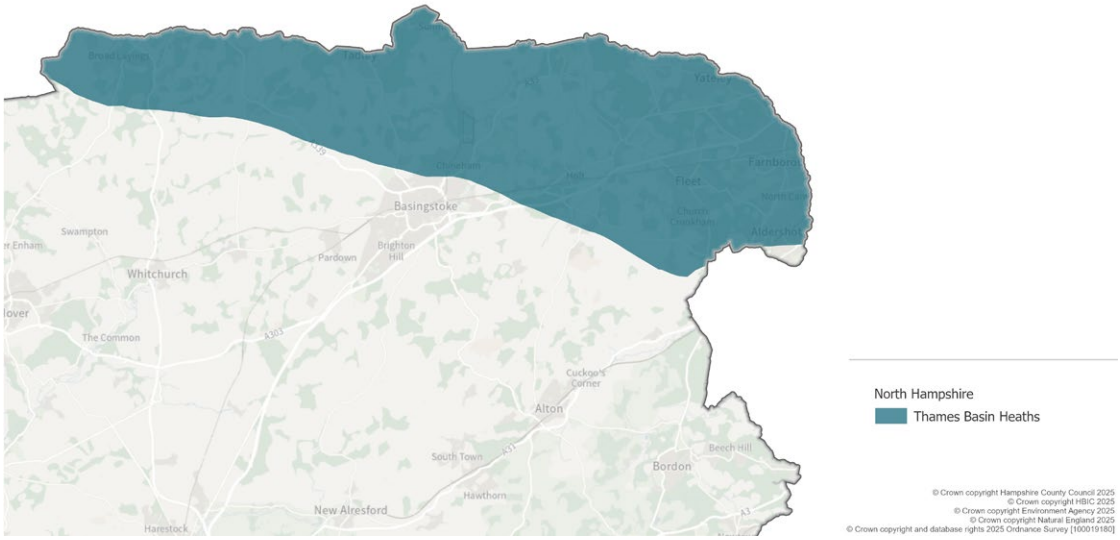


Figure 2.10: Nature conservation designations

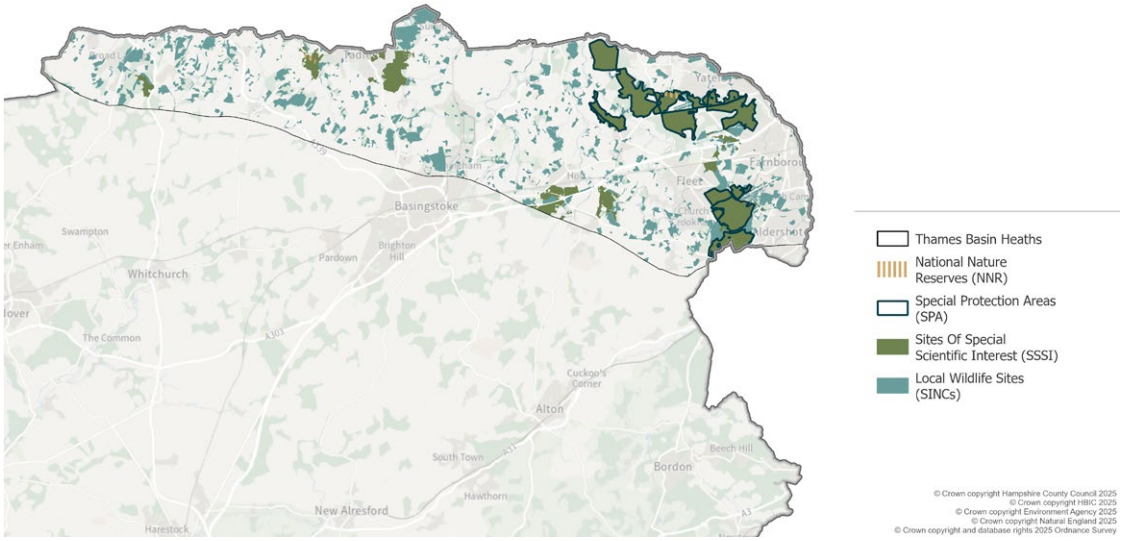
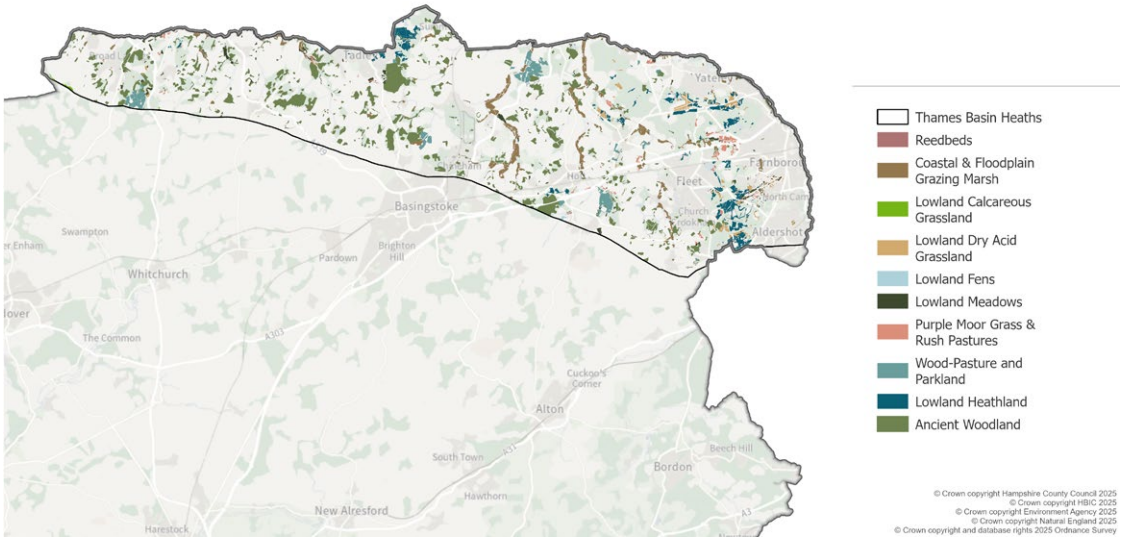


Figure 2.11: Priority habitats including ancient woodland



Description and current value to nature

Sitting on the more acidic clays and sands, this area of north Hampshire seems to get very little attention. It supports a diverse patchwork of ancient oak woodlands, hedgerows, wood pasture, heath, ancient meadows and wetlands. These habitats support a rich flora and fauna.

The area is bordered to the north partly by the River Enborne and has numerous streams, including the Loddon and Whitewater to the east. The North Wessex Downs National Landscape covers the western end of the area.

As part of the programme of LNRS engagement, a North Hampshire workshop was held on 17 January 2024. The workshop report is available on the LNRS webpages[59]. The workshop brought together a wide range of key stakeholders and individuals interested in farming, land management and nature recovery across the area.

The workshop identified a number of key issues for nature and opportunities for nature recovery, included below. It should be noted, however, that these issues and opportunities are the views of workshop attendees and may not always align with the scope and ambition of the LNRS.

Key Issues for nature identified through engagement

Climate change

Climate change poses a significant threat to biodiversity and is major driver in net biodiversity decline. Climate change exacerbates many of those issues for the area's biodiversity listed. Drier summers, in particular, were highlighted as a threat to nature recovery on the heathland in this area.

59 North Hampshire workshop (January 2024) - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**

Level of engagement with the farming community

Farmers and landowners are key to delivering nature recovery in North Hampshire. The short-term nature of government funding, and the complexities of accessing it, were reported to be barriers to farmers engaging with the new grant schemes. Several participants cited the loss of professional expertise and face-to-face advisors as a barrier to uptake of new schemes. Funding streams and project funding were also considered too short-term.

Land use tensions between productive arable land and rewilding or horse grazing were mentioned. However, farm clusters were cited as a proven and effective way to deliver environmental benefits.

Water – abstraction and pollution

Several participants referred to the impacts of over-abstraction and pollution on the health of rivers. Water companies, commercial properties, agricultural businesses and domestic properties were all cited here, with engagement with the water industry considered key to successful improvement of water quality.

Public awareness

A lack of awareness of the environment, farming and food production among the general public were felt to contribute to threats to nature recovery. The negative impacts on wildlife from public access were cited, as were the impacts of increased vehicular traffic, and a lack of understanding of rural issues in the urban population.

Species issues

Participants mentioned a lack of accurate baseline and abundance data for many species.

Opportunities for nature recovery identified through engagement

Farm clusters

Farm clusters were seen as an excellent opportunity for nature recovery. They provide access to peer-to-peer learning, active facilitators and grant scheme assistance, and encourage effective habitat linkage between farms. It was felt that the LNRS could have an active role in celebrating sustainable agriculture and promoting the good work already being carried out by farmers in the area.

Habitat connectivity

This was considered to be a key opportunity for the LNRS across a variety of habitats, including hedges, ditches, ponds, and watercourses. There were several specific geographical examples cited:

- Habitat creation and restoration to connect habitats on acid soils from west to east of the area, e.g. Greenham and Crookham through Ashford Hill, Pamber and Silchester, on towards the Thames Basin Heaths SPA.
- Use linear features to join up habitats, e.g. Roman roads from Silchester, railway lines, and motorway verges.
- Link the "string of woodland pearls" west of Basingstoke and establish corridors of mixed green and blue space, allowing nature and people to better interface between town and country.
- The former railway line to the south, becoming the A34 could be a good linking feature at Old Burghclere.
- Ensure that green and blue infrastructure plans are prepared for new development that deliver connectivity within development and out into the wider countryside.

Access to funding and grant schemes

To improve the ability of landowners and communities to access funding and grant schemes, it was felt that a "one-stop-shop" of information, or greater access to trained advisors and facilitators, could help provide opportunities for more uptake of schemes.

Cross-border approaches

Opportunities to work across the county boundary were considered important, particularly for scarce heathland habitats. This includes working with the Berkshire and Surrey LNRSs.

River catchments

Prioritising river restoration and wetland creation in the upper reaches of river catchments provides opportunities to address nutrient issues, general water quality and water storage. Beavers could be used as keystone species to achieve wetland creation and improve water storage.

Nature-based solutions at wastewater treatment works, e.g. settlement lagoons and reedbeds were seen as a sustainable way to mitigate the impacts of development on the area's watercourses.

Woodlands

Water industry commitments to planting trees and maintaining woodlands on land holdings were seen as an opportunity for woodland creation and BNG. Better woodland management could include a soft edge (transition) between field and woodland, rather than an impenetrable edge that species cannot easily cross.

Recreational impacts

Additional greenspace for people to access nature is seen as an opportunity to reduce pressure on existing designated wildlife sites, e.g. more SANG-like areas to attract dog walkers. Better management of existing rights of way is also seen as a way of reducing recreational pressure on sensitive areas.

Opportunities for species work

The use of umbrella species to drive nature recovery and public interest was considered a key opportunity.

Provision of artificial breeding sites for a range of species, especially birds, is an opportunity for species recovery. However, benefits and impacts need to be quantified and related to wider habitat management actions.

New Forest and Eastern Dorset Heaths

Area of NCAs (within the LNRS boundary)	70,648ha
Key priority habitats present	Wetlands, ancient woodland and wood pasture, lowland heathland, lowland dry acid grassland, fen and valley mire, lowland meadows, lowland fens, purple moor grass and rush pasture, reedbeds, coastal and floodplain grazing marsh, maritime cliff and slope, saltmarsh, shingle and saline lagoons.
'Crown jewel' sites	New Forest SPA/SAC/Ramsar, Dorset Heaths SAC, Dorset Heathlands SPA/Ramsar, Avon Valley SPA/Ramsar, River Avon SAC, Solent Maritime SAC and Solent and Dorset SAC, Ebblake Bog SSSI and Ringwood Forest SINC
Priority species	Honey buzzard, nightjar, woodlark, Dartford warbler, goshawk, hawfinch, breeding curlew, common snipe and seabird colonies, pine marten, smooth snake, sand lizard, adder, otter, water vole, beaver, shoulder-striped clover moth, speckled footman moth, black sweep moth, southern damselfly, New Forest cicada, 13 bat species, and rare lichen, bryophyte, fungi and beetle assemblages, great crested newt. Salmon, sea trout, eel, brook lamprey, bullhead.
Potential opportunities for nature recovery	Heathland and acid grassland mosaic restoration. Lowland meadow restoration. Tree planting and hedgerow creation in the New Forest fringes. Creation of wildlife corridors to link areas of high nature value, e.g. Forest to Coast and Avon Valley, and Ringwood Forest to the Dorset Heaths Creation and management of new ponds, wetlands and reedbed habitat. Restoration of the Avon Valley Floodplain. Restoration and enhancement of the area's rivers and streams for habitat and water quality, including buffer strips and shading. Development of more farm clusters. Better management of visitors to reduce disturbance to sensitive habitats and species.

Part of National Character Areas 131: New Forest[60] and 135: Dorset Heaths[61].

60 New Forest NCA profile - **https://nationalcharacterareas.co.uk/New-Forest/**
61 Dorset Heaths NCA profile - **https://nationalcharacterareas.co.uk/Dorset-Heaths/**

Figure 2.12: Area boundary

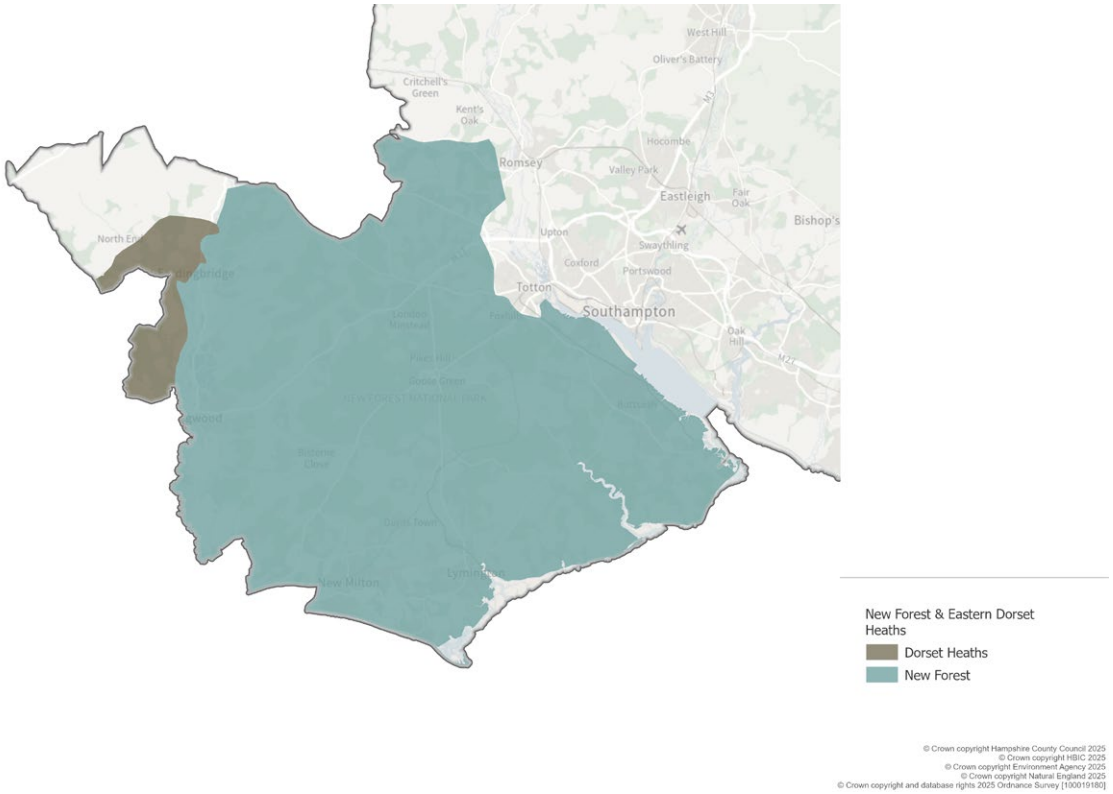


Figure 2.13: Nature conservation designations

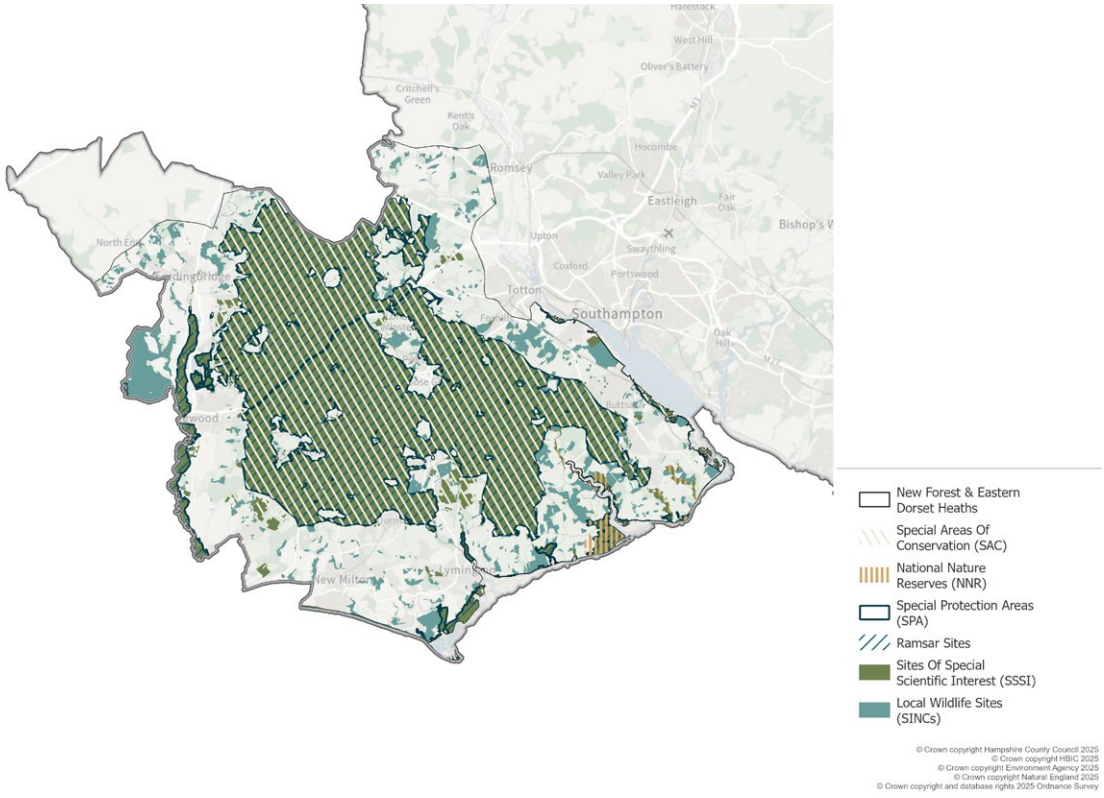
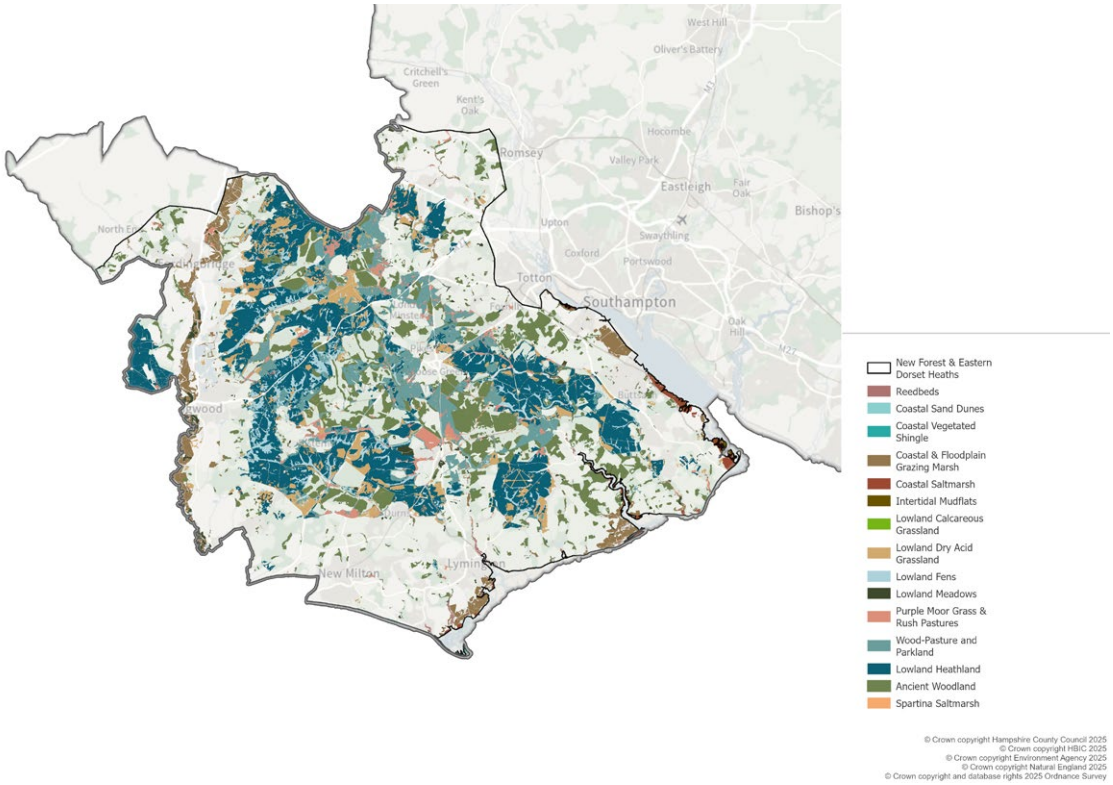


Figure 2.14: Priority habitats including ancient woodland



Description and current value to nature

New Forest

75% of the New Forest NCA is the New Forest National Park. It also includes the lower Hampshire Avon Valley, which forms the western boundary. To the east is the urbanised waterside from Totton to Fawley, with major oil, energy, and port-related industry alongside Southampton Water.

The area is a plateau, which averages around 80-100 metres above sea level, formed of Palaeogenic deposits. They are also overlain by Quaternary gravels in river terraces which retain evidence of prehistoric settlement. The gravels create the acid soils which support the habitats and species found in the New Forest which is designated as internationally important and is one of the most important and extensive habitats of this type in lowland Europe. These habitats have been kept largely undisturbed by agriculture with the survival of grazing and commoning as part of an important pastural tradition, due to the area's designation as a medieval royal hunting forest, imposition of ancient forest law, and more recent conservation policies.

Along its Solent shore, the soft geology forms low cliffs and extensive marine deposition features. The deposits exposed along the coast are internationally recognised fossil fauna. These spits, salt marshes and mudflats are designated as internationally important. The Avon Valley is distinctly different. It is a wide, flat valley bottom of mostly derelict water meadows, pasture, arable land, and a braided chalk river. It is linked with the New Forest through grazing tradition.

The core of the NCA is an area of contrasts. It has open heath, woodland and unenclosed wood pasture, which is characterised by ancient oak and beech, with New Forest ponies, cattle and pigs roaming free. There are also areas of enclosed pasture in historic field patterns with commoners' farmsteads,

and small settlements. Together they evoke a special sense of place. Much of this area is open access and has long been a popular destination for holidays and outdoor recreation, predominantly walking, horse riding, cycling, camping and caravanning. There is also a long tradition of wildlife study and collecting. The coastal area has more limited access. However, the Solent Way, shingle beaches, and marshes are also a popular destination, with sailing centres at Beaulieu, Lymington, Mudeford, and Keyhaven. The New Forest National Park was designated in 2005.

The mires, bogs, ponds and streams, along with the wet heaths, wet grasslands and wet woodlands, are among the New Forest's most precious qualities. They form part of the New Forest SSSI and are a key reason large areas of the New Forest are also protected under international legislation. In terms of wetland habitats, the New Forest supports one of only four significant sites of bog woodland in the UK, as well as one of the six best sites of riverine woodland. Together with other scarce wetland habitats, the Forest also contains the most extensive lowland valley mire systems in north-western Europe[62].

As it lies between two major areas of planned economic growth, the effects of new development since the 1970s have heavily impacted the New Forest. Combined with trends, like the popularity of rural lifestyles and increased demand for outdoor recreation and tourism, the landscape is under intense pressure. Together with changing farming economics, this has affected the viability of commoning, which is essential for retaining critical landscapes, and underpins the ecological processes which support the biodiversity of the New Forest Commons.

Around the fringe and within the forest core, there are areas of enclosed back-up farmland, mixed woodland, heath-associated pasture, and dispersed farmsteads, villages and hamlets. These areas have a more intimate character of small pastures and paddocks, enclosed by high hedgerows with many mature hedgerow trees and a network of narrow, winding, often sunken, lanes. An important area of enclosed land is detached from the main area to the north of the A36 in southern Test Valley.

There is an undeveloped open, marshy coastal strip with shingle beaches and spits, occasionally backed by low, crumbling cliffs, with visually prominent clusters of stunted oak and pine.

Much of the New Forest NCA is designated as SAC, SPA, and Ramsar.

Dorset Heaths

A small part of the Dorset Heaths NCA is within the strategy area.

The landscape of the Dorset Heaths is predominantly low relief. In places, erosion has left incised but shallow valleys, now dry or holding small watercourses, sometimes with associated mires.

There are large tracts of gently undulating, less-fertile marginal land dominated by conifer plantations or by heathlands of international importance (SPA, SAC and Ramsar). The area is internationally important due to its populations of nightjar, woodlark, Dartford warbler, sand lizard, smooth snake, and Dorset heath, as well as a rich assemblage of heathland, mire invertebrates, and lower plants. The heathlands can provide a sense of remoteness, bleakness or tranquillity, depending on the weather conditions.

At the eastern end, just within Hampshire, lies Ringwood Forest, one of the largest SINCs in Hampshire, comprising mostly of woodland plantation established on former heathland, and ancient woodland, and supporting a nationally important metapopulation of sand lizard. This is managed by Forestry England with plans to restore more areas to

62 NERR148 Edition 1 New Forest SAC Management Plan Version II (February 2025) - **https://publications.naturalengland.org.uk/publication/5661861545246720**

heathland, wooded heath and valley mire. This is also an area where the underlying geological gravel and sand deposits have and are being exploited in the form of quarrying, with each development required to undergo restoration on phased completion.

The soils are predominantly sandy, susceptible to erosion and relatively unproductive. Agriculture is largely pasture, with fields bounded by hedgerows or fences. There is some arable cropping, especially maize.

As part of the programme of LNRS engagement, a New Forest and forest fringes workshop was held on 1 February 2024. The workshop report is available on the LNRS webpages[63]. The workshop brought together a wide range of key stakeholders and individuals interested in farming, land management and nature recovery across the area.

The workshop identified a number of key issues for nature and opportunities for nature recovery, included below. It should be noted, however, that these issues and opportunities are the views of workshop attendees and may not always align with the scope and ambition of the LNRS.

Key Issues for nature identified through engagement

Climate change

Climate change poses a significant threat to biodiversity and is a major driver in net biodiversity decline. For example, the impact of climate change on flows and temperatures in the New Forest streams and the associated impacts on ecology, specifically fish and invertebrate communities. Climate change exacerbates many of the issues for the area's biodiversity listed below.

Recreation and access

A recurring theme in both the general and location-specific responses was the impact on nature from public access and recreation, particularly the damage caused by dogs (both on the coast and in the forest). Inappropriately located car parks were also cited as a threat.

It was suggested that dedicated dog parks could alleviate pressure on high nature value areas. It was also proposed that signs should be more user-friendly and avoid acronyms to encourage people to stop their dogs from disturbing wildlife.

Water quality and quantity

The poor condition of the area's rivers and streams and pollution in other water bodies was a key issue raised by participants. Threats include inappropriate river restoration and hard engineering in the past, historic drainage of the wetland for forestry and tree production, and the impact of sewage and agricultural run-off, for example from intensively managed fruit farms east of the New Forest.

Refinery operator(s) should maximise their investment in the local environment through nature recovery projects, above and beyond their regulatory obligations to monitor pollution outputs.

Air quality and light pollution

Air quality is a significant issue in the New Forest, particularly for pollution sensitive rare lichen species that grow on old forest trees.

Light pollution was also raised as an issue for nocturnal species in the area.

63 New Forest and forest fringes workshop (February 2024) - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**

Loss of grazing and commoning culture

Several participants cited the threats to the traditional commoning culture of the New Forest, with loss of layback land for grazing and an increase in the use of land for recreational equestrian activities. There was seen to be a lack of support for commoners to continue traditional practices that are intrinsic to the management of the area's special habitats.

Baseline data

The current status of many species in the area is unknown due to a lack of recent survey work and baseline data.

Species

One participant suggested the future of coniferous woodland is under threat insofar as this habitat supports species such as goshawk, crossbill, and hawfinch. The Dartford warbler was noted as an important species in the area that would take advantage of habitat restoration work.

It was suggested that SSSI designations should be reviewed to include new species coming in such as egrets and avocets.

Landscape character and sense of place

Participants suggested that it was important that the New Forest was appreciated as an iconic landscape, with varied habitats and multi-faceted values for people and nature. Preserving these unique senses of place was key, rather than addressing the area in a one size fits all way.

Opportunities for nature recovery identified through engagement

Grazing and commoning

The traditional commoning culture of the New Forest should be celebrated and supported along with the provision and protection of layback land for commoners. These traditional practices are intrinsic to the management of the area's special habitats, and are important to maintain and enhance the New Forest's internationally important nature conservation value.

Ecological connectivity

Connecting habitats, and the theme of habitats being "bigger, better and more joined-up", was a recurring theme in participants' contributions in this section of the workshop.

Tree planting and hedgerow creation were seen as key opportunities for the New Forest and forest fringes. Several specific locations were provided, including tree planting at the Horticultural Research Station at Lower Pennington, and new woodlands, orchards, and ponds on Hampshire County Council land at Newbridge. Green bridges were suggested to improve connectivity either side of the A326. In addition, there is the potential to create and improve habitat connectivity with the Franchises Wood RSPB Reserve over the border in Wiltshire.

The creation of wildlife corridors to link areas of high nature value, e.g. forest to the coast, is an opportunity to sensitively manage and restore roadside verges. This would provide more diverse flora and habitats for insects and larger animals. 'Wood meadows' which combine both habitats, were also cited as a possibility.

Opportunities to restore mineral extraction developments, particularly in the Avon Valley and Ringwood Forest areas, in line with LNRS habitat and species priorities and provide better connectivity with sites designated for their international and national nature conservation value.

Waterway and wetland restoration and pond creation

The creation and management of new ponds, wetland and reedbed habitats to store water and provide natural filtering of pollutants was seen as an opportunity for the LNRS. Suggested locations included the restoration of habitats in the Avon Valley floodplain. The restoration of rivers and streams to tackle habitat and water temperature issues was considered very important.

Cross-border approaches

Opportunities to work across the county boundary were considered important, particularly for scarce heathland and acid grassland mosaic habitats. This includes working with the Dorset and Wiltshire LNRSs.

Education and community engagement

Community engagement was seen as a key opportunity, with ideas including citizen science projects, planting trees in memory of loved ones on local authority owned land, and introducing wildflowers into cemeteries. The large student population in Southampton was mentioned as an opportunity for engagement with nature recovery. Another suggestion was that Hampshire includes the Natural History GCSE in school curricula.

Including under-represented groups, youth groups and other community groups, in planning and delivering actions for nature recovery was suggested as a key role for the LNRS.

Local authority collaboration and landowner liaison

Better collaboration and join-up of local authorities and key decision makers was considered crucial to the success of the LNRS. It was also considered vital that landowners were brought on board with the process. The development of more farmer clusters, especially on the forest fringes, was suggested as a way to facilitate this. The point was made that commoners and tenants needed a clear route to be supported by environmental schemes. The Environmental Farmers Group (see current projects in Appendix 4) was also cited as a way to expand and support farmer clusters.

Species

Swifts could be supported in new developments and renovations through the mandatory inclusion of swift bricks.

South Hampshire Lowlands and South Coast Plain

Area of NCAs (within the LNRS boundary)	55,400ha
Key priority habitats present	Ancient woodland, lowland meadows, purple moor grass and rush pasture, coastal and floodplain grazing marsh, saltmarsh and mudflats, sand dunes and coastal vegetation shingle, saline lagoons, chalk streams, and soft rock cliffs.
'Crown jewel' sites	Portsmouth Harbour SPA, Chichester and Langstone Harbours SPA, Solent and Southampton Water SPA, Solent Maritime SAC, River Itchen SAC, River Meon Compensatory SAC, and Titchfield Haven NNR. Botley Wood SSSI, Upper Hamble Estuary and Woods SSSI, The Moors SSSI and Portsdown Hill SSSI.
Notable species	Dormice, great crested newts, southern damselfly, Bechstein's bat, little robin, nottingham catchfly, green-winged orchid, brent geese, and breeding seabird colonies (ringed plover, black-headed gull, oystercatcher, Mediterranean gull, common tern, little tern and Sandwich tern), water vole, otter, salmonids, salmon and sea trout in the River Meon, eel, brook lamprey, bullhead.
Potential opportunities for nature recovery	Greater uptake of nature friendly farming measures. Ancient woodland and lowland meadow restoration. Green infrastructure delivery integrating with habitat networks. Creation of riparian buffers to improve water quality. Coastal habitat creation and enhancement to off-set coastal squeeze and coastal erosion including restoration and creation of coastal floodplain grazing marsh. River restoration and the removal of barriers to fish migration.

Part of National Character Areas 126: South Coast Plain[64] and 128: South Hampshire Lowlands[65].

64 South Coast Plain NCA profile - **https://nationalcharacterareas.co.uk/South-Coast-Plain/**
65 South Hampshire Lowlands - **https://nationalcharacterareas.co.uk/South-Hampshire-Lowlands/**

Credit: Shaun Roster

Figure 2.15: Area boundary

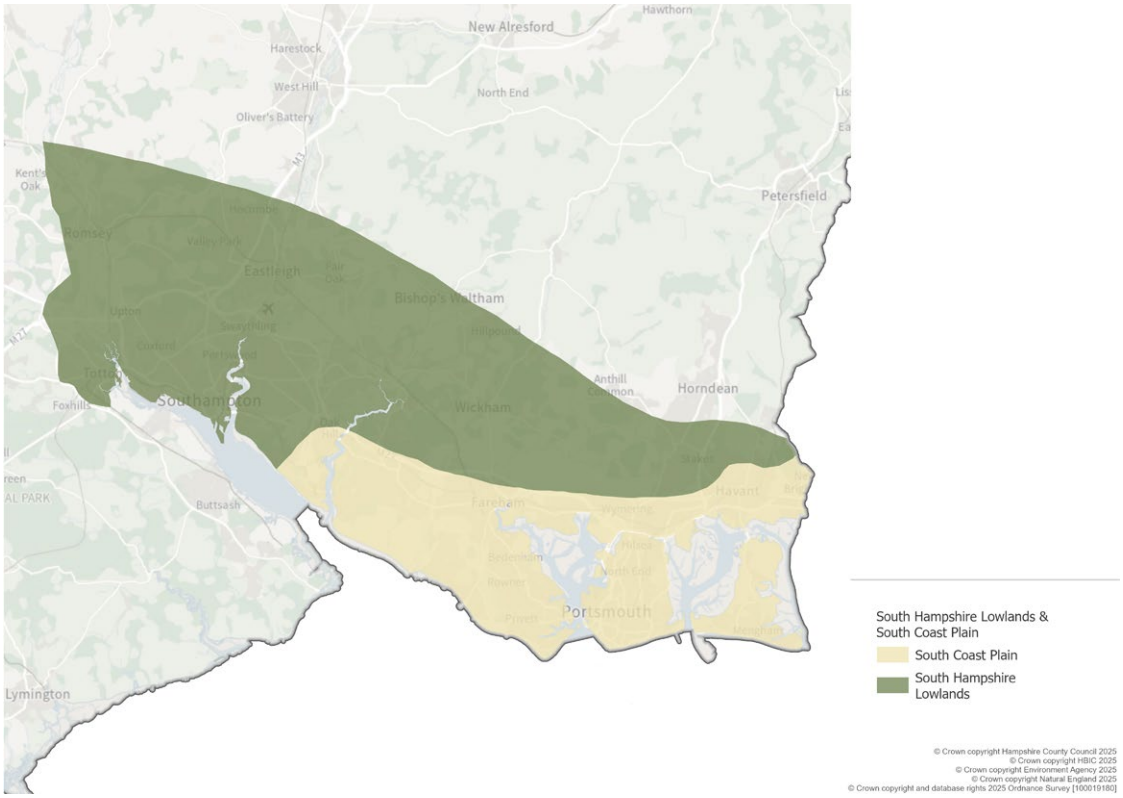


Figure 2.16: Nature conservation designations

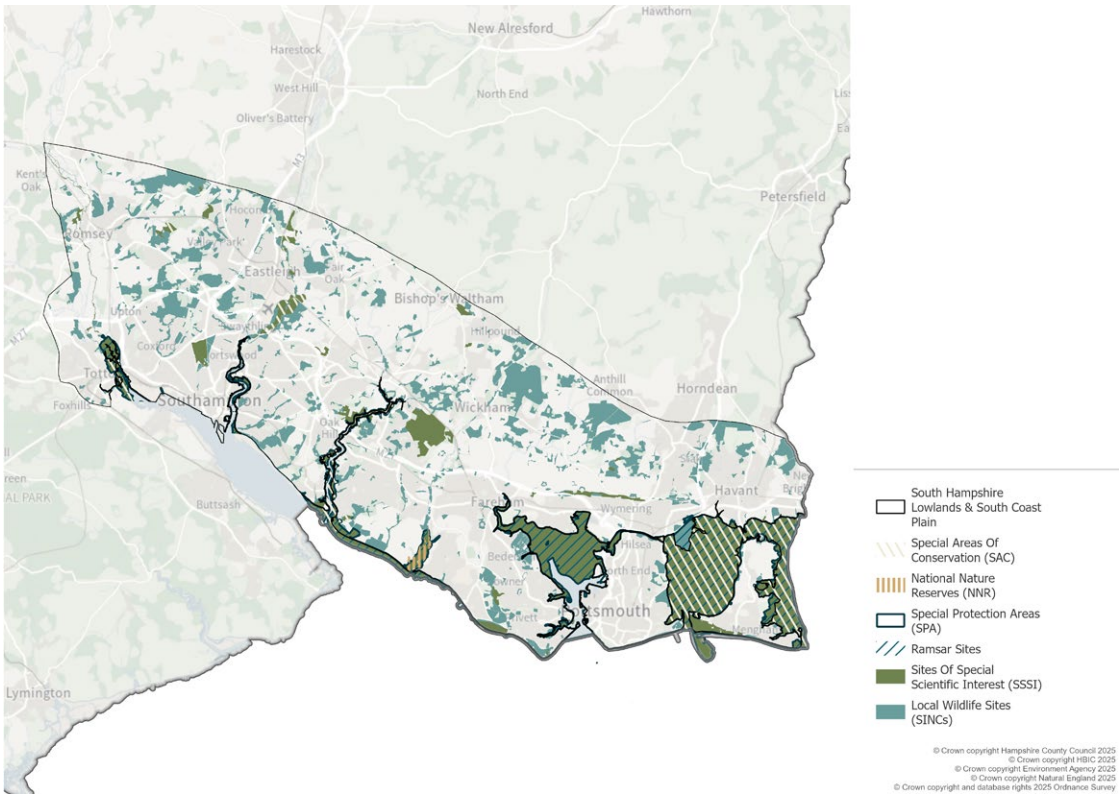
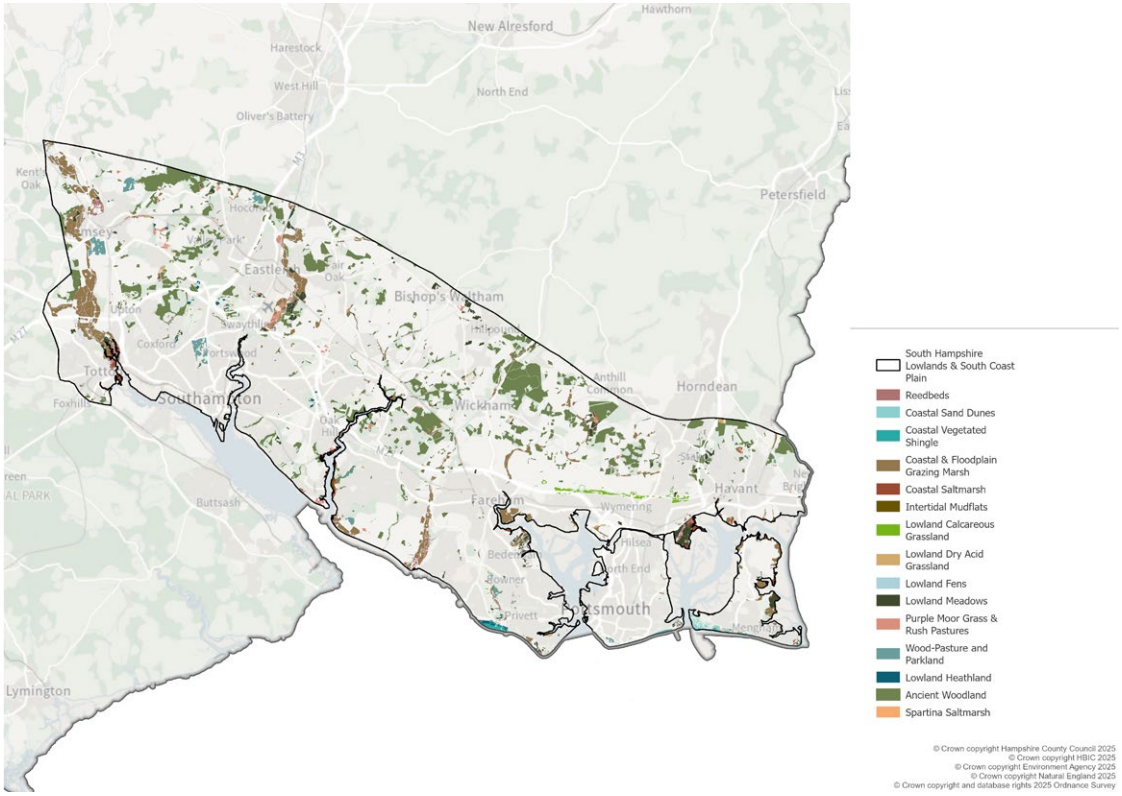


Figure 2.17: Priority habitats and ancient woodlands



Description and current value to nature

The South Hampshire Lowlands is a low-lying, undulating plain between the chalk hills of the Hampshire Downs and South Downs, and Southampton Water. Its highest point is an outlying chalk ridge, Portsdown Hill. The bedrock geology is mostly open marine, estuarine and freshwater Tertiary gravels. The area is dominated by the city and port of Southampton and its adjoining towns and suburbs. 29% of the area is urban. In the more rural areas, it is a mixture of farmland, particularly pasture, and woodland. Soils over much of the area are heavy and clayey with localised pockets of more freely draining soils on higher land. The foothills of the South Downs, along the northern boundary, fall within the South Downs National Park

The South Coast Plain is a flat, coastal landscape with an intricately indented shoreline. It lies between the dip slope of the South Downs and South Hampshire Lowlands and the waters of the English Channel, Solent, and part of Southampton Water. The area is dominated by the city and port of Portsmouth and its adjoining towns and suburbs. The coastline includes several major inlets which have particularly distinctive local landscapes and intertidal habitats of international environmental importance for wildfowl and waders. These include Portsmouth, Langstone, and Chichester Harbours. Chichester Harbour National Landscape lies within the NCA.

Portsmouth Harbour SPA, Chichester and Langstone Harbours SPA/Ramsar, Solent and Southampton Water SPA/Ramsar, Solent Maritime SAC, and Solent and Isle of Wight Lagoons SAC are internationally recognised for their habitat and species value, including overwintering coastal birds. Every winter, the Solent hosts over 125,000 overwintering and migratory ducks, geese and wading birds. The extensive intertidal mudflats, coastal lagoons, seagrass beds, shingle, and saltmarsh provide vital feeding and roosting grounds for these.

The shingle banks provide important breeding grounds for terns and gull species, including Mediterranean gulls. The Solent also supports 10-13% of the world's population of dark-bellied brent geese. This is 30% of the UK population.

Collectively, the area encompasses two cities and the surrounding urban areas, and is fragmented by major transport links. But it also supports a diverse patchwork of ancient oak woodlands, wood pasture, hedgerows, species-rich meadows, and wetlands set within an enclosed, mostly pastural landscape.

In between urban settlements, the coastal plain leans more towards larger arable fields and open fields important for overwintering waders and brent geese.

SSSIs include the lower reaches of the River Test and River Itchen, Portsdown Hill, Botley Wood, Southampton Common, and many stretches of the coastline, including Portsmouth, Langstone, and Chichester Harbours. The area is bordered to the north by the rising downland of the South Downs National Park. The whole area is traversed by numerous rivers and streams including the River Meon. These provide water resources, including recreation, flood management, and are rich habitats for wildlife. 12% of Hampshire's coastal SSSIs are in favourable condition in Hampshire, with 49% in an unfavourable recovering condition.

As part of the programme of LNRS engagement, a South Hampshire farming and conservation workshop was held on 14 February 2024. The workshop report is available on the LNRS webpages[66]. The workshop brought together a wide range of key stakeholders and individuals interested in farming, land management and nature recovery across the area.

The workshop identified a number of key issues for nature and opportunities for nature recovery. It should be noted, however, that these issues and opportunities are the views of workshop attendees and may not always align with the scope and ambition of the LNRS.

Key issues for nature identified through engagement

Climate change

Climate change poses a significant threat to biodiversity and is a major driver in net biodiversity decline. Climate change exacerbates many of the issues for the area's biodiversity listed.

Habitat fragmentation and competing land use

There is already considerable habitat fragmentation in this part of Hampshire, with the loss of hedgerows and riparian habitat, woodlands, and species-rich grasslands. Scrub is an important wildlife habitat, but its conservation is often overlooked in favour of grassland.

Many SINCs are small and in poor condition, making them difficult to manage effectively. Some SANGs may need changes to public and/or dog access to provide better opportunities for nature recovery. However, this may prove difficult as the purpose of SANGs is to mitigate the impact of recreational pressures from residential development on sensitive sites.

On the coast, large urban areas offer less opportunity for habitat retention and creation.

66 South Hampshire farming and conservation workshop (February 2024) - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**

Development pressure and recreational disturbance

Urban and sub-urban developments have caused cumulative habitat and species losses, and the pressures of new development are significant in the south Hampshire area. Several participants mentioned the need for a south Hampshire green belt to try to mitigate some of the development pressures.

It is felt that the south coast is heavily urbanised with relatively little space for nature remaining. Sustainable urban planning is required to prevent further natural spaces from being developed. Where new development is implemented, efficient biodiversity offsetting and recreational access needs to be fully considered, which must be monitored to ensure success.

The coastal area is extremely important for many wading birds and other coastal bird species. Disturbance is arguably the main barrier to species recovery, impacting on the breeding success of species such as ringed plover, oystercatcher, and redshank. Dog walking and other recreational activities increase levels of disturbance further.

Light pollution appears to have had a significant impact on moth populations.

Agri-environment funding is difficult to access

The number of different funding schemes, their complexity, and perceptions of harsh penalties for non-compliance are preventing farmers from accessing support for actions to assist nature recovery. Most schemes require financial outlay from the farmer before money can be claimed back, and many are not available to tenant farmers. Many schemes are relatively new and untested, and there have been several iterations in recent years, leading to uncertainty in the farming community. The LNRS must complement and augment these schemes, not add to their complexity.

Fragile farm business finances

High input costs, extreme weather, and short-term tenancy arrangements are making farms increasingly vulnerable, both environmentally and financially. Farmers must balance food production, biodiversity, and profitability.

Soil compaction and soil loss through run-off and erosion means that farms are increasingly unable to maintain healthy crops and livestock without unsustainable outside inputs of nutrients, pesticides, insecticides, and soil and therefore it is difficult to maintain profitability and environmental quality.

Freshwater habitats and species under threat

Freshwater watercourses are suffering from a range of impacts resulting in habitat and species loss. These include:

- Poor water quality.
- Over-abstraction.
- Acoustic disturbance from industry (e.g. in Southampton Water).
- Sedimentation of breeding areas.
- Sewage discharges.
- Agricultural run-off.
- Pollution incidents.
- Nutrient loading.
- Channel modification.
- Sport fishing.
- Barriers to fish migration.

Species impacted include salmon, brown trout, eel, white-clawed crayfish, otters, and water voles.

Opportunities for nature recovery identified through engagement

Key species and habitats protected and enhanced

Habitat restoration provides significant benefits for nature recovery, including the Beneficial use of

Dredged Sediment (BuDS) - the reuse of material removed during dredging for constructive purposes, such as habitat restoration, coastal defence, and land reclamation.

Focusing on key species and habitats which are recognisable and understandable for landowners and managers, such as the creation, enhancement or restoration of saltmarsh, will help to build a roadmap to recovery. Prioritising the recovery of existing habitats, such as SSSIs and SINCs, then building out from those and linking them where possible, should be a key role of the LNRS. It is considered crucial to maximise the biodiversity value of greenspaces and roadside verges across the area.

Nature-friendly farming

The LNRS could support farmers to improve soil health and support habitats and species through nature friendly farming practices. These could include:

- Autumn/winter cover crops.
- Winter feed for farmland birds.
- Insecticide-free farming practices.
- Enhancing unfarmed areas around ponds, ditches, rivers and hedgerows.

Supporting farmers and landowners through the formation of farm clusters, appropriate use of BNG contributions, and pragmatic support from Defra were seen as key to this. It was also highlighted that high-quality produce from these farms should receive a fair price, rather than being a viewed as a commodity.

A specific example was given of an area where there is an opportunity for farmer-led nature recovery. This is the area between Keyhaven (on the coast) and Efford to the north along the Efford Valley area, including The Pans and either side of Avon Water. There are no Landscape Recovery projects in the area, so this is an opportunity that could be supported by the LNRS.

Water Environment

Prioritising river restoration and wetland creation in the upper reaches of river catchments provides opportunities to address nutrient issues, general water quality and water storage, critical to the Solent.

River, stream, and ditch corridors exhibit naturally connected habitat that can be enhanced for nature recovery, as well as support networks of other waterbodies.

Sea trout and eel priority species recovery and umbrella and landmark species are important in raising the ecological status of south Hampshire watercourses.

Cross-border approaches

Opportunities to work across the county boundary were considered important, particularly for important coastal habitats. This includes working with the Dorset and Sussex LNRSs.

Appropriate development controls

All new development should deliver green infrastructure, and new developments should take place around habitat networks, rather than the other way round. Incorporating small-scale biodiversity enhancements into new developments, e.g. swift bricks, was also suggested. BNG from development must help to meet targets at a local level aimed at priority species and habitats.

Nature-based solutions at wastewater treatment works, e.g. settlement lagoons and reedbeds are seen as a sustainable way to mitigate the impacts of development.

The creation of areas where access is restricted may help to mitigate recreational disturbance on wading birds and other coastal species. Unfortunately, this would be unpopular with the public.

Better use and management of the area's rights of way network, including National Trails, was cited as a potential contribution to reducing recreational disturbance on sensitive areas.

Public engagement

The LNRS should support meaningful public engagement and efforts to reach under-represented communities who would benefit from nature's recovery the most. Linking with wider strategies such as the government's 30by30 initiative and the Hampshire & the Isle of Wight Wildlife Trust's Wilder 2030 strategy could help with this. It should also use existing volunteer groups with local knowledge and engage with the public at parish level to ensure understanding of opportunities. Supporting more school visits to farms was also suggested to create public support and raise awareness of farm biodiversity schemes.

Rivers and wetlands

Area (within the LNRS boundary)	Whole of Hampshire.
Key priority habitats present	Chalk streams, floodplain grazing marsh, reedbeds, fen and valley mire.
'Crown jewel' sites	Hampshire Avon, the rivers Test, Itchen, Meon and Whitewater, the Lymington River and Beaulieu River and associated wetlands of the new Forest, other wetlands such as Stockbridge North Fen, Bransbury Common, Greywell Fen and the Moors at Bishop's Waltham.
Notable species	European eel, bullhead, brook lamprey, Atlantic salmon, brown trout, sea trout, grayling, white-clawed crayfish, otter, water vole, water shrew, bittern, marsh harrier, bearded tit, kingfisher and Desmoulin's whorl snail.
Potential opportunities for nature recovery	Creation of riparian buffers. Improving in-channel habitat and water quality. Connecting rivers to floodplain and restoration of floodplain grazing marsh. Restoring/expanding fen habitat and reedbed. Creation of pond clusters.

Credit: Mang Thang

Figure 2.18: Hampshire's main river systems

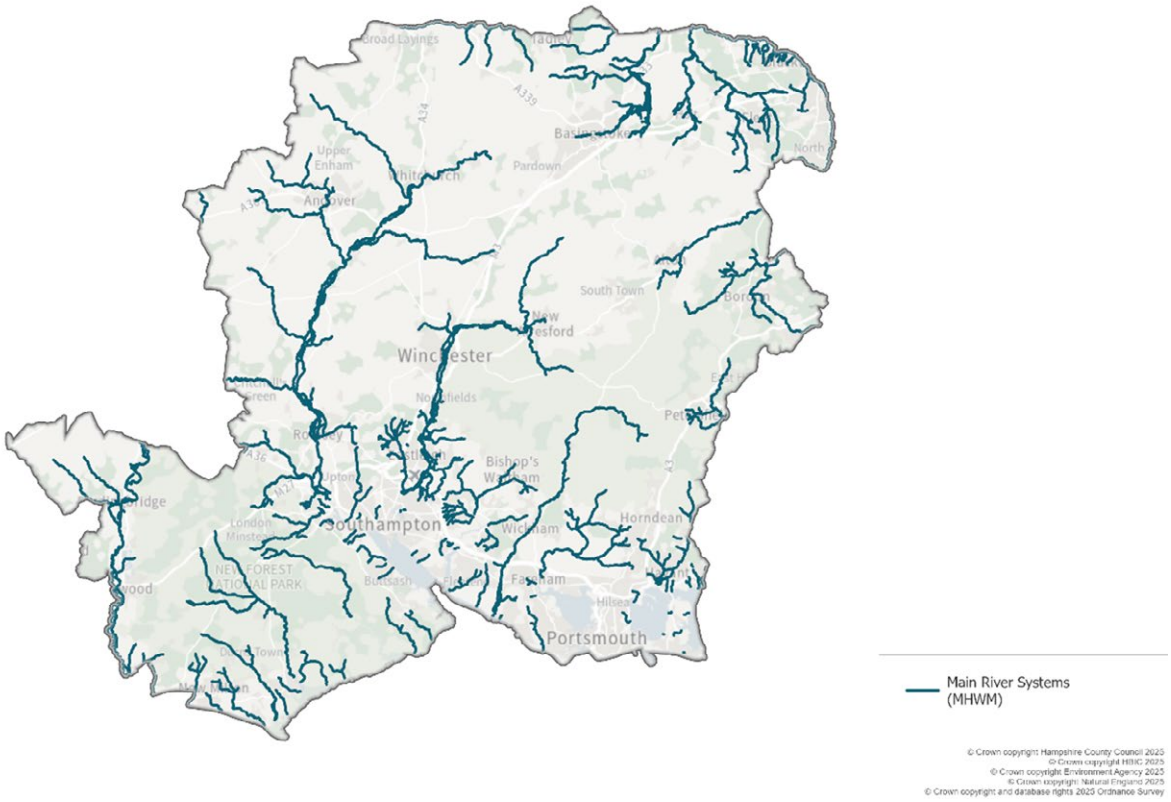


Figure 2.19: Hampshire's river catchments

Description and current value to nature

As described in Section 2.1, Hampshire has a vast network of watercourses that supply homes with water and wastewater services, provide recreational resources, and important habitats for wildlife. It is a coastal county that contains whole river catchments within its boundaries and is home to internationally important chalk streams.

In England there are 160 chalk streams of which eight can be found in Hampshire; the Hampshire Avon in the west; the River Test (and its tributaries the Wallop Brook, Anton, Dever and Bourne Rivulet); the River Itchen (and its tributaries the Candover Brook, Arle and Cheriton Stream); the River Loddon and Lyde, River Whitewater, River Wey and the River Meon in the east.

Chalk streams are fed by water filtered through chalk aquifers, resulting in exceptionally pure, clear, and mineral-rich water. The water maintains a relatively constant temperature year-round, which is beneficial for many species. The stable water conditions and mineral content support a wide variety of aquatic plants, including various water-crowfoot and water star-wort species. The abundant plant life and good water quality provide a food source and habitat for numerous invertebrates, fish, and other species. Chalk streams are crucial for fish populations like brown trout, bullhead, brook lamprey, and Atlantic salmon, which rely on the clean gravels for breeding, and they provide refuge for the threatened white-clawed crayfish, now only found in the upper reaches of the Itchen.

Our river systems, including those which are not chalk streams, are important for nature and provide essential services from water purification to flood management and from biodiverse landscapes to recreational pursuits such as angling. Freshwater habitats regulate water flow and flooding through connectivity of ground water stores, running water and other waterbodies; and through floodplain water storage where sites store excess water from rainfall.

Associated wetlands include many rich valley fens which have survived in Hampshire some as common land, some in the main river valleys, and others around calcareous spring lines. The internationally important valley mires and bogs of the New Forest are dealt with in the New Forest section. Similar but smaller valley mires can be found in north-east Hampshire at Hazeley Heath, Castle Bottom and Eelmoor Marsh.

As part of the wider 'Rights of Nature' movement, the concept of river rights has emerged where rivers are being recognised as legal persons, in a similar way to corporations. Drawing on international models, where rivers are recognised as legal entities with rights informed by the Universal Declaration of the Rights of Rivers[67], Lewes District Council determined to support the principles within the Rights for River Ouse Charter[68], co-developed with Love Our Ouse and partners. This is the first time in the UK that a Council has signed up to a River Rights Charter.

Within Hampshire, Basingstoke and Deane Borough Council, Southampton City Council and Test Valley Borough Council have passed motions to formally recognise the Declaration and the principles of rights of rivers within their administrative areas. This growing movement is likely to have positive implications for the protection of the intrinsic value of Hampshire's rivers, and for wider nature recovery.

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67 Universal Declaration of the Rights of Rivers - **https://www.earthlawcenter.org/river-rights**
68 Lewes District Council Decision - **https://democracy.lewes-eastbourne.gov.uk/ieDecisionDetails.aspx?Id=1106**

As part of the programme of LNRS engagement, a cross-cutting rivers and wetlands workshop was held online on 24 January 2024. The workshop report is available on the LNRS webpages[69]. The workshop brought together a wide range of key stakeholders and individuals interested in Hampshire's rivers and wetlands.

The workshop identified a number of key issues for nature and opportunities for nature recovery, included below. It should be noted, however, that these issues and opportunities are the views of workshop attendees and may not always align with the scope and ambition of the LNRS.

Key issues for nature identified through engagement

Water quality

Water quality was a key theme in comments from participants. Most frequently cited sources of pollution were nutrients from wastewater and diffuse agricultural pollution, including sewage, toxic run-off from roads and car parks, and agricultural chemicals. Nutrient enrichment can cause eutrophication and algal blooms, which impacts habitats and species abundance/diversity. Sediment run-off from eroded soils close to watercourses, caused by grazing stock, public access or inappropriate cultivation practices, was also cited as impacting on riverbed gravels and water quality.

In addition to the effects these pollutants have on the watercourses themselves, there is the wider issue of the contribution this has on the coastal and marine habitats into which the watercourses eventually drain.

Water quantity

There were a range of comments relating to low flows and the impact of flooding. Participants described how the disconnection of rivers from their flood plains and artificial straightening of river channels contributes to downstream flooding, with over-abstraction and lack of protection for wetland habitats causing low flows and loss of habitat for freshwater species. Possible solutions include effective mapping to target natural flood management (NFM), reconnection of watercourses to their flood plains through restoration work, and education of the public to limit mains water use (e.g. installing water butts).

Public awareness

A lack of awareness of the ecology of freshwater environments, and the impacts of human activity, were cited by several participants. Recreational access, including wild swimming, canoeing, and paddle-boarding, can damage sensitive habitats. Disturbance by humans and dogs can have a detrimental impact on freshwater ecosystems. Education from school-age onwards was considered key to increasing public awareness and improving the balance between connecting people to these important habitats and protecting the sites from damage.

Opportunities for nature recovery identified through engagement

Physical habitat priorities

Tree planting and the provision of riparian buffer strips were suggested by many participants as a key opportunity for improving water quality, reducing water temperature and providing habitat corridors and connectivity. Removal or bypassing of barriers to fish passage was also considered important for fish migration, particularly relevant on the Rivers Wey and Loddon.

69 Rivers and wetlands workshop (January 2024) - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**

Local authorities

It was felt that local authorities could be a driver of nature recovery for rivers and wetlands. They, like the water companies, have statutory responsibilities in relation to these habitats, e.g. as Lead Local Flood Authorities. Actions that could be taken include building river recovery strategies and action plans into local plans, and creating policies that protect river and wetland ecosystems. Consideration should be given to the impacts on the water environment before council decisions are made, as they currently are for climate change impacts. An example of this could be to create no build buffers around all rivers, as there are currently for ancient woodland.

Local planning authorities could also create river restoration projects that will contribute to developers' biodiversity net gain (BNG) watercourse units.

Participants considered it essential that spatial planning at all scales is focused around green and blue infrastructure.

Countryside Stewardship and other funding

Recent uplifts to Countryside Stewardship funding include a forthcoming floodplain meadows option paying £1,070/ha, alongside options for low-input grassland management and woodland creation and restoration. These could be effective incentives for improved riparian management. BNG and the Local Nutrient Mitigation Fund also offer funding opportunities to help rivers and wetland habitats. There was a suggestion that chalk streams should be classed as strategically significant for BNG, and that all chalk streams should be designated SSSIs.

Flood plain management

Participants highlighted the importance of sensitively managing flood plains to conserve wildlife habitats, enhance flood storage, and protect their fragile alluvial soils. There are only 1100ha of species-rich flood plain plant communities in England and Wales. These need greater protection and increased incentives for appropriate management. Floodplain habitats become more dynamic where beaver are reintroduced and, in some areas, aiming for a wetland mosaic would be more appropriate than specifically defined habitats.

Collaboration and landowner liaison

Better collaboration and the join-up of existing projects and funding was seen as an opportunity that could be facilitated through the LNRS. Other suggestions include:

- Gathering data at a central accessible resource, e.g. through the Hampshire Biodiversity Information Centre (HBIC).
- The use of citizen scientists and volunteers.
- The training of facilitators to help with landowner liaison.
- Better integration with marine work and other projects (see list of current projects in Appendix 4).
- Better monitoring of and liaison with operators of wastewater treatment works, land managers and industry in relation to effluent discharge, and other point source and diffuse pollution.

Coastal and marine

Area (within the LNRS boundary)	c24,000 ha coastal and intertidal.
Key priority habitats present	Saltmarsh, mudflats, vegetated shingle, coastal grazing marsh, soft rock cliffs, saline lagoons, sea grass beds.
'Crown jewel' sites	Portsmouth Harbour SPA, Chichester and Langstone Harbours SPA, Solent and Southampton Water SPA, Solent Maritime SAC, North Solent SSSI/NNR, Titchfield Haven NNR.
Notable species	Priority seabird assemblages including ringed plover, black-headed gull, Mediterranean gull, oystercatcher, avocet, common tern, little tern and Sandwich tern, brent goose and black-tailed godwit. Also priority species assemblages for coastal grazing marsh and upper saltmarsh, saline lagoons and maritime soft cliffs. The Gilkicker weevil.
Potential opportunities for nature recovery	Restoration and expansion of saltmarsh and mudflats through managed realignment and coastal defence works and use of beneficial dredgings. Restoration of seagrass meadows through the planting of new seagrass beds. Management of disturbance and predation to improve the breeding success of ground nesting seabirds.

Description and current value to nature

As described in Section 2.1, Hampshire has an extensive and internationally important coastline and associated marine environment. All of it is designated as SPA or SAC (if the marine elements are counted) and a large proportion designated as SSSI. A few remaining areas of vegetated shingle and soft rock cliff are designated as SINCs.

All of the Hampshire coast and associated marine areas are an integral component of the Solent, a large marine channel between the Isle of Wight and mainland Britain, spanning 51,000 ha, from Hurst Beach in Hampshire and the Needles (Isle of Wight) in the west to a line between Black Rock (Isle of Wight) and Selsey Bill (West Sussex) in the east. The major ports of Southampton and Portsmouth are situated in the Solent, and it is a major shipping lane for military, freight and passenger vessels as well as a popular location for recreational activities and water sports, including sailing, walking, angling, swimming and paddle sports.

The Solent forms the largest estuarine system of the south coast of the UK, containing over 11,000ha of intertidal habitats including over 8,300ha of intertidal mudflats (50% in Hampshire), and over 2,100 ha of declining and threatened saltmarshes (45% in Hampshire) made up of 400ha of ancient saltmarsh and nearly 1,800ha of Spartina marsh. Rarer habitats include just under 150ha of kelp beds mostly located off Hayling Island in Hampshire and some 350ha seagrass beds.

Other specific shoreline habitats include grazing marsh, vegetated shingle, soft rock cliffs, estuarine woodland and saline lagoons. This includes unusual examples of natural gradations from maritime to coastal and marine habitats that have been lost from

other areas of the south coast through development and coastal defence works.

The Solent region supports one of the largest wintering populations of dark-bellied brent geese in the UK and is of international importance for this species. By January each year, around 28,000 individuals, or 6 per cent of the world's population, can be found in the Solent.

The mudflats are rich in invertebrates and are consequently important feeding grounds for waterfowl and waders. There are also many adjacent terrestrial habitats and rivers which are important to birds and other animals which use these coastal and marine areas. For example, wading birds and waterfowl such as brent geese also forage and rest in the adjacent fields, grazing marshes and urban parks. A Solent-wide project identifying such important terrestrial areas has mapped 3,600 ha of such fields and grassland next to the Solent's marine and coastal habitats. In addition, there are several species of fish such as Atlantic salmon which migrate between the sea and the Solent's rivers.

Most of the coastal and marine habitats in Hampshire and the wider Solent are under significant pressure from human activities, particularly those in the intertidal and splash zones. Notably, many of the habitats created by shellfish or plants have seen dramatic declines and degradation, primarily due to destructive fishing activities, water pollution, land claim and diseases. Hampshire's rivers that discharge into the Solent are significant sources of pollutants including nitrates and phosphates. The Solent Seascape Project[70] is restoring and reconnecting seagrass, oyster reefs, saltmarsh and seabird nesting habitats across the Solent.

The Marine Management Organisation (MMO) is responsible for marine nature recovery beyond Hampshire's mean low water mark.

The King Charles III England Coastal Path National Trail provides 208km of public access along Hampshire's coastline, as part of the coastal path's 4,345 km national extent, when completed. The 'coastal margin' between the Trail and the sea, increases the ability of the access network to deliver nature recovery (see Protected Landscapes and National Trails section in 2.1 for more information, above, and the Greenspace, health and access to nature section, below).

As part of the programme of LNRS engagement, a coast and marine workshop was held on 16 January 2024. The workshop report is available on the LNRS webpages[71]. The workshop brought together a wide range of key stakeholders and individuals interested in Hampshire's coastal and marine environment and its future.

The workshop identified a number of key issues for nature and opportunities for nature recovery, included below. It should be noted, however, that these issues and opportunities are the views of workshop attendees and may not always align with the scope and ambition of the LNRS.

70 Solent Seascape Project - **https://solentseascape.com**
71 Coast and marine workshop (January 2024) - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**

Key issues for nature identified through engagement

Delegates raised the issue of the importance of wider environmental conditions and the need to address these for recovery to be successful such as water quality, sedimentation, non-native species and recreational disturbance. The Solent, for example, is a heavily populated and well used area and there are many local demands on it and global and regional terrestrial drivers that influence it, such as nutrient import and climate change.

Climate change

Climate change poses a significant threat to biodiversity and is a major driver in net biodiversity decline. Climate change exacerbates many of the issues for the area's biodiversity listed.

Pollution and water quality

Within the Solent, for example, the water quality of the inshore waters and estuaries is a serious concern. High nutrient levels have been reported due to the use of fertilisers and from human waste, and associated inputs from the areas watercourses. High nutrient levels in the Solent results in an increase of green alga, which smothers the sensitive habitats and impacts the wider ecology. It is recognised that substantial work has been undertaken by the Solent authorities to address these issues.

Coastal erosion and squeeze

There has been a general trend of rising sea levels over the past 40 years. Between 1962 and 2008, the sea level at Portsmouth has risen by 132mm, an average rise of 2.9mm per annum.

Relative sea level rise, increased erosion rates due to stormier weather, climate change, and coastal squeeze (increased erosion rates behind hard structures such as sea walls) threaten coastal habitats. Continuing erosion of foreshores, and die-back and erosion of cordgrass (Spartina) saltmarsh leaves upper foreshores, cliffs, and coastal defences increasingly exposed.

In a developed coastline, there are few areas where the natural processes of sedimentation and deposition can take place to rebuild new habitats lost due to coastal dynamics.

Recreational pressure and disturbance

Increasing recreational pressure at the coast due to population growth and tourism, together with declining water quality, non-native species, climate change, and dredging, pose some of the greatest risks to the coastal and marine environment. Hampshire's coast is a major centre for watersports, recreational boating, commercial shipping, and sport and commercial fishing. Dog walking and other recreational activities increase levels of disturbance further. As such, the area is under constant pressure and subject to the conflicting needs of wildlife and people.

The coastal area is extremely important for many wading birds and other coastal bird species. Disturbance is arguably the main barrier to species recovery, impacting on the breeding success of species such as ringed plover, oystercatcher, and redshank.

Monitoring

Ensuring effective monitoring of nature recovery work is a challenge, both in terms of monitoring nature recovery delivery and monitoring deterioration in existing sites. Inadequate monitoring, often linked to lack of budget, can lead to undesirable public behaviour in sensitive areas as individuals believe they will not be challenged.

Habitat restoration, creation and mitigation

Along the Solent coastline, for example, there is a lack of available coastal land and land values are high. Much of the Solent shoreline is privately owned, and identifying landowners and land and asset managers to source restoration sites can be challenging. On the coast, large urban areas offer less opportunity for habitat retention and creation.

Development is difficult to implement if land for mitigation cannot be sourced including environmentally beneficial projects, such as decarbonisation work, which is essential to tackling climate change.

Restoration and nature recovery are long term challenges and factors such as climate change and sea level rise need to be factored in when planning work to ensure it has longevity. The provision of appropriate practices, behaviour and personnel, with buy-in, is crucial. Individual organisations may have insufficient expertise and may experience rapid staff turnover, so partnership working is crucial for success.

Licenses and consents are still prohibitively expensive with no 'restoration' discounts. Monitoring costs can also be prohibitive.

Opportunities for nature recovery identified through engagement

Freshwater inputs

Prioritising river restoration and wetland creation in the upper reaches of river catchments provides opportunities to address nutrient issues, general water quality and water storage, critical, for instance, to the Solent.

Cross-border approaches

Opportunities to work across the county boundary are considered important, particularly for important coastal habitats. This includes working with the Dorset and Sussex LNRSs.

Appropriate development controls

All new development should deliver green infrastructure, and new developments should take place around habitat networks, rather than the other way round.

Nature-based solutions at wastewater treatment works, e.g. settlement lagoons and reedbeds are seen as a sustainable way to mitigate the impacts of development of the coastal and marine environment.

The creation of mitigation areas to divert public access away from sensitive coastal areas is thought crucial. Bird Aware Solent has and is doing significant work to raise awareness of the issue of recreational disturbance on coastal bird populations in Hampshire (see Appendices 3 and 4). Better management and increased provision of rights of way is also seen as a way of reducing recreational pressure on sensitive areas. See also information relating to the King Charles III England Coastal Path in the Greenspace, health and access to nature section below.

Restoration, creation and mitigation

Restoration benefits from having an individual or body lead across an area to drive delivery. In the Solent this could be the Solent Seascape Project. Restoration also needs to be undertaken at a large scale i.e. landscape or seascape intervention rather than site specific.

It would be beneficial to better understand habitat connectivity across the terrestrial, intertidal, and subtidal interface. With such a shortage of land in the Solent it may be better to identify sites that are available for restoration and look to enhance them rather than focus on individual habitats and species and searching for sites for them with the right environmental conditions. For any restoration on the coast it is important to build in how this connects to both the terrestrial and marine habitats. Passive restoration should be a key focus across the wider Solent, removing habitat pressures.

Regulators could help with trials and pilots by waiving fees for licences and consents. Resourcing of government organisations is a key challenge. Simplifying processes could enable work to happen faster, using the huge amount of local passion and expertise.

It is felt that there has been a focus on Langstone and Chichester Harbours and that there should also be a focus on the potential of the Western Solent, Portsmouth Harbour and the Isle of Wight.

Some SANGs provide opportunities for nature recovery, but this may prove challenging as their main purpose is to mitigate the impact of recreational pressures from residential development on sensitive sites by providing recreational greenspace.

Awareness and communication

Communication is important to ensure that the public and politicians are onboard and that expectations are managed. People can help with passive restoration by changing their behaviour and should be encouraged to think long-term.

We need people and organisations to report and record projects that are finished and successful. This helps to convince the public and politicians their resourcing was worthwhile. The Solent Seascape Project has produced two excellent videos on their work.

Mapping

The Solent Seascape Project will be producing a mapping portal that will include both coastal and marine habitats, this will be useful in the long term especially for marine data but there needs to be consideration of its long term legacy. It would be helpful if the MMO marine plan explorer could include local data in addition to national data sets.

Mapping needs to be accessible to all and data produced in standard formats so that it can be uploaded to different systems. Where mapping is not available, we need to use the best data that we have and also have a bank of local experts to ask.

There is a need to map habitat condition and condition assessment findings in addition to habitat location. Non-native species need to be mapped to monitor their extent and spread. We also need to record byelaws and management measures as data layers.

A data layer showing where public use is impacting on sensitive areas could help target protection and nature recovery.

Resources

Volunteers are a great resource, although management and satisfying the risk assessments for fieldwork can be time consuming and challenging. Volunteers could prove a useful resource for monitoring of sites, which is often lacking from schemes due to budget constraints.

Monitoring can be mediated by partnership working with further education, utilising the student resource.

Coastal erosion and flood management

The Hurst Spit to Lymington Flood and Coastal Risk Management (FCRM) Strategy, being developed by the Environment Agency, in partnership with New Forest District Council, Hampshire County Council and Natural England, aims to recommend options to manage flood and erosion risk that are sustainable and adaptive over the next 100 years, with the aim of having a completed and approved Strategy in place by summer 2026. On adoption of the Strategy a clear programme of projects will be established to deliver the strategy.

Credit: VisitHampshire

Woodlands and forestry

Area of NCA (within the LNRS boundary)	Whole of Hampshire.
Key priority habitats present	Native deciduous woodland.
'Crown jewel' sites	The New Forest SAC, East Hampshire Hangars SAC, Botley Wood SSSI, Boulsbury Wood SSSI, North Solent woods, Pamber Forest SSSI, Selborne Common SSSI, Harewood Forest SINC, West Walk SINC.
Notable species	Pearl-bordered fritillary, drab looper, hazel dormouse, pine marten, red helleborine, narrow-leaved helleborine, green-flowered helleborine, violet helleborine, bastard balm, bird's-nest orchid, western barbastelle, Bechstein's bat, tree pipit, hawfinch, lesser spotted woodpecker, woodcock, nightingale, spotted flycatcher, wood warbler, marsh tit, red-horned cardinal click beetle, blackening chanterelle, bitter tooth, velvet tooth, dusky bolete, gilded bolete, pale bolete, devil's bolete, oak polypore, coral tooth, violet crowncup, old man of the woods.
Potential opportunities for nature recovery	Resumption of active management to improve structural diversity through coppicing, thinning, opening up rides and glades. Improving connectivity between woodlands through new planting, creation of scrubby areas, hedgerows and soft edges between woodland and farmland.

Description and current value to nature

Hampshire's woodlands represent an important part of the county's natural environment, providing a diverse habitat for many different species. Some 7% of UK species of conservation concern rely on native trees as a habitat or as a food source. Hampshire is one of the most wooded counties in England and holds 5% of the UK's ancient semi-natural woodland. This includes nearly 5000 ha of unenclosed ancient oak-beech wood pasture of the New Forest, plus the innumerable oak-ash-hazel woods of the chalk, the oak-birch woodland of the clays and sands in south and north-east Hampshire, and numerous wet woodlands in the river valleys. Hampshire's ancient semi-natural woodlands are especially famous for their carpets of bluebell, a feature almost unique to the UK.

The extent of woodland in Hampshire appears relatively stable, with small losses offset by gains through new planting and natural regeneration. However, it is likely as many as 80- 90% of our ash trees will eventually be lost as a result of Ash dieback, with associated implications for canopy cover, timber stocks, biodiversity and ecosystem services. Ash is the UK's third most common tree and a key component of most of Hampshire's woodland and hedgerows. Young trees succumb very quickly whilst older trees

can survive with the infection for longer. In terms of biodiversity there are at least 100 species of insect, fungi, moss and lichen that are highly reliant on ash and at risk.

Outside the SSSI network there is little quantitative evidence available on the condition of our woodlands. Research on long-term ecological change (Kirby, K.J. et al, 2005[72]) found that woodlands are becoming less structurally diverse and less species rich. Repeat surveys of woodland over the past 30 years by the Hampshire Biodiversity Information Centre have shown a decline in structural and floristic diversity mainly because of lack of management, deer pressure, the impact of invasive species and, in some cases, recreational disturbance.

Woodland butterflies, especially the fritillaries, have fared particularly badly, with most showing more than 50 per cent range contraction since 1980. The small pearl-bordered fritillary was not recorded in Hampshire in 2021 and could now be considered extinct. Similarly, for many woodland bird species including willow tit and lesser spotted woodpecker. The willow tit is generally regarded as the fastest-declining resident bird species in Britain and very rare in Hampshire. This decline is primarily due to habitat loss and degradation, and climate change. The lesser spotted woodpecker has contracted in range by 54 per cent since 1991.

As part of the programme of LNRS engagement, a woodlands and forestry workshop was held on 10 January 2024. The workshop report is available on the LNRS webpages[73]. The workshop brought together a wide range of key stakeholders and individuals interested in Hampshire's woodlands and forestry.

The workshop identified a number of key issues for nature and opportunities for nature recovery, included below. It should be noted, however, that these issues and opportunities are the views of workshop attendees and may not always align with the scope and ambition of the LNRS.

Key issues for nature – identified through engagement

Lack of appropriate active woodland management

Inadequate management results in poor woodland structure that leads to closed canopy, simplified field and shrub layers, even-aged trees, and few open areas. This has serious consequences for woodland biodiversity.

Tree pests and pathogens

Tree pests and pathogens pose a serious threat to the sustainability of woodlands. Forest Research currently list 53 pests and diseases that are present in the UK, or may be in the near future.

Deer and grey squirrel control

Several participants stressed that without adequate control of deer and grey squirrels, it would be difficult to achieve natural regeneration and successful tree planting schemes. The detrimental impact of grey squirrels on woodland birds (e.g. the song thrush) was also highlighted.

The impact of residential areas and recreational use on woodland wildlife

Conflicts between wildlife and recreational activities were recognised, whilst acknowledging that trees in urban and semi-urban areas were important for a

72 Changes in the tree and shrub layer of Wytham Woods (southern England) 1974-2012: local and national trends compared: **https://scispace.com/pdf/changes-in-the-tree-and-shrub-layer-of-wytham-woods-southern-1ahlf53mvx.pdf**

73 Woodlands and forestry workshop (January 2024) - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**

host of reasons. Impacts on woodland wildlife can include soil compaction, trampling of ground flora, eutrophication (dog waste), disturbance, and increase in fire risk.

Residential pets, particularly cats, can have a significant detrimental effect on local woodland wildlife, through predation.

Care of veteran trees and Ancient Semi Natural Woodland (ASNW)

The fate of veteran trees, and the irreplaceability of ASNW was cited as a serious cause for concern.

Opportunities for nature recovery identified through engagement

Connectivity

Possibly the most consistent comment, both as an issue and an opportunity, was connectivity. Improving the connections between habitats, through hedgerow planting, strategic land purchase, landowner liaison and woodland restoration, was considered key. Additionally, participants cited that coastal and urban areas should also be better connected to woodland.

"Right tree, right place"

The appropriate choice of tree species in planting schemes was highlighted, with many participants considering this an important issue for woodland and tree planting schemes.

Priority species

Some participants listed species, or umbrella species, that could be a focus for woodland biodiversity enhancement. Such species included: lesser spotted woodpecker; spotted flycatcher; hawfinch; woodcock; wood warbler; willow tit; redstart; purple emperor; white admiral; bluebells; wild garlic; woodland orchids; and green forest hoverfly.

The reintroduction of species, such as the pine marten, was also mentioned.

Although many of these are not LNRS priority species (see Section 5), they are indicative of well managed ancient woodland and it was suggested that a single-species approach may not deliver the best outcome for biodiversity.

Development and recreational disturbance

Securing larger buffer areas between new residential development and woodlands, through the planning system, would help in reducing impacts, such as predation of wildlife by pet cats, fly tipping, and disturbance to wildlife, and would allow robust woodland edges to develop, providing additional habitat and connectivity. The creation of 'honey-pot' greenspaces could be provided to reduce pressures on sensitive woodland habitats.

It was suggested that the impact of dog-walkers and associated wildlife disturbance could be countered by the provision of more support for private woodland owners where public access was not an issue, and additional woodland planting in both urban greenspace and on less productive farmland to dilute the effect.

Better management and increased provision of rights of way is also seen as a way of reducing recreational pressure on sensitive areas.

Woodland management

It was stressed that woodlands are about more than simply tree planting. Improving access to traditional skills such as sensitive felling and coppicing, and increasing awareness of the need for ongoing management, is considered crucial.

Lack of appropriate active management is one of the main drivers of biodiversity decline in UK woodlands. More private landowners need to be incentivised to manage woodlands to the UK Forestry Standard and a Forestry Commission-approved woodland

management plan. Silvicultural operations and management options like thinning and selective felling, coppicing and continuous cover forestry improve the condition and resilience of woodlands. This is because they create greater structural and age diversity and are opportunities to restock (through natural regeneration and/or planting) with a greater choice of species and provenances. All this in turn benefits biodiversity, including threatened species.

Greenspace, health and access to nature

Area of NCA (within the LNRS boundary)	Whole of Hampshire.
Key priority habitats present	Varies from species poor amenity grassland to ancient woodland, species-rich grassland and heathland.
'Crown jewel' sites	The New Forest, the SANGs and open heaths of NE Hampshire, Southampton Common SSSI, Portsdown Hill SSSI, St Catherine's Hill, Itchen Valley meadows, the Hampshire coastline, all National and Local Nature Reserves, and Country Parks.
Notable species	Too numerous to mention.
Potential opportunities for nature recovery	Restoration/creation of species-rich grassland from amenity grassland. New woodland and tree planting. Improved/managed access to existing woodland such as ride widening. New parkland trees and low intervention areas within parks. Community orchards. New ponds. More street trees. Reduced mowing in churchyards.

Description and current value to nature

Greenspace

Greenspace, most commonly located in urban and semi-urban areas, can range from areas of monoculture grassland to areas rich in habitats and species and is often referred to as green infrastructure[74]. It can be both publicly accessible and private and may include water features, also known as blue spaces. Greenspace in Hampshire includes:

- Parks and formal gardens.
- Natural and semi-natural greenspaces.
- Green and blue corridors (e.g. river and canal corridors, and railway and road embankments and verges).
- Ponds and other static water features.
- Outdoor sports grounds (e.g. playing fields and golf courses).
- Amenity greenspace (e.g. areas used for informal recreation and village greens).
- Allotments, community gardens and city farms.
- Cemeteries and churchyards.
- Residential gardens.

74 What is green infrastructure? - **https://www.tcpa.org.uk/what-is-green-infrastructure/**

Many areas of greenspace may be protected through Local Green Space designation[75], designated as formal country parks, and/or designated for their nature conservation value as SINCs and SSSIs. Some greenspaces are also provided as Suitable Alternative Natural Green Space (SANGs), where management is not so intensive, so that a feeling of naturalness is allowed to predominate[76]. SANGs are used to mitigate recreational pressure on SPAs and SACs, to protect them from new development. Areas provided as Solent Wader and Brent Goose Strategy (SWBGS) mitigation areas can also be compatible as public open space, providing dog control measures are in place. Greenspaces, generally, offer significant opportunities for nature recovery, particularly those in urban areas and those without formal management in place.

Importantly, access to greenspace is known to promote improved mental health and wellbeing for people and communities. It is estimated that greenspaces in England deliver around £6.6 billion of environmental, health and climate change benefits, annually. However, one third of people in urban areas do not have good quality access to green or blue spaces within a 15 minute walk of their homes[77].

West Hill Cemetery in Winchester is an excellent example of a 're-purposed' 2.5ha accessible natural greenspace that is now being managed for its chalk downland flora with twice yearly cut and collect mowing. Church yards and cemeteries provide a valuable refuge for many species in an often urban setting, especially for slow worms and lizards.

Private residential gardens in England cover more than four and a half times the area of its National Nature Reserves. Gardens offer a substantial and widespread opportunity for biodiversity conservation because they offer essential food, water, shelter, and breeding grounds for wildlife, especially as natural habitats decline in urban areas and the countryside. By providing these resources, gardens act as stepping stones and corridors, allowing wildlife to move and survive, helping to maintain biodiversity and providing species like hedgehogs, sparrows, and frogs with a refuge from habitat loss and fragmentation. Everyone has a part to play[78].

Built structures

Built environments, including residential and commercial development, churches, schools, bridges and culverts, quarries, sea defences, and ports and harbours, provide a range of artificial habitats, particularly for nesting and roosting birds and bats. The UK has a set of priority species partly or wholly dependent on man-made built structures and dwellings for at least some of their life cycle. These include swifts, sand martins, house martins, swallows, peregrine falcons and house sparrows, together with pipistrelle, grey long-eared and serotine bats.

All built environments provide habitat niches that are generally incidental to design and are exploited opportunistically by wildlife, but also have the ability to provide significantly greater opportunities for target species. Increasingly, there are efforts being made to integrate intentional habitat design into new buildings and structures, and to retrofit them during repairs and maintenance, supported by local planning policies and the requirements of Biodiversity Net Gain (BNG). In addition to nature recovery, the incorporation of artificial habitats into built structures increases people's access to nature and promotes mental wellbeing, particularly when incorporated into residential buildings.

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75 Local Green Space designation - **https://www.oss.org.uk/need-to-know-more/information-hub/local-green-space-designation/**

76 Nature Nearby: Accessible Natural Greenspace Guidance. Natural England (2010) - **http://www.ukmaburbanforum.co.uk/docunents/other/nature_nearby.pdf**

77 **https://www.gov.uk/government/news/natural-england-unveils-new-green-infrastructure-framework#:~:text=Parks%20and%20greenspaces%20in%20England,15%20minutes%20of%20their%20home.**

78 **How to make your garden wilder | Rewilding Britain**

An example is the incorporation of swift bricks into new development or retrofitted into existing structures. Swift bricks are a universal nest brick for small bird species and can be installed in new developments, including extensions, in accordance with best practice guidance.

Progress in the field of ecological design and engineering is well advanced in the coastal and maritime sectors, where constructed habitats (artificial reefs, pools, colonisable surfaces) are now routinely required by planners and regulators.

Access

Hampshire has approximately 4,200km of public rights of way. This network includes footpaths, bridleways, restricted byways and byways open to all traffic (BOAT), and provides public access to wildlife, greenspaces and open countryside within Hampshire and beyond. Habitats along these access routes also provide ecological connectivity, improving species' ability to move through the landscape and promote genetic exchange. The New Forest National Park alone has over 325 km of rights of way for the public to explore and enjoy. Hampshire also benefits from having 25,320ha of publicly accessible open access land[79]. Details of Hampshire's rights of way network and the definitive map is provided on Hampshire County Council's website[80].

National Trails are an important part of this rights of way network (see Protected Landscapes and National Trails section in 2.1, above). National Trails provide both access to nature for people, opportunities for nature recovery and landscape scale ecological connectivity, with nature conservation being an important objective in their management. In Hampshire these include:

- South Downs Way - 160 Km long National Trail, 48 Km of which is within Hampshire.
- King Charles III England Coastal Path – 4,345 km long coastal path around England, when finished, 208 Km of which is within Hampshire.

The provision and management of the England Coastal Path's 'coastal margin' further increases the ability of the network to deliver nature recovery[81].

The use of the rights of way network, including long-distance National Trails, for walking, running, cycling and horse riding, and accessing nature is one of the most effective ways to improve physical health and mental wellbeing. In 2020, the value of health benefits associated with outdoor recreation within the UK was estimated to be between £6.2 billion and £8.4 billion[82]. An estimated annual saving of £2.1 billion would be achieved through averted health costs if everyone in England had good access to nature.

Transport routes, such as roads, railways and navigable waterways, often considered barriers to wildlife, can provide access to nature and the countryside for people, and form extensive wildlife corridors and stepping stones across the landscape. Vegetated verges, embankments and fringing habitats along transport corridors, if effectively managed, enable species migration and promote genetic diversity. These corridors often incorporate and connect areas of priority habitat.

79 Open Access Land in England - **https://www.gov.uk/right-of-way-open-access-land/use-your-right-to-roam**
80 Hampshire rights of way network - **https://www.hants.gov.uk/landplanningandenvironment/rightsofway**
81 England Coastal Path coastal margin - **https://www.nationaltrails.uk/news/coastal-margin-national-trails-in-local-nature-recovery-strategies-england**
82 **Health benefits from recreation, natural capital, UK - Office for National Statistics**

Green infrastructure standards

As important components of green infrastructure, green and blue spaces and access networks feature in Natural England's Green Infrastructure Framework[83], which supports the greening of towns and cities and connections with the surrounding landscape as part of the Nature Recovery Network. It incorporates the 2023 Accessible Natural Greenspace Standards (AGS). These standards are set out as follows:

AGS size and proximity criteria

Everyone should have access to good quality green and blue spaces close to home for the benefit of their health and wellbeing and so they can be in contact with nature. Within 15 minutes' walk from home, everyone should have:

- A doorstep greenspace of at least 0.5ha within 200m or a local natural greenspace of at least 2ha within 300m walk from home.
- A medium sized neighbourhood natural greenspace (10ha) within 1km.
- Beyond 15 minutes' walk, everyone should have:
    - A medium or large wider neighbourhood natural greenspace (20ha) within 2km.
    - A large natural district greenspace (100ha) within 5km.
    - A very large sub-regional greenspace (500ha) within 10km.

AGS capacity criterion

Local authorities should provide at least 3ha of publicly accessible greenspace per 1,000 residents and there should be no net loss or reduction in capacity.

AGS quality criteria

It is recommended that accessible greenspace meets the Green Flag Award Criteria[84], and best practice in accessibility for all[85] in major new developments.

It should however be noted that significant public access close to, or within, ecologically important areas can lead to a range of recreational impacts on sensitive habitats and species. For the New Forest National Park, for example, potential conflicts are identified in the National Park Management Plan. Conflicts are managed on the ground by National Park Authority staff and others. This includes off-setting recreational impacts by undertaking biodiversity enhancement away from affected areas and by creating 'honeypot' sites for visitors.

As part of the programme of LNRS engagement, an improving access to nature and our health and wellbeing workshop was held online on 6 March 2024. The workshop report is available on the LNRS webpages[86]. The workshop brought together a wide range of key stakeholders and individuals interested in greenspace, access to nature and health and wellbeing.

The workshop identified a number of key issues for nature and opportunities for nature recovery, included below. It should be noted, however, that these issues and opportunities are the views of workshop attendees and may not always align with the scope and ambition of the LNRS.

Key issues for nature identified through engagement

Barriers to access

It was considered that many people do not feel able to access nature due to practical barriers. These include:

83 Natural England's Green Infrastructure Framework - **https://designatedsites.naturalengland.org.uk/GreenInfrastructure/GIStandards.aspx**
84 Green flag award guidance manual - **https://www.greenflagaward.org/media/1019/green-flag-award-guidelines.pdf**
85 **https://www.sensorytrust.org.uk/uploads/documents/ByAllReasonableMeansEnglandAug2020.pdf**
86 Health and access to nature Workshop (March 2024) - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**

- Lack of provision for those with specific access needs.
- Lack of access to private transport or poor public transport.
- Unfamiliarity with how to use public rights of way.
- A lack of affordable weatherproof clothing.
- Inadequate provision of toilet facilities and benches, particularly for older people and those with additional needs.

Dogs that are insufficiently controlled can also be off-putting for many users and damaging to wildlife, particularly ground nesting birds and feeding waders. Dog walkers are often vocal in discussions around the provision and management of parks and greenspaces.

Many people feel excluded from greenspaces for cultural reasons. This may be because they lack confidence that greenspaces are for them, or do not feel safe in natural environments. There should not be an assumption that people care about green and blue spaces. Efforts must be made to include a wide range of people, including young people, in decision making relating to greenspace provision.

Lack of incentives for farmers and landowners

Agri-environment schemes do not currently incentivise access provision as they previously did, and farmers can be negatively affected by public access. The Hampshire Farmer Wellbeing Survey highlights farmers' concerns about recreational uses of their land. In addition, there is a lack of understanding of visitor safety and risk management principles that can mitigate the claims culture, encouraging more access.

Development and population pressure

Development plans could work more holistically across boundaries to deliver greater levels of access. SANG creation is driven by the need to offset development-related pressures and there is often further opportunity for biodiversity enhancement on these sites. A shortage of greenspace in urban areas can put pressure on wildlife from high visitor numbers.

Lack of resources

A shortage of funding to create and maintain accessible greenspace can prevent innovative projects taking place and result in existing spaces being in poor condition.

Opportunities for nature recovery identified through engagement

Connectivity

An increase in accessible routes between high nature value sites and across administrative boundaries would enable the movement of people and wildlife and foster a landscape-scale approach to access. The National Trails network is an excellent example of this in action. Improved signage both within and outside accessible greenspace would raise people's awareness of their ability to walk or cycle to nearby greenspaces, rather than travel by road. The provision of natural capital investment into local plans, and the planning system more widely, was cited as an opportunity. An example provided was the South Downs National Park People Nature Network. It was considered that the rights of way network needs to evolve to suit current needs. It would help to have a website showing all accessible greenspace and connecting access routes.

Community engagement

A bottom-up approach, starting with meaningful and inclusive community engagement, was considered one of the most important opportunities for this aspect of the LNRS. Education would be key to this, starting in schools - potentially with the National Curriculum, and including a wide range of parish and community groups. It is important to show people that the management of nature conservation sites can look different from management of amenity sites. The management of more natural areas may look untidy as a result of tree felling and thinning. Encouraging responsible use of greenspaces to leave space for wildlife and explaining how pet dogs and cats can detrimentally impact wildlife could also be integrated into this engagement.

Practical access provision

Improved facilities, public transport links, parking and a better rights of way network are all opportunities for the LNRS. Microgrant funding could enable small projects to green their local environment or create community gardens and orchards. This has been very successful in Southampton and Portsmouth. In addition, there could be more conversion of underused amenity greenspaces, GP surgery greenspace, and greenspace in new developments to more natural spaces to improve practical access in urban areas.

More trees

Several tree planting strategies were cited as opportunities in the LNRS. These include:

- Enacting the 3-30-300 urban treescape rule[87].
- Planting trees along transport routes.
- Joining up forest fragments with accessible wildlife corridors.
- Planting more elms in coastal areas. Elms are resistant to salt spray and are suitable for coastal planting where other species are not.
- Incorporating trees into sustainable drainage systems (SuDS).

Collaborative funding mechanisms

Public and private finance, including Environmental Land Management (ELM) schemes and BNG present an opportunity for long-term investment in accessible greenspace, including education and community engagement.

87 The '3-30-300 rule' is an evidence-based rule that stipulates that everyone should be able to see at least three trees from their home; there should be a 30% tree canopy cover in each neighbourhood; and 300 metres should be the maximum distance to the nearest high-quality public green space.

Species recovery

Area (within the LNRS boundary)	Whole of Hampshire.
Key priority habitats present	Ancient semi-natural woodland and pasture woodland, fen, mire, heathland, species-rich grasslands, chalk streams, coastal habitats.
'Crown jewel' sites	All SSSIs and many locally designated sites.
Notable species	As listed in Part 3.
Potential opportunities for nature recovery	As listed in Part 2.

Description and current value to nature

Hampshire is very rich in a wide range of species due to a number of factors, including:

- The merging of two climatic zones.
- The county's situation on the coast.
- The broad extent of a considerable range of habitats.
- The New Forest.

Hampshire lies at the junction of two climatic zones and is fortunate to have species that are typical of both. Some western or oceanic species reach the eastern edge of their range - for instance western gorse and the marsh fritillary butterfly. Similarly, some eastern or continental species reach the western edge of their range, for example ground pine, wall bedstraw, and small cord-grass. The county is also the first landing point for some species from continental Europe.

Hampshire has a variety of coastal habitats, including extensive saltmarshes and vegetated shingle, which have their own distinctive wildlife. These habitats support a number of species absent from inland counties.

Hampshire also has a wide range of other habitats, due to the variation in its underlying geology, superficial deposits and river catchments.

The New Forest is a special case. It is the largest expanse of semi-natural habitat in the lowlands of north-west Europe and is extremely rich in fungi, lichens, bryophytes, vascular plants, invertebrates and vertebrates, many of which are found nowhere else in Britain.

However, a great many species are undergoing decline due a range of factors such as fragmentation and pollution which can affect individual organisms or their habitat. For example, the marsh fritillary butterfly has been driven close to extinction as traditionally managed damp pastures and meadows have been reduced in extent by development, agricultural improvement and abandonment. These grasslands now occur in patches too small to support a viable population of the butterfly.

Some species are particularly sensitive to the direct effects of pollution. Lichens are well known as sensitive indicators of air pollution and are in decline across the New Forest. Some species are adversely affected by other species, through competition, disease or predation. For example, the native, white-clawed crayfish has undergone a very marked decline since the introduction of North American crayfish which carry a fungal disease lethal to the native species.

Disturbance is a particularly important factor in the reduced breeding success of several species of bird,

prticularly waders nesting in open habitats such as wet grasslands in river valleys and shingle on the coast.

Species are essential because they form the building blocks of our habitats, providing crucial services like clean air and water, pollination, and climate regulation that support all life, including humans. Species-rich ecosystems are more resilient to disturbances like climate change with each species playing an important role in maintaining the balance and proper functioning of its ecosystem.

As part of the programme of LNRS engagement, a species recovery prioritisation workshop was held online on 9 March 2024. The workshop report is available on the LNRS webpages[88]. The workshop brought together a wide range of key stakeholders, experts and individuals interested in species recovery, and helped to identify those species that should be targeted in this LNRS. Further detail about species recovery in Hampshire is provided in the LNRS for Hampshire Part 3: Species Recovery document.

88 Species recovery and prioritisation Workshop (March 2024) - **https://www.hants.gov.uk/landplanningandenvironment/nature-recovery-hampshire/get-involved**