The Berkshire Local Nature Recovery Strategy

Description of Area and its Opportunities



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Royal Borough of Windsor & Maidenhead

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Foreword



Common Blue Butterfly © Nick Bell

Berkshire is a busy county providing a home for many human and wildlife communities of historic and recent origin. With the M4 running along its length, and more development impacting many locations it will be increasingly urbanised, with habitats and wildlife exposed to further pressures and threats. Yet the multitude of landowners, community groups, agencies, businesses, wildlife organisations and individuals that have come together to develop this LNRS are evidence of how much that remaining wildlife is valued, and how vital it is to turn the dial from threatened to thriving.

The diversity of notable species and habitats still found across the county is remarkable and is derived from both traditional and recent land uses. They include the iconic chalk streams and downs, historic parklands with majestic veteran oaks, ancient woodlands and meadows, a few remaining patches of precious heathland, and river valleys now punctuated with gravel pits which are such a magnet for birds and people.

Conservation activity by local groups and land managers has been achieving some fantastic results for wildlife, and previous strategies may have helped - but we know it has not been enough to slow the general decline in nature. A new approach is now needed to enable habitats and wildlife to prosper amidst the many other demands on land use. New funding streams are evolving, and more people are eager or obliged to get involved. The LNRS provides a new framework for focussed activity to build on those successes of the past, and to drive local conservation now and into the future. It is vital that the strategy is widely embraced and adopted and implemented at scale and at pace as a matter of urgency. This must just be the start of the recovery, to rebuild a stronger baseline for future strategy iterations to take forward. It will be exciting to see what is achieved in the next few years, and for many local communities it will be even more exciting to be involved in projects turning the strategy into action.

Des Sussex

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Acknowledgement

Below, Figure 1, are the organisations who contributed to the Berkshire Local Nature Recovery Strategy. Many people helped add their expertise, be that in members of working groups, providing habitat or species information, editing documents, attending workshops, or completing surveys. The visualisation of the Berkshire Local Nature Recovery Strategy in Figure 2 helps depict the ideas and communities involved. Thank you.



Figure 1: The organisations that contributed to the creation of the Berkshire Local Nature Recovery Strategy.



Figure 2: Graphic depicting stakeholder input for our Berkshire Local Nature Recovery Strategy. Source: Just Ideas

Section 1
Introduction to Local Nature Recovery Strategies (LNRS)s

What are Local Nature Recovery Strategies?

Local Nature Recovery Strategies (LNRSs) are a new and important tool for nature recovery across England and are required under the Environment Act 2021. There are 48 LNRSs covering the whole of England, with no overlapping strategies and no areas left uncovered. The strategy areas align with England's 48 counties. Local Nature Recovery Strategies are a platform for local people to agree the key priorities for recovering nature in their area and recommend the actions required to help achieve these priorities. The actions will also bring about wider environmental benefits by utilising nature-based solutions to tackle issues such as flooding, carbon emissions and poor water quality in rivers and streams. They will be practical and achievable and will be directed at locations where they will have the greatest impact on nature recovery. They will be delivered by local partners on the ground, be these community groups, landowners or land managers, who will be able to use existing sources of public and private funding to help implement nature recovery actions.

Local Nature Recovery Strategies will help to build a national Nature Recovery Network across England by creating new biodiversity rich areas, or by expanding or connecting existing important wildlife sites. They will have a pivotal role to play in meeting local and national environmental objectives and targets, helping to recover and enhance England's nature, mitigate and adapt to climate change and enable healthier and more sustainable lifestyles for those who live and work in the strategy areas.

What needs to be in an LNRS?

The Environment Act 2021 states that each LNRS must comprise:

- A comprehensive overview of the strategy area and its biodiversity (Section 2)
- Opportunities for bolstering or enriching biodiversity within the strategy area (Sections 4 and 5)
- The threats to biodiversity in the strategy area (Section 3)
- The wider environmental benefits that can be achieved by changing land management (Throughout)
- Key priorities for nature recovery and measures which can deliver these priorities
- A list of biodiversity priorities
- Suggestions for potential measures related to these priorities
- Key areas for biodiversity restoration or enhancement, considering their contributions to other environmental benefits

The above are included in the Statement of Priorities and Measures document.

- National conservation sites within the strategy areas
- Local nature reserves located therein
- Other significant areas within the strategy area, which either presently hold or have the potential to host notable biodiversity, or where enhancing biodiversity could yield substantial environmental benefits.

The above are included in the Local Habitat Map document.

How will LNRS ambitions be delivered?

Local Nature Recovery Strategies are not nature recovery delivery tools in their own right. They are a platform from which nature recovery activity can be delivered using existing public and private funding mechanisms, such as Biodiversity Net Gain and carbon offsetting markets. There is a financial relationship between BNG and LNRS, incentivising nature recovery work to occur in LNRS opportunity areas. See more at this link. Guided by the recommendations of each LNRS, this funding will help deliver significant improvements to important natural habitats in England and will focus heavily on deploying 'nature-based solutions' to help achieve this. These solutions utilise natural processes to tackle complex environmental problems, such as flooding, poor water quality and greenhouse gas emissions. The 2025 update to the Planning Practice Guidance contains a new legislative requirement for all Local Planning Authorities (LPAs) to "have regard" to LNRSs. This relates particularly to the Local Habitat Map. See more information in Appendix 7.



Painted Lady Butterfly © Nick Bell

Who is involved?

LNRS must be developed with a wide range of partners to make sure they reflect local knowledge and priorities. Each LNRS area has a Responsible Authority (RA) leading on developing the strategy, alongside local stakeholders. All remaining district or unitary authorities within the county assist the Responsible Authority in developing the LNRS and are known as Supporting Authorities. Natural England also has a role as a Supporting Authority in every LNRS area. See Figure 3 below for a full list of the types of stakeholders.



Figure 3: Stakeholder groups that are part of the Berkshire Local Nature Recovery Strategy. Local authorities; partnerships; borough, parish and town councillors; landowners; utility companies; local residents; local businesses; public bodies; local community groups; farmers; NGOs.

Development - a summary

The creation of our Berkshire Local Nature Recovery Strategy has taken two years of work.

Launching the Strategy: In April 2023, the LNRS development process began identifying stakeholders in Berkshire that could play a role in developing the strategy: a cross section of relevant public bodies, NGOs, partnerships, landowners, private businesses, voluntary groups and the wider community. To ensure an inclusive, bottom-up approach to the creation of the Berkshire LNRS, six working groups were established to provide guidance over strategy development from diverse perspectives of the county. See more detail in Figure 4. For use at the introductory webinars, a short inspiring film about the Berkshire LNRS was created. This was also added to the website and can be viewed here. A baseline habitat map of Berkshire's existing best places for nature, (the APIB layer on the Local Habitat Map) was developed as a baseline for the strategy. Six bespoke webinars were run, plus a survey for various stakeholder groups to introduce the LNRS process and research how stakeholders would best be involved.

Collect data on priorities for nature: From here, the main engagement period was conducted, to investigate priorities for nature across Berkshire's communities, to help formulate the List of Priorities and Measures. We ran workshops for communities (each of the six councils plus for farmers/landowners) to tell us about their aspirations for supporting species, habitats, and promoting wider environmental benefits across Berkshire. Simultaneously, with the help of local species experts, we began to select the most important species for recovery across Berkshire, based on those which are within the scope of the strategy and need specific extra actions taken for their recovery. See more on the extensive engagement process in Figure 5. A Description of Berkshire and its Opportunities, based broadly on National Character Areas (NCAs) and waterways, was developed in collaboration with many local organisations.

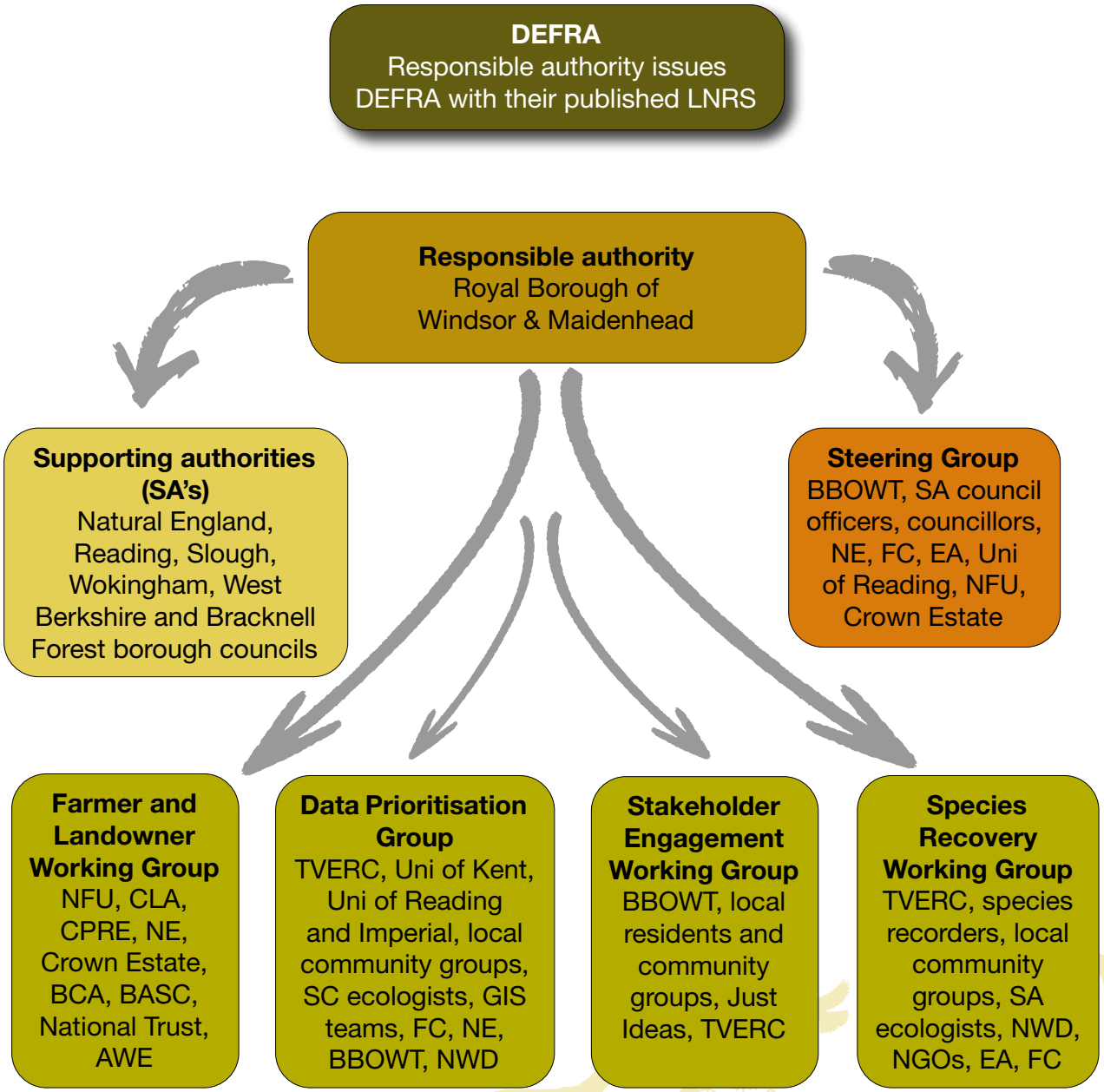
Data Prioritisation: Data was taken from existing nature recovery strategies, stakeholder workshops responses, and the expert opinion of working group members to develop our local list of Priorities (end results to achieve) and Measures (actions to achieve them). Some of these measures were mapped to where they would be most effective in the county, using conservation prioritisation software Marxan. After sense-checking with the feedback from our Public Consultation, this became our Local Habitat Map, the final mapped output of a Local Nature Recovery Strategy. See more on the LNRS stages in Figure 6.

See further detail of the development of the Berkshire Local Nature Recovery Strategy in Appendix 4.



Hillside landscape © Hayley George

Structure of LNRS management





Kestrel © Nick Bell

Figure 4: Structure of the Nature Recovery Strategy management. RBWM is supported by Supporting Authorities, the Steering Group, the Farmer and Landowner, Data Prioritisation, Stakeholder Engagement and Species Recovery Working Groups.

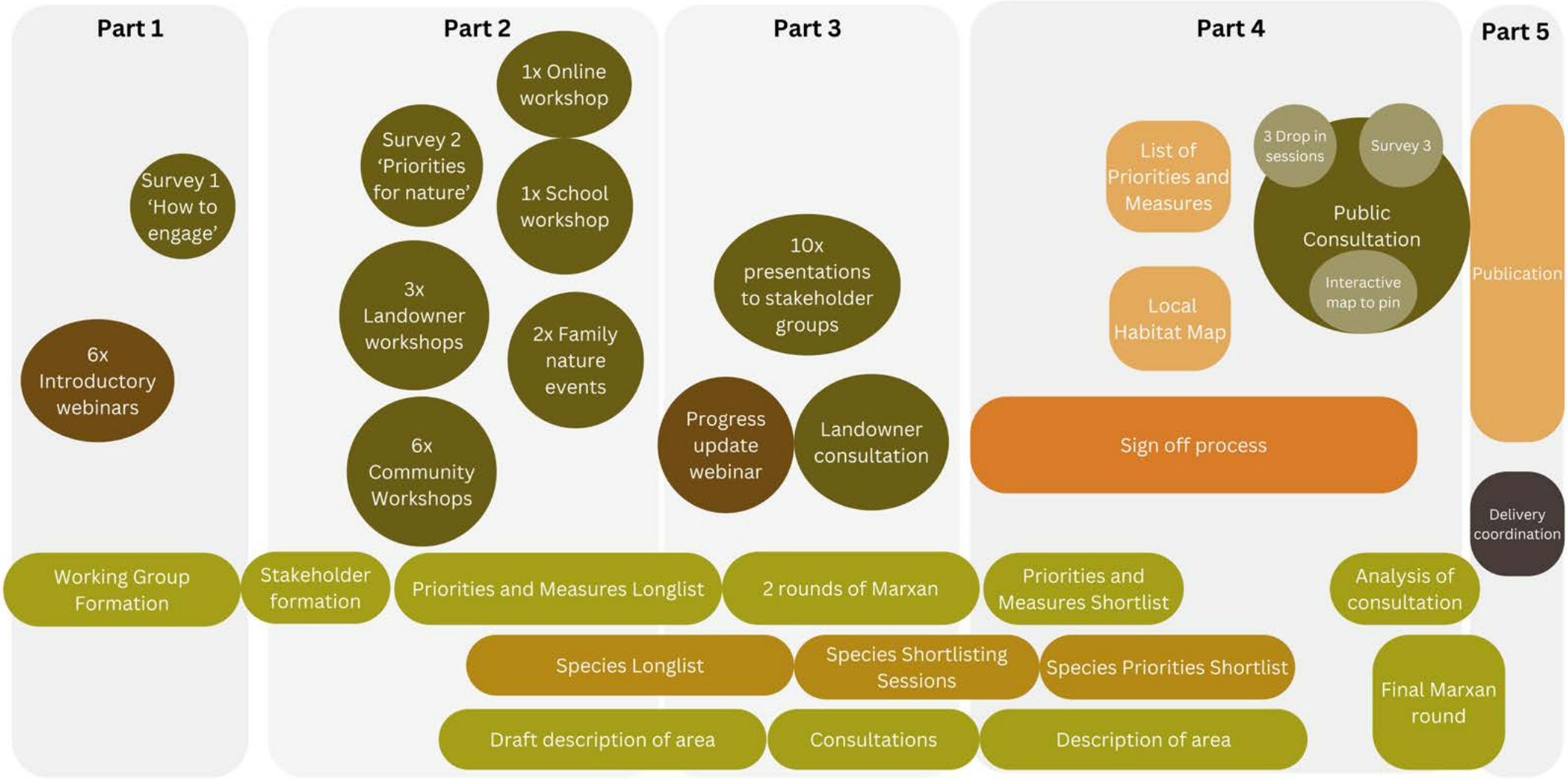


Figure 5: A visualisation of engagement through the LNRS process. Part 1 involved initial engagement, before the main engagement period in Part 2. We updated stakeholders on progress in Part 3, begin the sign off and public consultation in Part 4 and Part 5 is the publication of the strategy. See more information in Appendix 4.

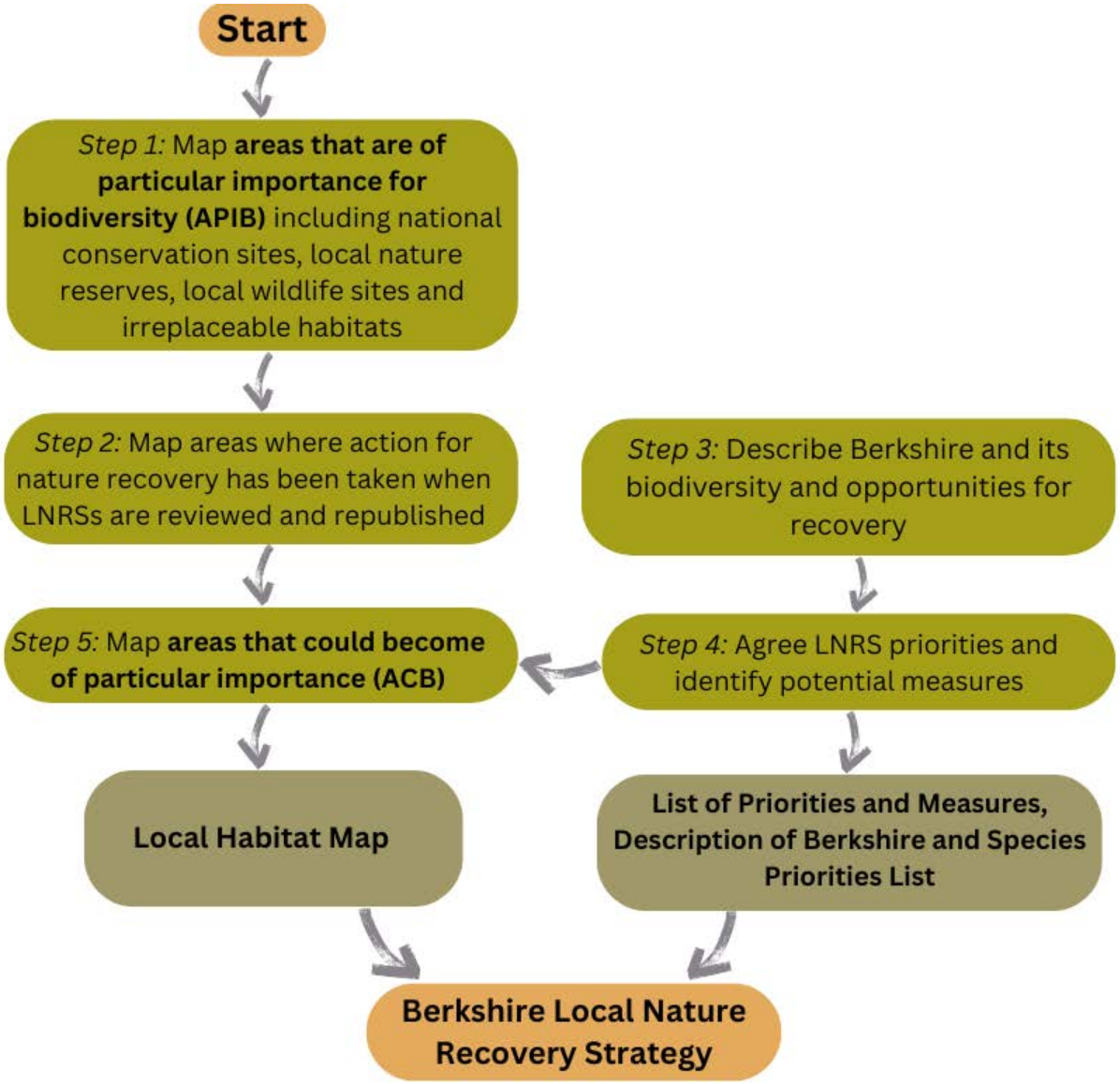


Figure 6: Flow diagram of stages of a Local Nature Recovery Strategy. Source: Defra

The Berkshire LNRS Overview

The Berkshire LNRS covers the county of Berkshire. See the map of Berkshire in Figure 7 below.

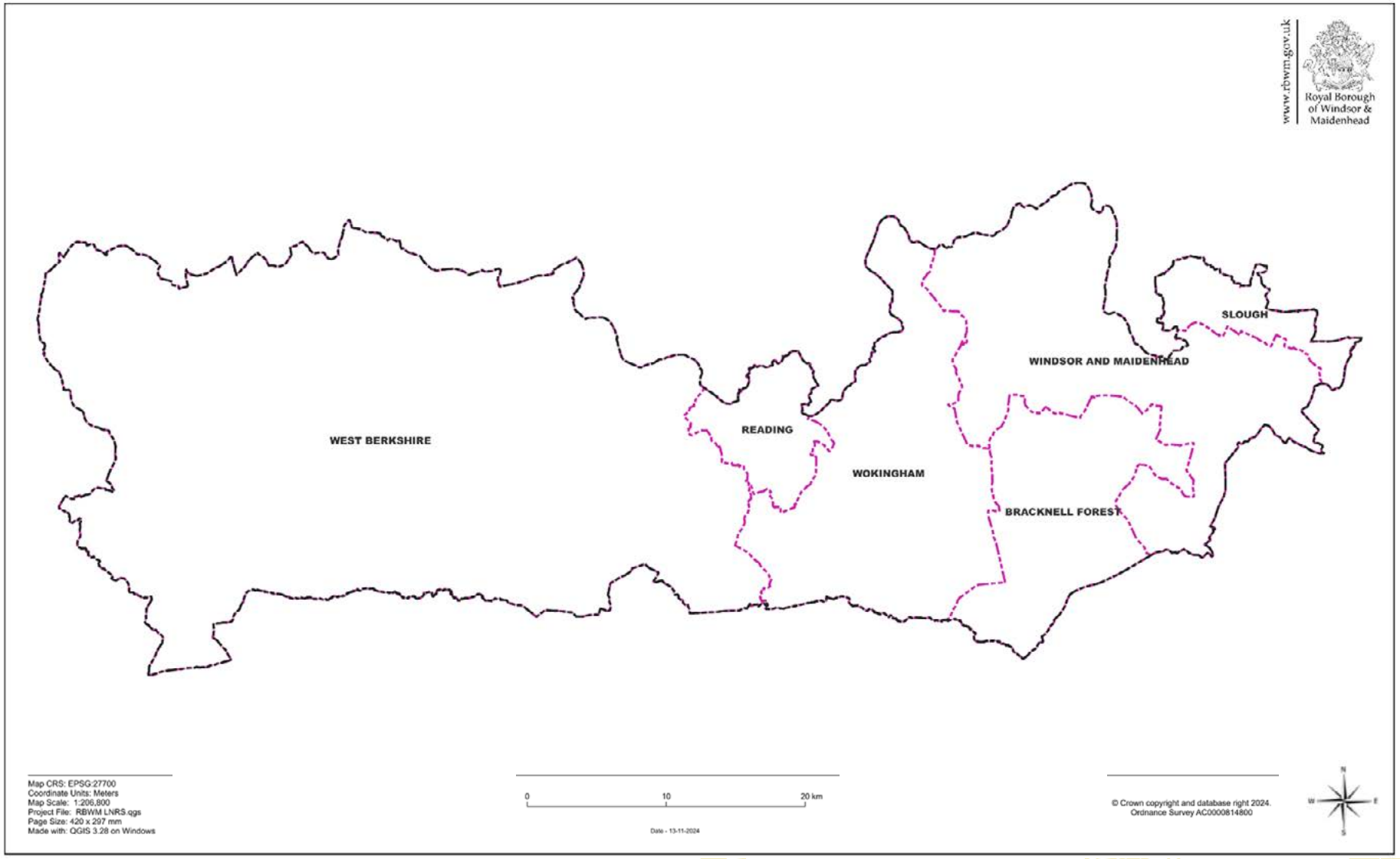


Figure 7: The county of Berkshire and its six unitary authorities (West Berkshire, Reading, Wokingham, Bracknell Forest, Windsor and Maidenhead and Slough).

The Royal Borough of Windsor and Maidenhead are the Responsible Authority (RA) for the Berkshire Local Nature Recovery Strategy. In addition to Natural England, the Supporting Authorities (SAs) in Berkshire are Bracknell Forest Borough Council, Reading Borough Council, Slough Borough Council, West Berkshire District Council and Wokingham Borough Council. See the 'Who is involved' section above for more information.

Section 2

A brief introduction to the county of Berkshire: its history, landscape and geology



Red Deer © Nick Bell

The next part of the strategy is designed to help inform the setting of priorities for recovering nature in Berkshire, along with the data collected in the survey and workshops. It will explain the current ecological situation in Berkshire with regards to its state of biodiversity, define the threats facing biodiversity and the opportunities for recovering nature.

History

The area of the Berkshire LNRS is the former (1998) county of Berkshire, a relatively small land-locked area in the south-east of England. It is notable in having a name that is not derived from a town, but a natural feature, the wood known as 'Berroc', 'Barroc' or other variations of the spelling. Though the location of the wood is uncertain, it seems likely to have been in the south-western part of the county. Alternatively, 'Barroc' is a Celtic name, meaning 'hilly', so this was possibly the original name of the Berkshire Downs.

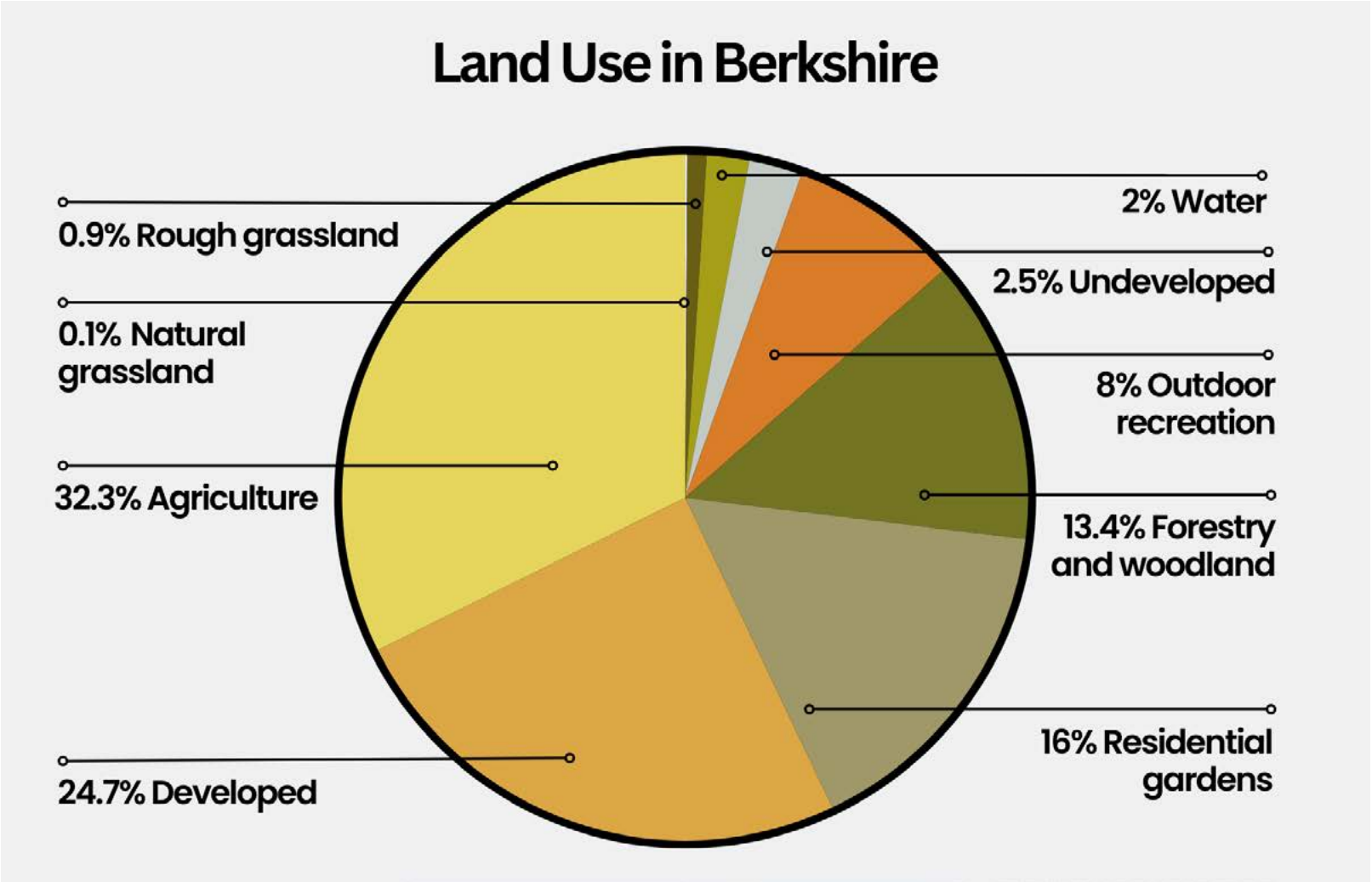
Berkshire existed as an administrative county from approximately the 9th century AD up until 1998. In 1998, local government changes saw Berkshire County Council abolished, to be replaced by six unitary authorities: Bracknell Forest, Reading, Slough, West Berkshire, Windsor and Maidenhead and Wokingham. West Berkshire is the largest Council area, covering over half of the total of 1263km^2. The total current population of Berkshire (as of 2019) is 915,000.

Geology and soils

The County is characterised to the west by the chalk downs of West Berkshire, with the Kennet Valley forming an important feature, with most of the remaining the county the poorer sandy Thames Basin Heaths National Character Area. The east of Berkshire is defined by the clay of the Thames Valley National Character Area, and the north by the chalk of the Chilterns National Character Area. Read more on National Character Areas in Section 4.

Landscape and Habitats

Given its large population and proximity to London, Berkshire is surprisingly green. The majority of built environment is in Reading and Slough unitary authorities, providing significant urban wildlife habitat, and the remaining area is mostly farmland, plus significant woodland and heaths in public, private and Crown ownership (Righelato, 2022). **30% of the North Wessex Downs National Landscape occurs in Berkshire.**





Whitethroat © Nick Bell

Figure 8: Land use in Berkshire. Source: Department for Levelling Up, Housing and Communities, 2022.

Many of Berkshire's woodlands are rich in biodiversity, such as Swinley Forest (a National forest) and Sulham Woods, and others include notable areas of ancient wood pasture in Windsor Great Park. Chalk grasslands are another important habitat, occurring substantially in the North Wessex Downs and Chilterns National Landscape Areas.

Places such as Dinton Pastures County Park, Windsor's Great Park and Greenham Common in West Berkshire offer valuable spaces for wildlife and provide opportunities for those who live and work in the county to connect with nature. Specialist nature education facilities in Berkshire include BBOWT's Nature Discovery Centre in Thatcham, the Look Out in Bracknell and Braywick Nature Centre in Maidenhead. We will explore the detail of Berkshire's biodiversity and ecology in Section 4. The table below gives an indication of the number of nature reserves across Berkshire of varying sizes.

Area category	Number of Fragments	Total Area (ha)
≤5ha	3,385	1,156.5
>5ha but ≤20ha	207	2,031.0
>20ha but ≤40ha	49	1,362.6
>40ha but ≤100ha	29	1,845.0
>100ha but ≤1000ha	14	3,644.2
>1000ha but ≤5000ha	2	7,371.9
>5000ha	2	25,877.8

Figure 9: Quantities of different sizes of nature reserves across Berkshire

Important habitats of Berkshire

Scrub

Scrub is one of the most important and overlooked habitats. They are most frequently encountered as transitional areas, often colonising the fringes of more open landscapes or as successional growth on formerly disturbed land. Significant concentrations can be found on the **chalk downlands** of West Berkshire and along the Chilterns escarpment in the north, where they intersperse with rare chalk grassland, such as at Lardon Chase. Additionally, scrub is present within **woodlands**, particularly at their edges or in areas that have experienced disturbance. Scrub can also be found in and around the extensive **gravel pits and former quarries** of the Thames and Kennet valleys, where it often forms a mosaic with wetlands and grasslands. Smaller pockets also occur on more **acidic soils**, sometimes alongside heathland remnants, such as at Snelsmore Common or Finchampstead Ridges. Much scrub is lost due to a lack of heterogeneity in habitats, a lack of grazing and perhaps a view of the perceived ‘messiness’ of scrub.

Ancient or veteran trees

Ancient or Veteran Trees are those that are particularly old, often with features like hollow trunks, large girths, or other signs of age that make them ecologically significant. While ancient woodlands may contain many veteran trees, veteran trees can also be found in parks, farmland, and other landscapes outside of woodlands.

Ancient woodlands

Ancient Woodlands are those that have been continuously wooded since at least 1600 AD in England, and often much longer. They are particularly important because they support a unique combination of plant and animal species, many of which are adapted to the stable conditions of long-standing wooded environments.

Eutrophic standing waters

Eutrophic Standing Waters are water bodies whose naturally high nutrient status makes them very productive, with dense populations of algae in mid-summer often making the water green. Anaerobic mud rich in organic matter supports abundant bottom-dwelling invertebrates such as snails, and these water bodies are also important for dragonflies and water beetles. Management strategies, such as controlling nutrient inputs through buffer zones, sediment removal, and the installation of floating islands, help improve water quality and maintain biodiversity.

Floodplain grazing marshes

Floodplain grazing marshes in Berkshire are grasslands that periodically flood, supporting a diverse assemblage of species, including waterfowl, invertebrates, and rare plants in the fertile, seasonally inundated soil. These ecosystems are managed through traditional practices like controlled grazing, ditch management, and hay cutting, which maintain habitat diversity and prevent encroachment by invasive species.

Lowland calcareous grasslands

Lowland calcareous grasslands in Berkshire are nutrient-poor, well-drained ecosystems typically found on limestone or chalk soils, supporting a diverse range of plant species adapted to these conditions, such as wildflowers like orchids, gentians, and buttercups. These grasslands also host a variety of invertebrates, including butterflies, bees, and moths, which thrive on the rich floral diversity and provide essential pollination services. Management practices like controlled grazing or mowing help maintain the habitat by preventing shrub encroachment and promoting species-rich vegetation.



Migrant Hawker Dragonfly © Natural England/Allan Drewitt

Lowland dry acidic grasslands

Lowland dry acidic grasslands in Berkshire are characterised by nutrient-poor, well-drained soils, often found on sandy or heathland substrates. These ecosystems support a range of specialised plant species such as heather, along with grasses like red fescue. The grasslands are typically maintained by traditional land management practices, such as grazing and mowing, which prevent shrub and tree encroachment, preserving their unique biodiversity, including rare invertebrates, and bird species.

Lowland fens

Lowland fens in Berkshire are wetlands characterised by waterlogged soils, rich in minerals and supporting a diverse range of plant and animal species, including sedges, mosses, and rare invertebrates. These ecosystems are vulnerable to drainage, nutrient enrichment, and invasive species, so management practices focus on controlling water levels, maintaining traditional grazing regimes, and removing invasive plants to enhance biodiversity. Conservation efforts, including habitat restoration and the use of specific grazing techniques, aim to preserve these valuable habitats for species such as the marsh fritillary butterfly and various bird species.

Lowland heathland

Lowland heathland is a UK habitat of principal importance. The majority of the Berkshire heathlands are on the acidic, free-draining soils and gravels of the south- eastern edge of the county and at Greenham Common in West Berkshire. This has become a highly fragmented landscape and undergone significant decline with only a reported 2% of the county's heathland left, compared to the national average of 5%. However, the areas that remain support rich assemblages of invertebrates, specialist bird species and native reptile species such as adder.

Lowland meadows

Lowland meadows in Berkshire are diverse ecosystems typically found on nutrient-poor, well-drained soils, often shaped by historic farming practices such as haymaking and grazing. They support a wide variety of wildflowers, grasses, and herbs, which in turn provide habitat for numerous insects, birds, and small mammals. These meadows are seasonally dynamic, with species composition shifting through the year as wildflowers bloom in spring and summer, and are often maintained through careful management, such as a grazing regime or an annual cut and collect, to prevent them from becoming overgrown or dominated by scrub.

Lowland mixed deciduous woodland

Lowland mixed deciduous woodland in Berkshire is characterised by a diverse range of tree species, including oak, ash, beech and silver birch, which provide varied habitats for a rich array of flora and fauna and cover a greater area than any other priority habitat in the county. These habitats can be managed for biodiversity through selective tree thinning or coppicing. Deadwood and fallen branches can be left in place to support invertebrates, fungi, and birds, while the understory is maintained to encourage ground-nesting species and woodland flora. Additionally, efforts can be made to control invasive species and increase connectivity between fragmented woodland areas.



Adder © Nick Bell

Reedbeds

Reedbeds in Berkshire, often found in wetlands like the Thames Basin, provide crucial habitats for a variety of bird species, including reed warbler and bittern, as well as invertebrates and plants. These ecosystems thrive in waterlogged conditions and are managed through controlled grazing, mowing, and cutting back reeds in winter to prevent succession into scrub or woodland. Conservation efforts aim to maintain these reedbeds by balancing natural processes with active management to enhance biodiversity and maintain open, dynamic wetland habitats.

River systems

River systems in Berkshire contain habitats that support a rich variety of plants, mammals and invertebrates as well as often defining our landscapes. They are important in terms of both culture and recreation. The main river catchments that occur in Berkshire are the Thames, Kennet, Lambourn, Pang, Loddon and Colne, although there are great differences between them. See more in the Rivers section. These rivers are managed through initiatives like habitat restoration, riparian buffer zones, and floodplain conservation to maintain biodiversity and water quality. Local authorities and conservation groups collaborate on sustainable practices, such as controlling invasive species, enhancing fish migration routes, and reducing pollution.

Traditional orchards

Traditional Orchards in Berkshire are ecologically rich habitats, supporting diverse species such as birds, insects, fungi, and small mammals due to their mix of old fruit trees, grassland, and hedgerows. Management for biodiversity typically includes maintaining a diverse range of fruit tree species, planting of new fruit trees allowing for natural regeneration, and avoiding the use of chemical pesticides to protect pollinators and other beneficial organisms. Grazing by livestock, seasonal pruning, and creating habitat features like deadwood and wildflower meadows can all help to enhance an orchard's ecological value.

Wet woodlands

Wet woodlands in Berkshire are characterised by waterlogged soils that support a unique mix of species, including alder, willow, and wetland herbs. These habitats are vital for biodiversity, providing shelter and food for a range of species, including birds, invertebrates, and amphibians. To manage them for biodiversity, conservation efforts focus on maintaining hydrological conditions, controlling invasive species, and implementing coppicing and selective thinning to ensure a diverse age structure of trees and shrubs.

Wood pasture and parkland landscapes

Wood pasture and parkland landscapes tend to be the product of historic grazing and are often characterised by a mix of open grassland and scattered mature tree specimens, such that livestock can graze between the trees and historic views can be maintained. These habitats are managed through practices such as selective tree thinning, maintaining veteran trees, and creating deadwood habitats to enhance biodiversity and support species like bats, fungi, and rare invertebrates. Mature trees are often pollarded, with branches cut above the browsing height of the stock below.

A note regarding Priority and Irreplaceable Habitats

Priority habitats - Habitats which are considered the most important for nature recovery, as listed by the government under Section 41 of the Natural Environment and Rural Communities Act.

Irreplaceable Habitats - Mapped onto the Baseline Biodiversity (APIB) layer of the Local Habitat Map, these are habitats which, as defined in the National Planning Policy Framework (Ministry of Housing, 2024) would be very difficult to restore, recreate, or replace. Maintaining, improving and creating buffers around our areas of irreplaceable habitat are important opportunities for nature recovery in the county.

Berkshire's Irreplaceable Habitats consist of:

- Ancient and Veteran Trees
- Ancient Woodland
- Lowland Fens

Rivers and watercourses

- Along Berkshire's northern boundary lies the River Thames, one of England's most iconic watercourses. Like many of the watercourses traversing the county's urban areas and countryside, the waters of the River Thames offer extensive opportunities for recreation and places for wildlife to thrive. Nestled along its banks, towns like Windsor and Pangbourne are popular with tourists on and off the river. Also, of the 260 chalk streams globally, 224 are found in England and many of these unique, rare chalk streams are in Berkshire, mostly in the west, including the River Pang, Kennet, Dun and Lambourn.
- The complex network of watercourses, lakes and associated habitats of the Colne Valley Regional Park touches on Berkshire in the east of the boroughs of Slough and Windsor & Maidenhead.

See all Berkshire's OS marked watercourses, including chalk rivers, in Figure 10 below.



© Getty Images

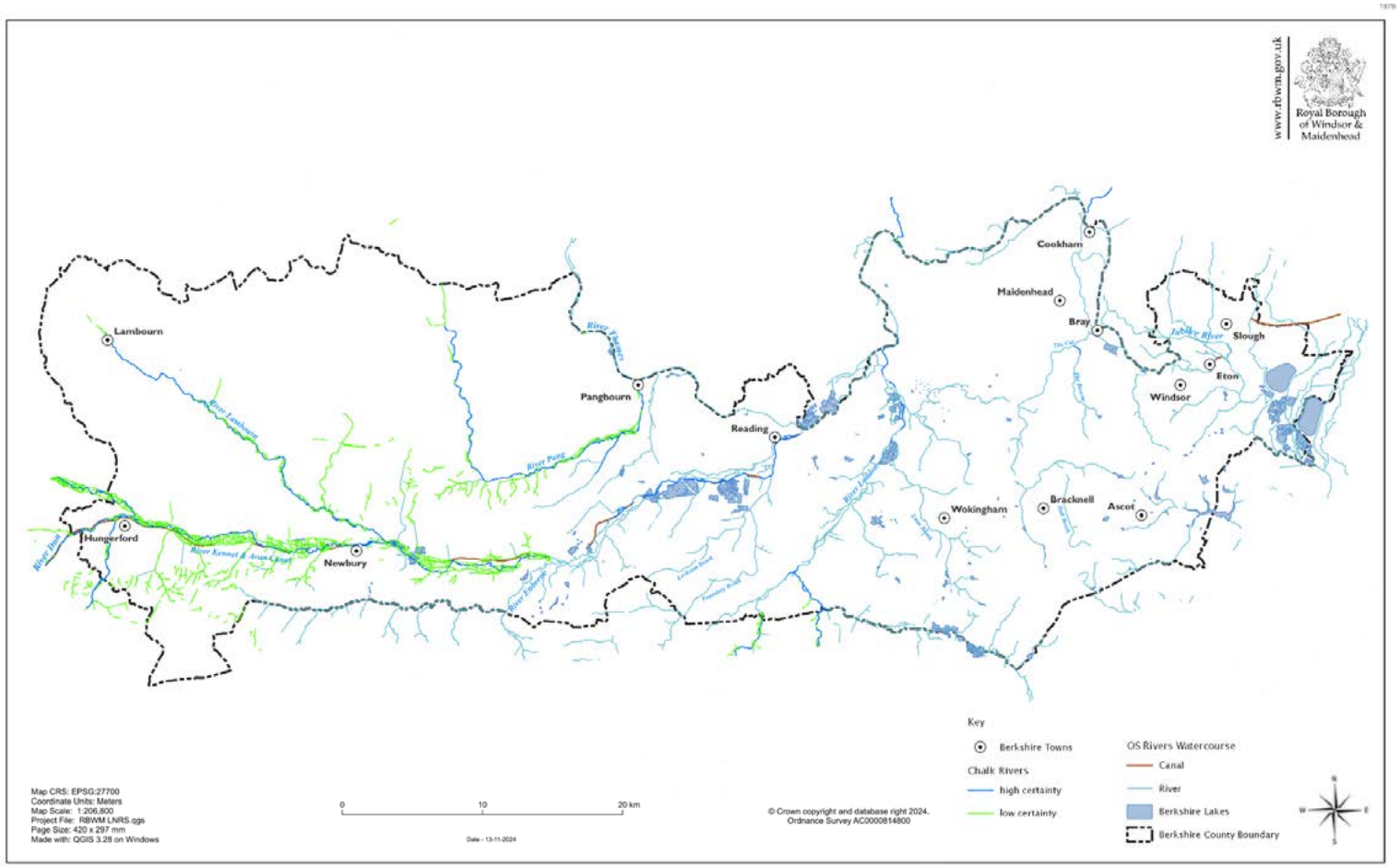


Figure 10: Map of watercourses of Berkshire, including OS river watercourses and Chalk Rivers. The blue, 'high certainty' layer of chalk rivers -, the dark blue lines, are the "official" map of the chalk streams. The green, 'low certainty' layer refers to any waterbody of any sort within a given orbit of outcropping chalk or a chalk stream.



Watercourse bankside

Highlights of Berkshire's nature as told by its residents

The Berkshire LNRS stakeholder engagement workshops held in April 2024 captured what those stakeholders attending believed to be the most special aspects of nature close to where they live. Figure 11 below highlights these aspects and details how many times each was mentioned during the workshops. They are an indication of current environmental trends, as described by local people with lived experience of the area. This information helped to direct the Berkshire Local Nature Recovery Strategy, forming the basis of a graphic in Figure 2 and was a starting block to develop the List of Priorities and Measures.

What do you love about nature where you live?

Parks and Green Spaces	85 mentions	Anti-Development and Preservation Sentiments	32 mentions
Wildlife and Biodiversity	79 mentions	Urban Greenery and Street Trees	29 mentions
Woodland and Forests	70 mentions	Seasonal Changes and Natural Beauty	28 mentions
Footpaths, Walking, and Cycling Routes	68 mentions	Hedgerows and Wildflowers	25 mentions
Specific Wildlife (e.g. hedgehogs, birds)	52 mentions	Community and Social Interaction	22 mentions
River Thames and Waterways	51 mentions	Agricultural and Farmland Areas	20 mentions
Health and Well-being Benefits	46 mentions	Mental Health and Peacefulness	18 mentions
Local and Accessible Nature	40 mentions	Outdoor Activities (e.g. fishing, swimming)	17 mentions
Gardens and Allotments	37 mentions	Education and Learning Opportunities	15 mentions
Nature Reserves and Protected Areas	33 mentions	Historical and Cultural Significance	14 mentions



© Getty Images

Figure 11: What is special about local nature to communities of Berkshire.

Survey results with stakeholders indicate particular or favourite species within Berkshire that people would like to see supported. The most frequently mentioned species were **hedgehog** with 58 mentions, followed by **birds** in general (24), **stag beetle** (21), **water vole** (20) and **bees** (17). A variety of other species were highlighted multiple times, including many mammals: **deer** (14); **badger** (11); **hazel dormice** (11); and **otter** (7). Other species that were mentioned included **swift, oak tree, kingfisher, common frog, slow worm, butterflies** in general, **nightingale, barn owl** and **peregrine falcon**.

Section 3
The challenges and threats to Berkshire's biodiversity

The past challenges - what has created the current situation?

Berkshire's natural landscapes and its native biodiversity have experienced, and will continue to experience, numerous environmental challenges. Changes in land use have resulted in changes and losses in habitats and species across the county. For example, 84% of West Berkshire's chalk grassland had been lost from the first documentary sources by 2007 (Barnett, Bell, & Grant, 2020), threatening species such as the linnet.

This is often a result of changes in land management practices. In the post-war period, food security was a priority. During this time, Berkshire lost much rough grassland and wet meadows in river valleys due to the intensification of agricultural practices. Urbanisation and infrastructure development has also put considerable pressure on Berkshire's natural environment over the last 100 years, with urban encroachment from west London into the Slough area and Colne Valley, expansion of the county's towns and cities, the building and expansion of Heathrow airport and the creation of the M4 bisecting the county.

During the period between the 1960s to 1980s, continued agricultural intensification saw an increased emphasis on productivity rather than protecting biodiversity. Many smaller, mixed farms were engulfed by larger holdings. Fields needed to be larger to allow the use of larger machinery which led to a loss of hedgerows, traditional ditch systems and field margin strips. An increased usage of herbicides and pesticides wiped out many invertebrates, whilst an increased tendency to sow crops during the autumn decreased winter food for farmland birds. Cattle were grazed more intensively, decreasing the grassland biodiversity benefits gained from more traditional, extensive grazing regimes. Many areas in the county have also become popular for racehorse training. This has resulted in various grassland areas becoming more intensively managed with ploughing and application of fertilisers to create good ground conditions for horses, as seen across the Lambourn Downs (Righelato, 2022).

The Threats to Biodiversity in Berkshire

In Berkshire there are significant pressures on nature recovery including habitat fragmentation and environmental degradation. The current resource for nature conservation is not having enough of an impact, as highlighted in the report 'Making Space for Nature' (Lawton, 2010). This report highlights an urgent need for a paradigm shift towards large-scale nature recovery efforts.

Human activities such as urbanisation, agricultural intensification and infrastructure development have fragmented natural habitats, posing significant challenges to wildlife. This fragmentation restricts the movement of species, isolating populations and increasing their vulnerability to extinction. Without access to essential resources, suitable habitats, and mating opportunities, species face heightened risks from external stressors such as climate change, pollution, and habitat degradation.



Lesser Whitethroat © Nick Bell



© *Getty Images*

Water Pollution and other water environment pressures

Addressing water pollution in Berkshire is a significant challenge, from both point (such as sewage treatment works) and diffuse (mainly agricultural) sources. The biodiversity of rivers, standing waters and wetlands can all be adversely impacted by high levels of nutrients, and chalk streams (of which Berkshire has an important proportion of the global total) are particularly vulnerable.

Improvements in treated sewage effluent over recent decades is being undermined by recent substantial increases in releases of untreated effluent from storm tanks following under-investment in infrastructure (Thames Water, 2024). Water quality pressures compound the challenges for river and wetland restoration, along with those presented by the legacy of land drainage and river engineering which has caused significant habitat damage to many of our rivers, and the ongoing pressure of increasing water demand driven by climate change and population growth.

Fragmentation

The fragmentation of habitats disrupts ecological processes and reduces the resilience of ecosystems. Species that are unable to disperse across the landscape may struggle to adapt to changing environmental conditions or recover from population declines caused by disturbances. Fragmentation also affects feeding and breeding of species (Peterken, 2002).

Climate Change

Climate change is a major threat to habitats and species in Berkshire. Changes in temperature and rainfall patterns may lead to shifts in habitats and certain species will struggle to adapt to the changes. The increase in extreme weather events will also increase stress on species that rely on stable habitats with an increase in drought/flooding impacting those habitats. Changes in temperatures may push species distribution further north in search of cooler, more suitable habitats. This will result in a change to species currently found in Berkshire, which will inevitably have a knock-on impact on other species that remain.

Climate change is already causing shifts in the timing of natural events, something that is often especially noticed during late winter/early spring. These changes can disrupt food chains and reproductive cycles of species that may result in a decline in numbers. For example, blue tit chicks need around 100 caterpillars every day, but if moths and butterflies emerge earlier due to warming temperatures, there may not be enough caterpillars around at the right time for the blue tit chicks to thrive (Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust, n.d.).

Berkshire is an area with significant levels of farming. A decline in pollinators, such as bees, due to habitat and temperature changes, will pose a threat to both food production and species in the county. The loss of native pollinators could reduce the availability of wild fruits that many species rely on.

Increased risks of extreme weather events, bringing flooding, storm and drought conditions, will put ecosystems under additional pressure. Without increasing the resilience of our habitats to these extremes, many of the sensitive species within them could be lost. Increasingly wet weather is leading to a growing threat of flooding within Berkshire. For example, Slough Borough is at risk of multiple sources of flooding. In recent years, it has experienced flooding from rivers (fluvial), surface water, groundwater, and sewers (Slough Borough Council, 2021). In the urban areas of Slough, watercourses are in constrained, and often marginalised, man-made channels, with long sections in culverts. Here, capacity issues lead to frequent flooding in high rainfall events. In the green belt areas in the south into Windsor and Maidenhead and in the southeast at Colnbrook and Poyle, river terrace gravels of the Thames Flood Plain and high groundwater levels combine to increase flood risk. However, public open spaces align well with watercourses and there are opportunities for nature-based solutions to alleviate flooding and improve biodiversity.

Invasive species

Invasive species are likely to become more prevalent in Berkshire as warmer temperatures and milder winters enable them to outcompete native species. This may have an impact directly on species but will also have a significant impact on the habitats which those species rely on. For example, Himalayan balsam and American signal crayfish, (the latter threatening not only our waterway species but the banks and stability). Berkshire is also likely to experience an increase in the spread of diseases, such as ash dieback, and parasites that affect wildlife in the county because of the warmer temperatures. These cumulative impacts threaten the long-term viability of native flora and fauna and compromise the overall health of ecosystems.



Little Egret © Nick *Bell*

Berkshire's nature is also being impacted by pest species – these can be invasive non-native species or native species that are at unsustainable population levels. One highly impactful group are deer. In Berkshire, there are six species of deer: two native and four non-native species. Since the loss of large carnivores in the UK, there have been no natural predators of deer, and the collective deer population has rapidly expanded without control. The UK population is now thought to have exceeded 2 million deer. This huge population has had a significant impact on our woodlands and wider habitats, with deer grazing preventing ground flora from surviving, stripping the bark of mature trees and browsing saplings so that new trees cannot establish and grow. These impacts result in simplified woodlands, with limited understorey that birds and invertebrates cannot survive in. Without management, deer populations will continue to increase and impacts on our woodlands and adjacent habitats will worsen. To improve the conditions of our woodlands, this pressure needs to be reduced, deer populations must be brought back to sustainable levels and non-native species should be controlled as far as possible.

Recreational Pressures

Recreational pressures in Berkshire pose a significant threat to the region's natural environments and biodiversity. Increasing footfall from outdoor activities such as hiking, cycling, and dog walking puts strain on sensitive habitats, including woodlands, heathlands, and riverbanks. Overuse can lead to soil erosion, habitat fragmentation, and the disturbance of wildlife, particularly in areas of ecological importance like the North Wessex Downs, Kennet and Pang chalk stream catchments and the River Thames corridors. The accumulation of litter and damage to vegetation exacerbates these issues. Conservation efforts play a crucial role in safeguarding these fragile ecosystems, with designated Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) status ensuring their protection. There is a need to balance conservation with recreation, providing opportunities for public enjoyment while preserving the integrity of these natural habitats (Barker, 2020).

Pressures facing Berkshire's nature as told by its residents

Stakeholder workshops as part of the creation of the Berkshire LNRS identified attendees' concerns for nature in and around where they lived. The concerns that were raised, together with the frequency with which they were mentioned, are presented in Figure 12 below.

What worries you about nature where you live?

Impact of ongoing housing and other development	67 mentions
Poor management of water, drought, and flood	45 mentions
Increased litter and pollution	36 mentions
Competing pressures with nature conservation	32 mentions
Loss of invertebrates, especially pollinators	30 mentions
Lack of understanding in the general population about nature	28 mentions
Inadequate government policies and lack of enforcement	26 mentions
Impact on water bodies, rivers, and aquatic life	24 mentions
Negative impact on mental health and well-being	22 mentions
Agricultural impacts and loss of farmland	18 mentions

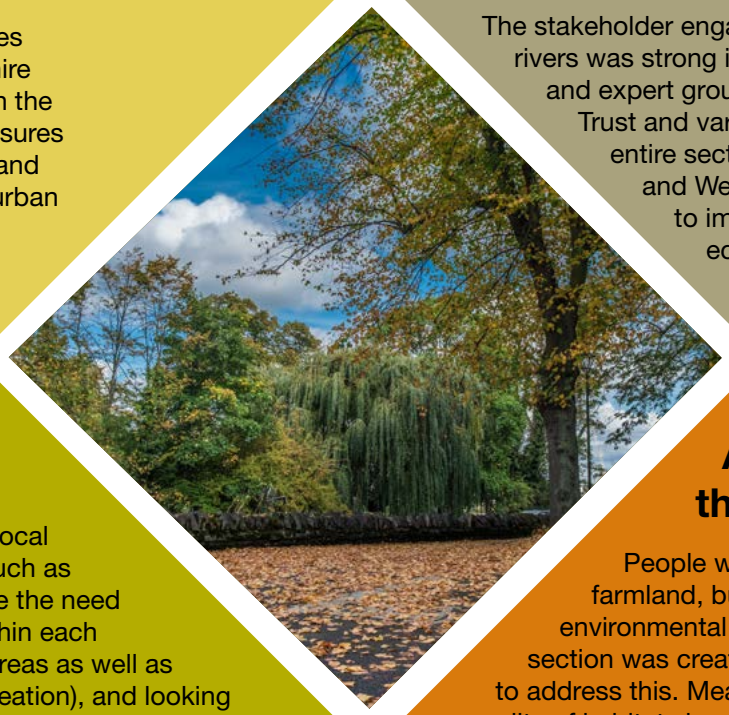
Figure 12: Stakeholder concerns regarding nature, where people live in Berkshire

How these concerns feed into our Berkshire LNRS

Addressing these pressures requires a concerted effort to mitigate human impacts, restore degraded habitats, and promote landscape connectivity. By understanding and addressing the underlying causes of habitat fragmentation and environmental degradation, we can work towards ensuring the resilience and sustainability of Berkshire's natural heritage and achieve wider environmental benefits.

Loss of invertebrates, especially pollinators

There are at least 21 invertebrate species highlighted as of importance for Berkshire in the Species Priorities Shortlist. Within the List of Priorities and Measures, six measures specifically refer to wildflower creation and restoration in the general countryside, urban areas and along watercourses, (PM03, PM06, PM15, PM16, PM50, PM57).



Impact on water bodies, rivers and aquatic life

The stakeholder engagement showed that concern for the rivers was strong in the Berkshire community. From this, and expert groups such as the EA, Freshwater Habitats Trust and various Catchment Partnerships, there is an entire section of priorities and measures for 'Rivers and Wetland habitats Grouping', which aims to improve the wetlands and floodplain, the ecological quality of rivers, and chalk stream management.

Competing pressures with nature conservation

The prioritisation process to create the Local Habitat Map balanced land pressures, such as targeting low quality farmland (to balance the need for food production), creating habitat within each district, creating habitat close to urban areas as well as rural areas (balancing pressure from recreation), and looking at environmental pressures such as floodplain (optimising restoration to create extra value). This contributed to balancing the value that is created for society by these habitats with the value created for nature.

Agricultural impacts and the loss of farmland

People were concerned about losing importance farmland, but also concerned about the negative environmental impacts of intensive farmland. A habitat section was created in the List of Priorities and Measures to address this. Measures were developed to improve the quality of habitats in agricultural land and the wider countryside. The list of unmapped measures guide land managers to take actions to support nature recovery on agricultural land that complement food production.

Section 4

Berkshire's Character and its opportunities – told through National Character Areas and River Catchments

Natural England, the Government's nature conservation advisory body, describes England in terms of 159 distinctive National Character Areas (NCAs). These profiles describe the natural borders across our landscape, based on differing landscape character and underlying geological diversity, instead of using the more anthropogenic administrative boundaries. By thinking about the land based on its natural features, the NCAs are considered to be a good framework to use when making decisions for the natural environment. The NCAs of England are illustrated in Figure 13 below.

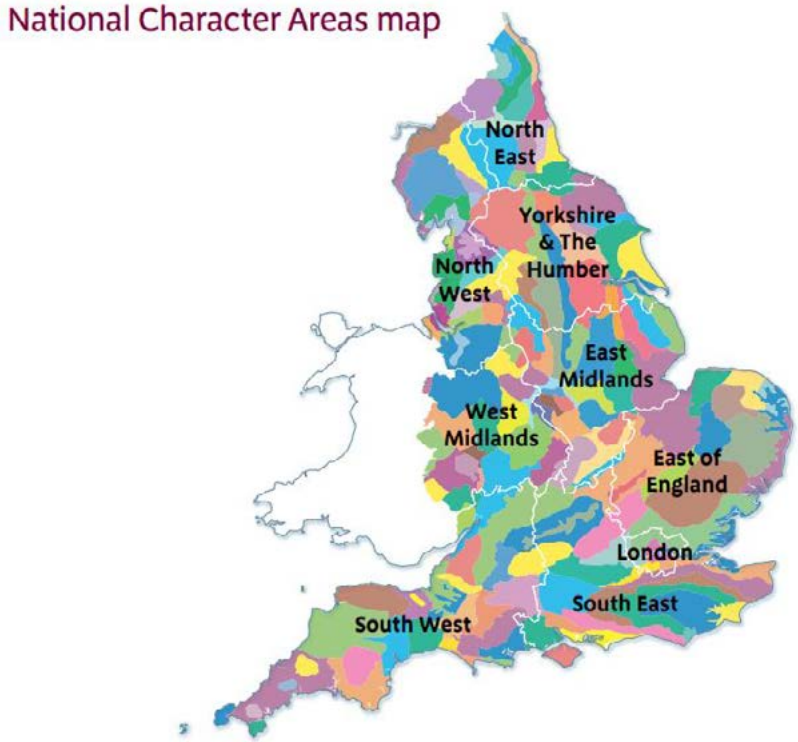


Figure 13: National Character Area Profiles designated by colour, Natural England (2014)

In Figure 14 below, the five National Character Areas that comprise Berkshire are illustrated. These are: the Berkshire and Marlborough Downs NCA; the Thames Valley NCA; the Thames Basin Heaths NCA; the Chilterns NCA and the Hampshire Downs NCA. Descriptions of these are detailed in the sections below.

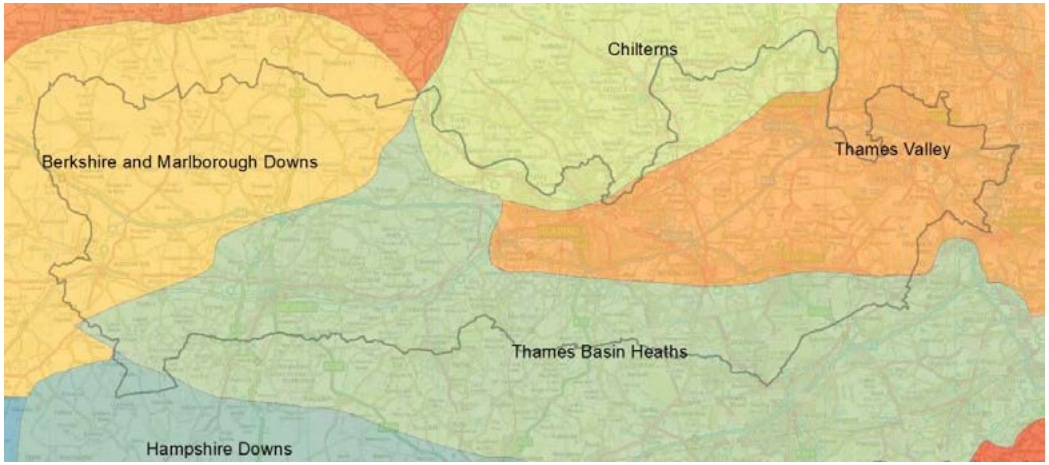


Figure 14: Map of National Character Areas of Berkshire. Contains public sector information licensed under the Open Government Licence v3.0.



Kingfisher © Natural England/Allan Drewitt11

The Berkshire and Marlborough Downs NCA (NCA116)

Overview

The Berkshire and Marlborough Downs National Character Area (NCA) has a landscape shaped by its unique geology, diverse ecology, and distinctive scenery. All of this character area falls within the larger North Wessex Downs National Landscape. This region encompasses vast arable fields and rolling chalk hills, providing breathtaking panoramic views from its escarpments.

The geological composition of the Berkshire Downs is predominantly chalk, a permeable rock with thin soils that characterises the rolling landscape. This geological feature has influenced the area's ecology, contributing to the presence of unique habitats such as species-rich chalk grasslands and chalk streams, and hanging woodlands along the escarpments and steep slopes. The high quality of some of the remaining habitats has resulted in two internationally important wildlife sites (Special Areas of Conservation) being recognised within this NCA in Berkshire – the River Lambourn and the Kennet and Lambourn Floodplain.

The landscape of the Berkshire Downs is further defined by its historic routeways, such as the Ridgeway National Trail, which offer public access to explore the region's natural and cultural heritage. Notable landmarks and ancient monuments dot the landscape, attracting historians, antiquarians, writers, and artists alike. This rich history and cultural significance add to the area's distinctiveness.



Red Kite © Stu Mclellan

Despite its scenic beauty and ecological richness, the Berkshire Downs face challenges such as damage to heritage features, as well as threats to groundwater quality from agricultural pollution and current pressures on chalk rivers from frequently storming sewage treatment works. Conservation efforts are crucial to preserve the integrity of these habitats and maintain the ecological balance of the region.

The Berkshire Downs NCA is the product of an ongoing interplay between geology, ecology, and human history. Its distinctive landscape character, shaped by millennia of geological processes and human interaction, contains both natural wonders and cultural heritage. See more information regarding the internationally important sites of the Berkshire Downs in Appendix 3.

Notable species

These habitats support a rich diversity of wildlife, including brown hare, harvest mice, rare plants and birds like the stone curlew, grey partridge and are an especially important overwintering area for short-eared owl. Invertebrates such as Adonis blue butterfly and Desmoulin's whorl snail are notable. Plants such as early gentian are important in this NCA, as well as Anaptychia cilaris (a lichen).



Opportunities for Recovery

1. Sustain a variety of pastures and parklands featuring veteran and ancient trees, plus protecting younger woodlands by planning for new generations of veteran trees, to enrich biodiversity while preserving natural elements of the agricultural landscape.
2. Expand permanent grassland areas with ample buffer strips along watercourses and un-tilled strips on valley slopes to mitigate soil erosion, fortify soil stability and facilitate water retention and filtration. Where significant field boundaries have been lost, revitalise hedgerows by infilling gaps, allowing for growth to maturity, and interspersing individual trees.
3. Continuing the programme of chalk river habitat restoration on the Kennet, Pang and Lambourn, to secure a healthy future for the iconic chalk streams in this NCA. Capitalise on opportunities to reduce sources of nutrients within chalk river catchments, particularly the River Lambourn SAC, to complement Nutrient Neutrality measures. Continue initiative on restoration of Pang.
4. Expand woodland coverage: undertake diversified mixed broadleaf woodland planting and active management in suitable locations. Coppicing currently represents a small percentage of Berkshire's woodland, but offers potential to diversify woodlands and provide habitat for threatened species.
5. Preserve grasslands, especially lowland calcareous grassland and lowland meadow, to foster an open landscape conducive to wildlife movement and habitat connectivity, enriching the ecological network throughout the county's diverse habitats, whilst also helping preserve archaeological features.

Berkshire and Marlborough Downs Countryside Stewardship statement of priorities

The Thames Valley NCA (NCA115)

Overview

The Thames Valley encompasses a low-lying expanse from Reading to the southwest periphery of London, with the river Thames serving as a defining feature amid a varied landscape. This region is characterised by a mix of urban and suburban settlements, infrastructure networks, agricultural land, historic parks, commons, woodlands, reservoirs, and extensive mineral workings. The majority of Reading falls within the Thames Valley NCA, including floodplain meadows to the south, while areas of mixed broadleaved woodland persist mainly on steeper ridges.

In the mid-20th century, the widespread extraction of construction minerals, notably gravel, from river valleys presented an opportunity to create new wetlands. Many former extraction sites were subsequently flooded, forming a network of lakes in the Kennet Valley east of Newbury, west of Reading, along the Loddon and Blackwater valleys, and in the lower Colne Valley in the far east of Berkshire. Recognising their value for wildlife, groups such as the Lavell's Wetland Trust, and Theale Area Bird Conservation Group have emerged to manage these areas for optimal wildlife preservation. Opportunities persist for the management and enhancement of wildlife in other sites as well.

In Berkshire, pockets of wet lowland meadows exist, including Cock Marsh in Cookham, and the Fritillary Meadows near the Loddon at Swallowfield.

Hydrological features, including the Thames and its tributaries, the Kennet and Avon Canal, the Grand Union Canal, and reservoirs forming the South-West London Waterbodies Special Protection Area (SPA) and Ramsar site, are vitally important for Berkshire's wildlife and also for the communities living and working in the county. These features not only supply water to London and its environment but also serve as vital habitats for wildlife and recreational areas within an urban setting. The management of river flows and water levels, flood defence measures, and water quality improvement initiatives, such as wetland restoration for flood management, present opportunities for biodiversity conservation and wider environmental benefits.



Puffball mushroom © Stu Mclellan

The Colne Valley Regional Park includes parts of the boroughs of Slough and Windsor & Maidenhead. The Park is a network of 200km of watercourses, over 70 lakes and associated wetland habitats. It is the first large taste of countryside immediately to the west of London and should be managed and planned for as such across the boundaries of Berkshire, Surrey, Buckinghamshire, London and Hertfordshire. Despite its urbanisation, the Thames Valley NCA retains environmental significance, with 6% of its area designated as Sites of Special Scientific Interest (SSSI). It harbours substantial amounts of broadleaved woodland, including ancient forests like the internationally important Windsor Forest and Great Park. See more information regarding the internationally important sites of the Thames Valley in Appendix 3.

Notable species

The Thames Valley hosts numerous nationally important invertebrate species including the Violet click beetle and stag beetle, as well as birds such as gadwall, shoveler and nightingale. The striped lychnis is a key moth species, and European eel plus recently reintroduced water vole are notable in the waterways. Important plant species include the loddon lily (which is also the county flower of Berkshire).



Opportunities for Recovery

1. Enhance rivers and wetlands focussing on a catchment-wide scale, including improving water quality, habitats and connectivity for wildlife.
2. Create and enhance green spaces within urban areas, to provide benefits such as recreation, flood risk management, urban cooling and opportunities for wildlife.
3. Protect and manage historic parklands, ancient woodland and traditional orchards.
4. Restore areas to enhance carbon sequestration, mitigate noise pollution and prevent soil erosion.
5. Encourage engagement with and enjoyment of nature, while minimising negative impacts.

Thames Valley Countryside Stewardship statement of priorities

The Thames Basin Heaths NCA (NCA129)

Overview

The Thames Basin Heaths National Character Area (NCA) extends east to west across parts of Surrey, Hampshire and Berkshire. Within Berkshire it spans across the south of the county. The east is more urban, including the south of Bracknell, while the west covers the countryside surrounding Newbury. In the far west is the North Wessex Downs National Landscape.

One of the defining features of the Thames Basin Heaths NCA is its mosaic of semi-natural habitats, including wet and dry heathlands, woodlands, acidic grasslands and chalk streams such as the River Pang. These habitats support a wealth of biodiversity. Much of the woodland of the Thames Basin Heaths is reclaimed former heathland, with coniferous woodland particularly distinctive in the east of the NCA. The Kennet Valley Alderwoods towards the west are designated as Special Areas of Conservation (SAC) for their important ash-alder woodland habitat, and to the east part of Thatcham Reedbeds is designated as a component site of the Kennet and Lambourn Valley Floodplain SAC.

The Thames Basin Heaths have been identified by the Freshwater Habitats Trust as a Nationally Important Freshwater Area, and should be a 'primary locus for freshwater restoration and creation actions, with potential to deliver nationally significant benefits for freshwater nature recovery' (Freshwater Habitats Trust, 2024).

Amidst growth and development pressures, strategic planning is essential to accommodate the increasing demand for mineral extraction and landfill sites while promoting nature's recovery. Mineral extraction and infrastructure projects offer opportunities to safeguard remaining natural areas and enhance biodiversity. With only 0.6% of the area currently accessible to the public according to the latest NCA report (Natural England, 2024), restoration plans for mineral extraction sites and new developments should prioritise enhancing green infrastructure and public accessibility.

Residential development continues at a high rate across the Thames Basin Heaths with an 11% increase in dwellings within a 5km buffer zone since 2011. To mitigate the impact of this development on the heathland, 1930 ha of Suitable Alternative Natural Greenspace (SANGs) have been opened. This is green space previously unavailable to the public.



Kingfisher © Stu Mclellan

The Thames Valley Basin Heaths face challenges such as damage to heritage features, for example in rural villages and in Newbury and Thatcham towns, as well as threats to groundwater quality from agricultural pollution and current pressures on rivers from frequently storming sewage treatment works. Conservation efforts are crucial to preserve the integrity of these habitats and maintain the ecological balance of the region.

Despite the challenges posed by urbanisation and human activity, the Thames Basin Heaths NCA is a place of natural beauty and ecological significance. Through careful stewardship and collaborative conservation efforts, such as those of conservation groups such as Moor Green Lakes Group, this diverse landscape continues to thrive. See more information regarding the internationally important sites of the Thames Basin Heaths in Appendix 3.

Notable species

Much of the heathland is designated as a Special Protection Area (SPA) as it supports internationally important populations of Dartford warbler, nightjar and woodlark (see Appendix 3). The heathlands are also home to reptiles such as adder, and in wetter areas dragonfly and damselfly, including the scarce blue-tailed damselfly. All six native amphibian species can be found here. Rare butterflies are also present, notably the grayling and the silver studded blue. Populations of bat such as barbastelle, serotine and nathusius' pipistrelle bat are also present in the area. Finally, the exceptionally rare and endangered Desmoulin's whorl snail (Vertigo moulinsiana), 2mm in size, lives in Thatcham Reed beds and this is one of its strongholds in the UK.



© Chris Damant Pell Frischmann

Opportunities for Recovery

1. Manage existing and establish new habitats such as woodlands, field margins, river margins and reedbeds to reduce runoff and filter pollutants and improve connectivity.
2. Balance the different uses and benefits of woodlands, including biodiversity, timber production and recreation.
3. Enhance rivers and wetlands focussing on a catchment-scale, including improving water quality, habitats and connectivity for wildlife. Create riverside tree buffers.
4. Restore and enhance long-established priority habitats such as ancient woodland, wet woodland, lowland heathland, lowland acid grassland and lowland fen.
5. Provide high-quality green infrastructure in and around urban areas for multiple benefits including public engagement, opportunities for wildlife, reducing flood risk and climate regulation.
6. Build on current habitat restoration initiatives on the river Pang chalk stream. Capitalise on opportunities to reduce sources of nutrients within this chalk river, to complement Nutrient Neutrality measures.

Thames Basin Heaths Countryside Stewardship statement of priorities

The Chilterns NCA (NCA110)

Overview

The area north of the River Thames in Caversham and the north-facing slopes of Tilehurst are part of the Chilterns NCA, known for its chalk terrain overlaid with clays, gravels, and sands, fostering diverse habitats of chalk grassland and woodland. Notable features include Bugs Bottom, Clayfield Copse, and McIlroy and Arthur Newbery parks. The Chilterns landscape, dominated by chalk bedrock, offers expansive views from its northwest-facing escarpment.

The Chilterns showcase a patchwork of agriculture, woodland and chalk downland, complemented by urban fringe areas. Outdoor activities abound with extensive rights of way, parks, and trails like the Ridgeway and Thames Path. Human history dating back to the Palaeolithic is evident, with farming practices evolving to include arable farming in valleys and historic settlements along major routes. Steep slopes and clay-with-flint soils shape land management, fostering mixed farming, woodland, and downland.

Despite fragmentation, common land and downland remain important, with woodlands covering 14% of the area, including native beechwoods of ecological significance. Historic buildings, predominantly built with local materials like brick and flint, dot the countryside, reflecting the area's rich heritage. See more information regarding the internationally important sites of the Chilterns in Appendix 3.

Notable species

The Duke of Burgundy and silver studded blue are important butterflies to the Chilterns whilst military orchid, juniper and white helleborine are plants of note. Bat such as Daubenton's and the orange-fruited elm-lichen are also priority species in the area. Otters are a top predator in water environments of the Chilterns.



Opportunities for Recovery

1. Protect the Chilterns' groundwater and River Thames, through collaborative efforts addressing catchment-wide issues and water supply network concerns. Improve the river catchment's resilience to climate changes which can result in high flows, erosion, heat and low flows. Strive for sustainable water usage and the preservation of thriving floodplain landscapes, valued by the community for generations to come.
2. Foster local identity and develop or improve green infrastructure within established communities and new development areas, especially along the urban fringe and growth zones. Ensure equitable access to rural areas for all community members to enjoy.
3. Oversee the management of wooded areas, including the significant Chilterns beechwoods, hedgerows, commons, and parklands to preserve and enrich biodiversity and historical features. Particularly encourage drought tolerant species, such as oak, to increase resilience to climate change. Emphasise both recreational opportunities and sustainable biomass and timber production.
4. Revitalise historically significant landscapes rich in natural and cultural heritage to enhance ecological resilience, soil conservation, and species diversity. Prioritise the preservation and expansion of species-rich habitats like the internationally important Chiltern downland, ensuring environmentally and economically sustainable management practices.

Chilterns Countryside Stewardship statement of priorities



Pippestrelle, Credit: Stu Mclellan

The Hampshire Downs NCA (NCA130)

Overview

Note: This NCA covers a very small percentage of Berkshire, and the short following description is relevant to those areas of the county.

The Berkshire segment of the Hampshire Downs is delineated by a steep scarp face to the north, offering views of the Thames Basin. This landscape is characterised by rolling hills, large arable fields, and low hedgerows on thin chalk soils. Notably, a significant portion of the Hampshire downs falls within the North Wessex Downs National Landscape.

The chalk underlying the Berkshire part of the Hampshire Downs is a vital aquifer, necessitating groundwater protection measures and catchment-sensitive farming practices to mitigate pollution and soil erosion. See more information regarding the internationally important sites of the Hampshire Downs in Appendix 3.

Notable species

Barbestelle bat, bryophyte, juniper, lapwing, turtle dove and dormice are some species of note across the Hampshire Downs NCA.



Opportunities for Recovery

1. Preserve and enhance remaining biodiversity-rich lowland calcareous grassland areas to maintain their condition. Identify opportunities to rehabilitate degraded areas and expand the extent of this critical habitat. This will benefit pollinating insects, reduce surface runoff rates into watercourses, strengthen landscape character and help improve water quality and flood risk management.
2. Partner with landowners and agricultural communities to promote sustainable food and fodder production methods. Emphasise practices that preserve or improve landscape aesthetics, provide wildlife habitats, and minimise adverse impacts on ecosystems like water and soil.
3. Advocate for woodland management strategies, including wood pasture areas, that ensure the health of priority habitats and species. Maximise the ecological benefits of woodlands, such as carbon sequestration, water quality regulation, timber supply, recreational opportunities, and biomass potential.

Hampshire Downs Countryside Stewardship statement of priorities



Oak Tree © Stu Mclellan

River Catchments and Waterbodies

Berkshire is the only county with all its surface waters falling entirely within the catchment of the River Thames; just a small part of the downland in the south-west of the county drains south to the Test catchment but has no surface watercourses. The watercourses and freshwater catchments are integral to the biodiversity of Berkshire, forming key habitats and corridors for species movement.

Major tributaries joining the Thames as it flows through Berkshire include the Rivers Kennet, Pang, Loddon, Cut and Colne. Six separate CaBA (Catchment Based Approach) Catchment Partnerships exist within the county of Berkshire (see Figure 15), which use cross sector partnerships to deliver catchment-wide benefits to the water environment. These are the Kennet, South Chilterns, Loddon, Lower Thames (Maidenhead to Teddington), Wey, and Colne Catchment Partnerships.



Figure 15: Catchment Partnerships of Berkshire. (The Kennet, South Chilterns, Loddon, Maidenhead to Teddington, Wey and Colne).

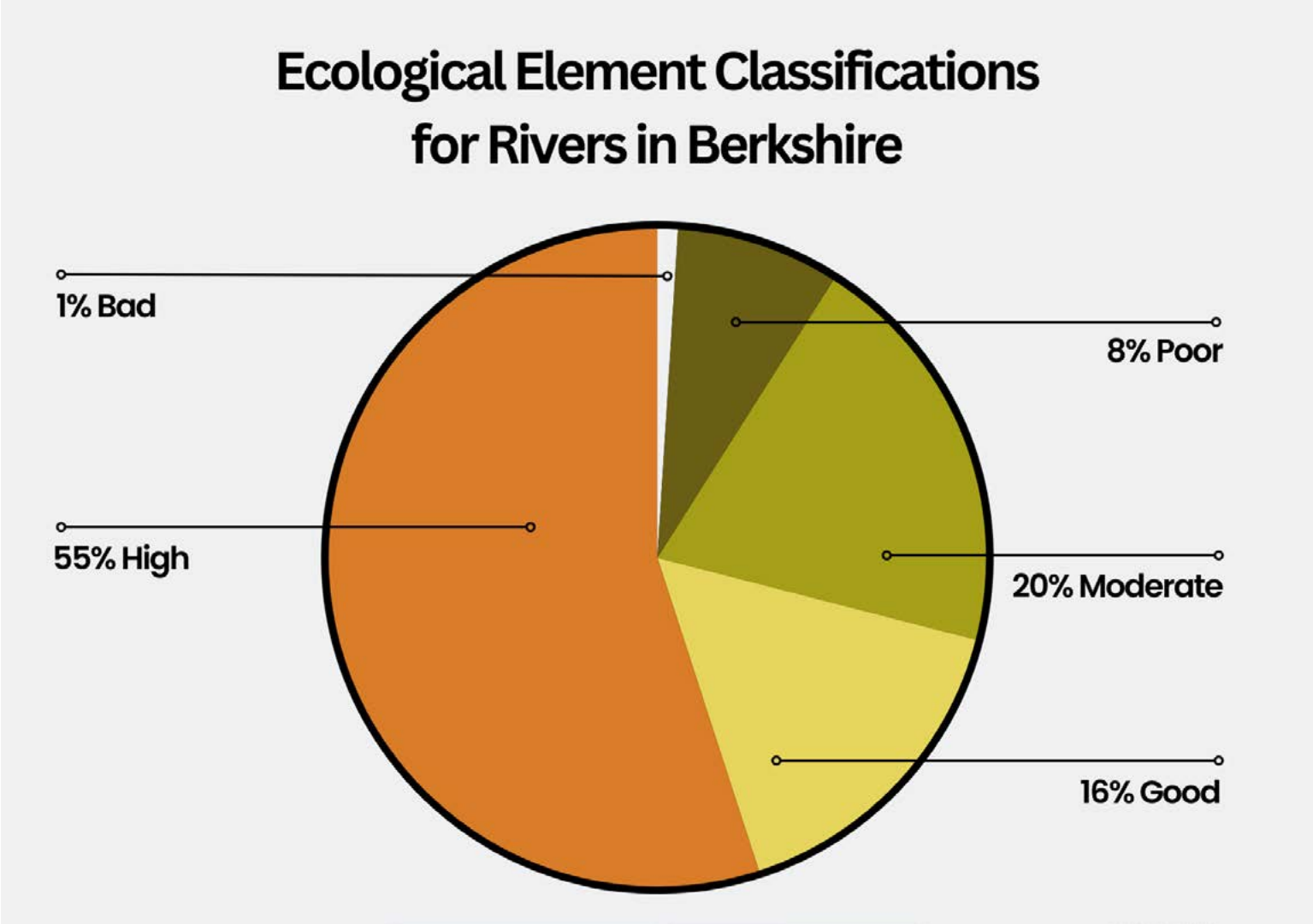
Rivers in Berkshire generally are of mixed status, with some fantastic areas for wildlife and some highly polluted courses. See Figures 16 and 17 below for more detail across Berkshire on ecological status, according to the Water Framework Directive (EU Water Framework Directive, 2024).

Berkshire is an extremely important county globally for chalk streams, containing 4% of chalk streams (Wilson, 2020). These include the Lambourn, also an SAC, the Kennet, the Pang and Loddon. Chalk streams are vital wildlife habitats for a variety of species, including water crowfoot, water vole and salmonid fish such as trout. Winterbournes, chalk streams that often partially dry up in the summer months, host rare specialist invertebrates such as the winterbourne stonefly. Headwater streams are also important habitats for freshwater biodiversity, providing critical spawning and juvenile habitats for other fish.

In response to the CaBA Chalk Stream Restoration Strategy, the Pang and Sulham Brook Catchment has been selected as one of 12 national Chalk Flagship Catchments by Thames Water (Action for the River Kennet (ARK), 2025). This aims to restore the chalk stream over the 10-year period from 2025-2035 and hosts an engaged and active group of partners from across the catchment to do so.

Standing waters in Berkshire are important for supporting landscape-wide freshwater biodiversity, including species found in chalk streams - a lot of freshwater species move freely between these habitat types (Freshwater Habitats Trust).

A more detailed description of the river catchments across Berkshire can be found in Appendix 2.

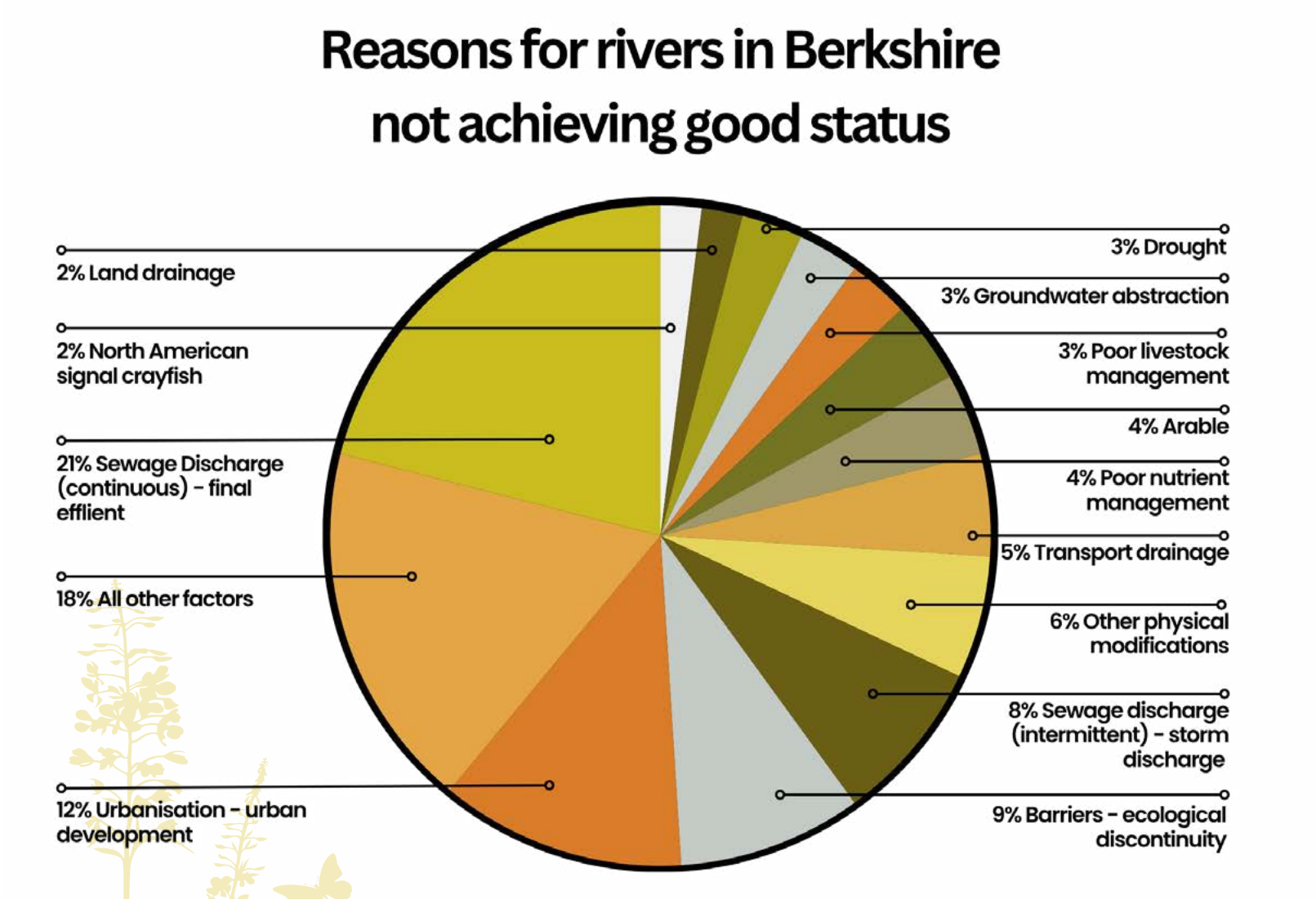


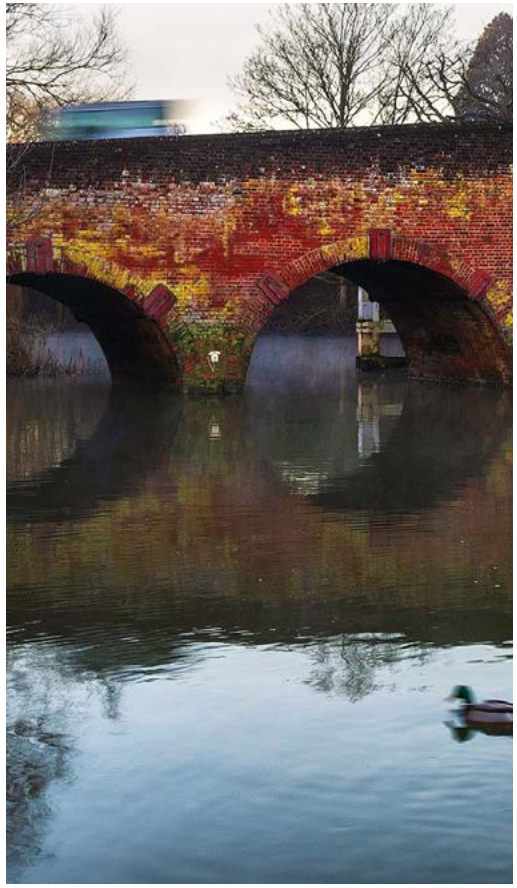


River Thames at Sonning © Hayley George

Figure 16: Percentage of ecological element classifications in each band for rivers in Berkshire. Elements measured include Phosphorus, Ammonium, Fish, Invertebrates and others.

'High' and 'Good' elements support healthier rivers, 'Bad' and 'Poor' will reduce the ecological classification. Source: Water Framework Directive.





Bridge over River Thames © Hayley George

Figure 17: All pressures contributing to Berkshire waterbodies not achieving "Good" ecological status. Top factors: continuous sewage discharge, urbanisation and intermittent sewage discharge. Source: Water Framework Directive.

Section 5
Opportunities across Berkshire as a whole

Present efforts for recovering nature in Berkshire

Increased environmental awareness: A more holistic approach to the general agricultural environment is generally being taken now, including restricting the use of pesticides, controlling the application of fertiliser and managing stock levels. There is an increasing awareness of needing to manage land for wildlife. Berkshire boasts numerous impassioned community environmental groups, such as Earley Environmental Group, Wild Maidenhead, and Binfield Environmental Group. Amongst the general population of Berkshire, concern relating to water pollution in the county's rivers and streams is common, and interest in this issue continues to grow.

Habitat Restoration: Efforts are underway to restore and reconnect fragmented habitats, such as small streams, creating wildlife corridors and enhancing ecosystem resilience. Previous initiatives, including the Berkshire Biodiversity Opportunity Areas, are useful starting points for this. Various community-led nature recovery corridors have been identified on maps, to highlight important potential wildlife recovery areas and implement projects on the ground. This information feeds into our Local Nature Recovery Strategy.

Species Recovery Programmes: Organisations such as Natural England, local wildlife trusts and conservation groups have been actively involved in habitat restoration, species monitoring, and conservation initiatives across Berkshire, with many notable successes. For example, after becoming locally extinct, red kites were successfully reintroduced into the Chilterns between 1989-1994 (Wotton, 2020). These birds were first known to breed in Berkshire in around 2000 and are now a flourishing species across the county (Righelato, 2022).



Red Kite © Nick Bell

Partnership Working: Partnership programmes are essential to effective nature recovery work, and a number are running in parallel with the Berkshire LNRS, such as the Big Chalk Programme, North Wessex Downs National Landscape Recovery Programme, the Colne Valley Regional Park and Biodiversity Action Plans for many of the unitary authorities of Berkshire.

The future opportunities for nature recovery across Berkshire

Adaptation Strategies: Future conservation efforts will need to focus on adapting to changing climatic conditions, such as implementing climate-smart land and water management practices and creating climate-resilient habitats. Increasing shade across the landscape will help combat extreme heat, improving livestock resilience, protecting people and safeguarding habitats that are vulnerable to temperature spikes, such as chalk streams. This will also be important for woodlands, which adjust slowly to changes, and will need help to build climate resilience.

Habitat creation: To create ecological networks that operate more naturally and effectively, the 2010 Lawton report called for some simple measures - more, bigger, better and joined-up sites within the landscape (Lawton, 2010). Creation and maintenance of wildlife sites across the county can follow these principles. It has been suggested that of particular focus for habitat creation in Berkshire are new, small freshwater habitats, such as ponds Freshwater Habitats Trust, 2024).

Community Involvement: Berkshire is lucky to have many strong community groups and individuals who are passionate about nature recovery in the county, and beyond. Growing engagement with local communities in nature recovery efforts through education, outreach, and citizen science initiatives will be crucial for promoting sustainable land use and water management practices and fostering stewardship of natural resources.

Policy Integration: Successfully integrating nature recovery into local planning policies will be essential for ensuring that future growth and infrastructure development are carried out in a manner that minimizes impacts on ecosystems and wildlife and enhances biodiversity. The 2021 Environment Act states that public bodies have a strengthened biodiversity duty to enhance as well as conserve biodiversity.

Opportunities for nature recovery across Berkshire as told by its residents

Stakeholder workshops with the community of Berkshire identified a range of visions for nature in Berkshire, shown in Figure 18 below. Many of these visions have been incorporated into the list of Priorities and Measures. See examples below.

Restoration of natural habitats, wetlands, and woodlands: Priority 2 plus 25 measures relate to woodland and Priority 9 plus 9 measures to wetland.

More protected areas and conservation projects: The LNRS cannot designate protected areas, but PM104 encourages 'refuge areas' for wildlife.

Integration of nature into urban areas: Priority 7 and its accompanying 5 measures relate to nature in urban areas.

Connected green corridors and wildlife corridors: Wildlife corridors were encouraged in the creation of the Local Habitat Map. See how here. Existing and proposed corridors put forward by community groups were considered for the map.

Native species protection: PM57, PM58 and PM113 relate to managing invasive species across a variety of habitat types.

Clean rivers and waterways, no sewage discharge: Priority 10 and its accompanying 9 measures relate to improving river ecological quality. The Local Habitat Map includes a mapped layer of the rivers, with a measure to restore them.

Community engagement in conservation and nature projects: This is an overall aim of our LNRS, by co-creation with the community and showcasing Berkshire based community groups. Potential community led nature projects are identified, mapped, and encouraged through the LNRS.

Sustainable farming practices and rewilding: Priority 1 relates to improving the quality of habitats in agricultural land and wider countryside.

Less massive fields, more hedgerows: PM01 aims to create and enhance hedgerows and is on the Local Habitat Map.



Common Frog © Natural England/Allan Drewitt

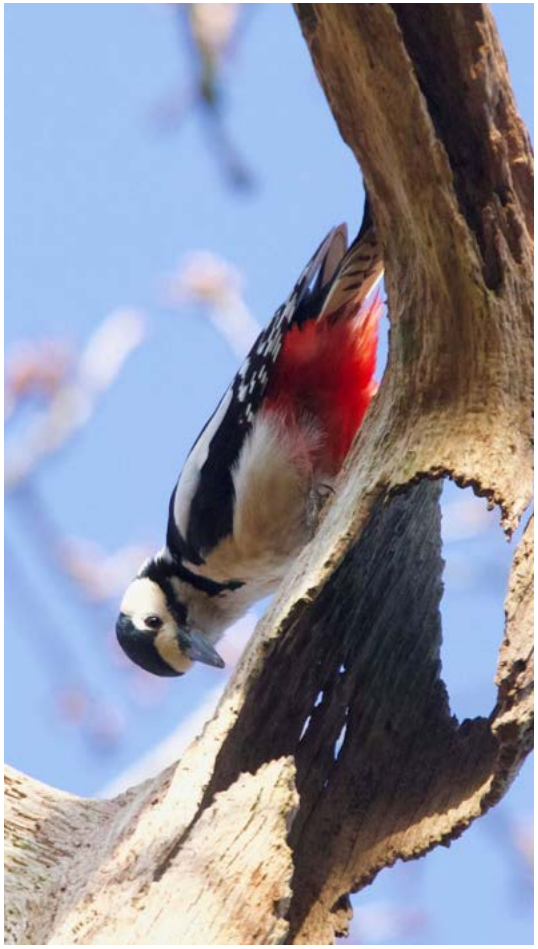


Natterers Hibernation © Chris Damant Pell Frischmann

What is your vision for the future of Berkshire?

Expanded Common Ideas	Number of Mentions
Restoration of natural habitats, wetlands, and woodlands	22
More protected areas and conservation projects	20
Integration of nature into urban areas (trees, green spaces, etc.)	18
Connected green corridors and wildlife corridors	18
Enhancement of biodiversity and native species protection	17
Clean rivers and waterways, no sewage discharge	16
Community engagement in conservation and nature projects	15
Sustainable farming practices and rewilding	15
Rewilding projects and less intervention in natural processes	14
Education about nature and environmental protection	14
Less development on greenfield sites, focus on brownfield sites	13
Water quality improvement and pollution control	12
Less litter, more bins, and anti-littering campaigns	12
Network of joined-up high-quality habitats	12
Green infrastructure in new developments (wildflower verges, green roofs)	11
Less massive fields, more hedgerows and plant/animal diversity	10
Restoration and natural management of rivers and floodplains	10
Encouraging local involvement and stewardship	10
Improved public transport and reduced car usage	9
Better waste management and pollution control	9
Support for farmers and land management practices	8
Reduction in pesticide and chemical use	8
Organic and nature-friendly farming	7
Control of non-native species and proper deer management	5

Figure 18: Communities' visions for the future of Berkshire Urban Wildlife Corridors



Great Spotted Woodpecker © Nick Bell

Urban Wildlife Corridors

During the engagement process undertaken as part of Berkshire's LNRS development, many local environmental groups provided information regarding urban wildlife corridors. These are planned or already existing pathways through urban areas that wildlife can travel through, including parks, hedges and footpaths. Urban areas are where the majority of people in Berkshire LNRS live, and consultation showed that green spaces in urban areas, and urban wildlife corridors, are incredibly important to many Berkshire residents. It was felt to be of importance to showcase these in the Berkshire LNRS, to reflect the county's active and engaged community of volunteers working hard in nature recovery. Though not specifically mapped as a layer in this version of the Local Habitat Map, many sections of these corridors are mapped as Opportunity areas, and these corridors can be seen in this description document. One case study, the Earley Green Corridor Network, created by the Earley Environmental Group, is given below. The remainder can be seen in Appendix 8.



Community engagement in wildlife corridors

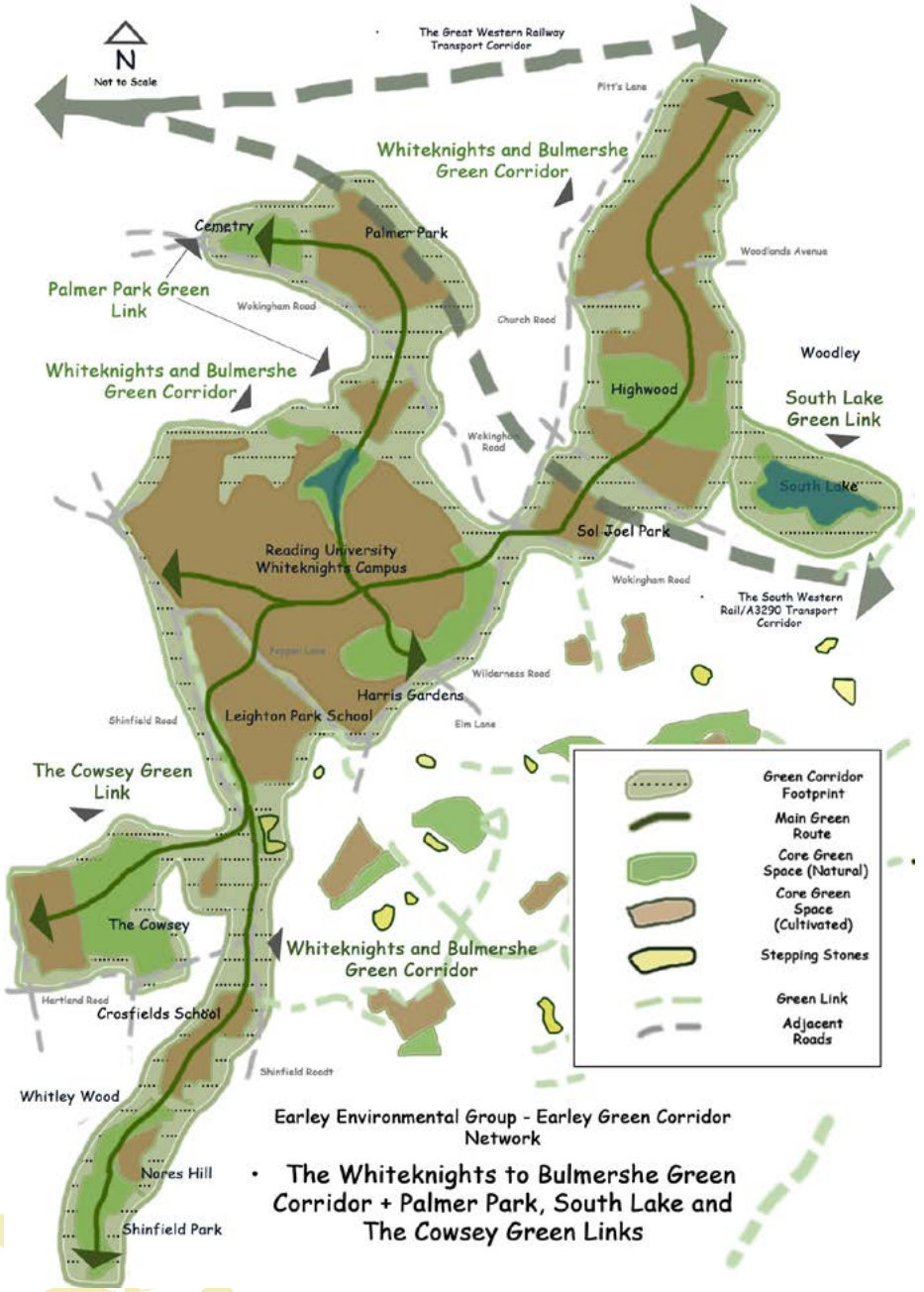


Figure 19: The Whiteknights and Bulmershe Green Corridor, designed by the Earley Environmental Group as part of the Earley Green Corridor Network. See Appendix 8 to view the other corridors of the network.

Appendix 1
Definitions of acronyms

Acronym	Definition	Explanation within context of Local Nature Recovery Strategy
ACB	Areas that could become of particular importance	The Opportunity Layer of the Local Habitat Map. Areas identified through the LNRS process as the best opportunities for nature recovery.
APIB	Areas of particular importance for biodiversity	The Baseline Layer of the Local Habitat Map. The places across Berkshire that are already great for wildlife – these are important to continue to protect. These include: National Conservation Sites (National Nature Reserves, Ramsar sites, Sites of Special Scientific Interest, Special Areas of Conservation, Special Protection Areas); Local Nature Reserves; Local Wildlife Sites and Areas of Irreplaceable Habitat (Ancient and Veteran Trees, Ancient Woodland, Lowland Fens).
AWE	Atomic Weapons Establishment	A UK Ministry of Defence research facility based in West Berkshire, responsible for the design, manufacture and support of warheads for the UK's nuclear weapons. Members of the Farmers and Landowners Working Group.
BAP	Biodiversity Action Plan	Studies undertaken normally at county or district level that assess the biodiversity of plants and animals in a particular area and then set out strategies for their future.
BASC	British Association for Shooting and Conservation	The UK's largest shooting organisation. Members of the Farmers and Landowners Working Group.
BBOWT	Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust	The Wildlife Trust for Berkshire, Buckinghamshire and Oxfordshire. The Wildlife Trusts are nature based charities operating across the UK. Members of the Steering Group and Data Prioritisation Group.
BCA	Berkshire College of Agriculture	A further education agricultural college in Maidenhead, Berkshire. Members of the Farmers and Landowners Working Group.
BNG	Biodiversity Net Gain	A way of creating and improving natural habitats. Legislation that ensures development has a measurably positive impact ('net gain' on biodiversity, compared to what where there before development).
CaBA	The Catchment Based Approach	A civil society-led initiative that works in partnership with Government, Local Authorities, Water Companies, businesses and more to maximise the natural value of the environment.
CLA	Country Land and Business Association	The membership organisation for owners of land, property and businesses in rural England and Wales.
CPRE	The Countryside Charity	A national organisation dedicated to promoting, enhancing and protecting the countryside. It is formerly known by names such as the Council for the Preservation of Rural England and the Campaign to Protect Rural England.
Defra	Department for Environment, Food and Rural Affairs	A ministerial department of the UK government. Responsible for environmental protection, food production and standards, agriculture, fisheries and rural communities. Defra brings together environmental responsibilities from the former Ministry of Fisheries and Food (MAFF) and the former Department of the Environment for the Regions.

	Description of Area and its Opportunities	This document. Defines the county of Berkshire in a natural context, sets out its history, current state of nature and future opportunities.
EA	Environment Agency	A non-ministerial governmental department responsible for flood management, waste management, regulating land and water pollution and conservation. Members of the Data Prioritisation Group.
FC	Forestry Commission	A non-ministerial governmental department responsible for the management of publicly owned forests and the regulation of both public and private forestry in England. Members of the Data Prioritisation Group.
LHM	Local Habitat Map	An interactive map for stakeholders to understand the areas which are, or which could become, of particular importance for biodiversity and the natural environment to target nature recovery action.
	List of (Biodiversity) Priorities and Measures	A written list and important element of an LNRS. Priorities are “the end results that the strategy is seeking to achieve” Potential measures are “specific practical actions to achieve" priorities. These are the suggested activities that, if done properly, would help to deliver the agreed priorities. The Berkshire List of Priorities and Measures is found on the main LNRS webpage.
LNP	Local Nature Partnership	Strategic partnerships that bring together local organisations, businesses and people who want to improve their local natural environment. The Berkshire Local Nature Partnership contributed to this document.
LNR	Local Nature Reserve	Areas designated under the National Parks and Access to the Countryside Act 1949 as being of particular importance to nature conservation, and where public understanding of nature conservation issues is encouraged. There are thirty-five such LNRs in Berkshire.
LNRS	Local Nature Recovery Strategy	A spatial strategy to identify locations to improve nature and other environmental benefits. An LNRS comprises of a Local Habitat Map, a Description of Area and its Opportunities and a List of Biodiversity Priorities.
	Marxan	A computer software tool designed to help users create cost-effective spatial plans that meet predefined conservation goals and targets while minimising constraints to achieve them. Marxan is aligned with the Systematic Conservation Planning Network. Marxan was used to aid in the creation of the Berkshire LNRS.
NCA	National Character Area	The NCAs represent 159 geographically unique areas of England, each of which is distinctive with a special ‘sense of place’. They are areas where a combination of factors such as topography, vegetation pattern, land use and cultural associations combine to create areas with a distinct, recognisable character. NCAs are used to distinguish areas of Berkshire in this strategy.
NE	Natural England	A non-departmental public body in the UK, sponsored by the Department for Environment, Food and Rural Affairs. A Supporting Authority for the Berkshire LNRS and members of all working groups.
NFU	National Farmers’ Union	A representation body for agriculture and horticulture in England and Wales. Members of the Steering Group and Farmers and Landowners Working Group.
NGO	Non-Governmental Organisation	A non-profit organisation that operates independently of any government, typically one of whose purpose is to address a social or political issue. Various NGOs were involved in the creation of the LNRS, including BBOWT, the National Trust, CPRE, and the Freshwater Habitats Trust.
NNR	National Nature Reserve	An area containing nationally significant wildlife or geological features, usually managed by Natural England. NNRs are also designated as Sites of Special Scientific Interest (SSSIs). The small part of Chobham Common that lies within Berkshire is designated as a National Nature Reserve.

NWD National Landscape	North Wessex Downs National Landscape	Much of western Berkshire is within the North Wessex Downs National Landscape. National Landscapes are areas of land designated under the National Parks and Access to the Countryside Act 1949, where the primary purpose is the conservation and enhancement of natural beauty, which includes protecting flora, fauna, geology and landscape features. Natural England is responsible for formally designated National Landscapes and advising on policies for their protection.
OS	Ordnance Survey	The national mapping agency for Great Britain.
	Parish and Town Plans	Comprehensive strategies prepared by local communities setting out a vision for how the community should develop in the future, identifying actions needed to tackle areas of concern and demonstrate how distinctive character and features can be preserved.
RA	Responsible Authority	The Local Authority for each LNRS area that leads on the preparation of the LNRS. In Berkshire this is the Royal Borough of Windsor and Maidenhead.
	Ramsar Sites	Areas of wetland, deemed internationally important for conservation purposes, defined by the Ramsar Convention (1971). They are designated by the Secretary of State for the Environment, Food and Rural Affairs. There is part of one designated RAMSAR site in Berkshire. This consists of two of a series of reservoirs known collectively as the South West London Waterbodies Ramsar. Ramsar sites are part of the LNRS APIB.
SA	Supporting Authority	All Local Planning Authorities, including National Park Authorities, in an LNRS region, that are not the Responsible Authority. Supporting Authorities have an important role to play in their LNRS: working closely with the Responsible Authority, provide local data and periodically review and agree draft of the LNRS. For Berkshire these are: Bracknell Forest Borough Council, Reading Borough Council, Slough Borough Council, West Berkshire District Council, Wokingham Borough Council and Natural England.
	Section 106 Agreement	Planning obligation on a party with an interest in land in order to achieve the implementation of relevant planning polices as authorised by section 106 of the Town and Country Planning Act 1990.
SAC	Special Area for Conservation	An SSSI additionally designated a Special Area of Conservation under the European Community's Habitats Directive 1992 (92/43/EEC), to maintain or restore priority natural habitats and wild species. Together with SPAs, SACs comprise the European Union's 'Natura 2000' network of habitats of pan European nature conservation importance. SACs are part of the LNRS APIB.
SCP	Systematic Conservation Planning	An approach for identifying and implementing the management of priority areas for conservation and restoration. SCP is a process of deriving a conservation area network for regions, which will represent the biodiversity of regions in the most cost-effective way. SCP was used in the Berkshire LNRS to create the Local Habitat Map.
SPA	Special Protection Area	An SSSI additionally designated a Special Protection Area under the European Community's Directive (79/409/EEC) on the Conservation of Wild Birds 1979. It provides protection for the eggs, nests and habitats of birds. SPAs are part of the LNRS APIB.
SSSI	Site of Special Scientific Interest	A formal conservation designation, usually describing an area of particular interest due to the rare species of fauna, flora or geological features it contains. SSSIs have high conservation value and are part of the LNRS APIB.
TVERC	Thames Valley Environmental Records Centre	Thames Valley Environmental Records Centre are the Local Records Centre for Berkshire and Oxfordshire. Local Records Centres are organisations which have been established, usually through a partnership of interested parties, in order to bring together local information on wildlife and to supply this to local users. TVERC was commissioned during the Berkshire LNRS create the Species Longlist, APIB and help develop the ACB and measures layer, along with inputs from stakeholders.

Figure 20: Definitions and explanations of acronyms used within the Local Nature Recovery Strategy

Appendix 2
Rivers

The River Thames

The main River Thames flows through Berkshire from below South Stoke (near Streatley) to Old Windsor, acting as the northern and north-eastern county boundary for much of this length. It is already a mature river at this point, having received flow from nine substantial tributaries. The Thames has a long history as a waterway and the navigable reaches have been important since before Roman times. As such, the Thames has undergone much modification in the past through widening and deepening to facilitate transport up and down the river, and through the construction of locks and weirs.

The Environment Agency is the navigation authority for the non-tidal River Thames between Cricklade and Teddington Lock and is responsible for maintaining the public right of navigation. River habitats are dominated by its heavily engineered nature and regulated levels to facilitate this. Banks are generally steep, and in places, impacted by boat wash. This has meant that the river generally lacks geomorphological features such as riffles and pools and gravel bars. Flow dependant habitats are restricted to weir streams, which contain valuable riffle features, and a few other side-channels. Pressures on bankside and marginal habitats, such as intensive land use for agriculture, gardens, public open space and housing, generally mean that a buffer zone of non-intensive land use is not present.

Despite passing through the town of Reading, the river is predominately rural in the county until it reaches Hurley. This upper section of the Thames derives its flow from water draining from the Cotswold Hills, the Vale of Oxford and the Berkshire Downs, entering the county through the Goring Gap with chalk hills on either side.

At Maidenhead, the River Thames crosses a narrow band of mottled, plastic clays and sands with bands of flint pebbles known as the Reading Beds. Below Maidenhead the river enters a wide, flat area which supports urban development. This region is part of the London Basin and the solid geology consists of London Clay, a dark blue or brown/grey clay with variable amounts of fine-grained sand and silt. The town of Windsor sits on a dome of chalk, which projects through the London Clay.

In between Maidenhead and Windsor is the Jubilee River, also known as the Maidenhead, Windsor and Eton Flood Alleviation Scheme (MWEFAS). The Jubilee River is a 12km artificial flood relief channel built by the Environment Agency and opened in 2002. It reduces the risk of flooding to over 3,000 properties by diverting water from the Thames upstream of Maidenhead, running parallel and north of the Thames, and re-joins the Thames downstream of Windsor. The lower section of the Jubilee River is within the county of Berkshire. Public access to most of the Jubilee River is encouraged with the provision of footpaths, cycleways and bridleways and is a well-used local amenity. Although most of the Jubilee River has a trapezoidal channel design, the overall landscape objective was to create a river of natural appearance, incorporating natural lowland river landscape features and habitats. Along both banks there are extensive areas of native tree and shrub planting with species rich grassland. Marginal and aquatic plants are present and most notably, a mosaic of wetland habitats, called the Dorney Wetlands, was incorporated into the design of the scheme, though this area is now in need of reinvigorating.

The River Thames remains an important resource for people, businesses and the economy. It provides drinking water for a large population, including much of Greater London. It is managed to protect people and property from flooding, for navigation, and because it is a world-famous attraction. Water quality in the River Thames has substantially improved since the 1950s although there are a number of large sewage treatment works and commercial and residential buildings that lie close to the river, and there has been a recent trend in deteriorating infrastructure and increased storming of untreated sewage during wetter periods.

Despite the intensive management, diverse fisheries are present throughout the River Thames and its backwaters, with bream, roach and perch dominating this section. This has been helped by the fact that there has been a longstanding, concerted effort to make the Thames passable to fish by installing fish and eel passes at the major weirs along the length of the Thames, work which is still ongoing.

The impounded nature of the Thames and the generally low flow velocities for most of the river (in dry weather, non-flood, conditions) provide suitable habitat for species which benefit from stable river levels, including nesting mute swans, coot and great crested grebe, with kingfisher breeding wherever there are suitable nesting cliffs on the bank. Sand martin also breed along the river sometimes using artificial drainage pipes to do so. Otters are now found along the whole of the Berkshire part of the Thames, although water vole until recently were lost from the Berkshire stretch of the river, with a recent re-introduction and American mink control in the Cookham/Maidenhead area providing some hope that they can recolonise more of the river.

However, in the last decade, there has been a rapid decline in the nesting population and range of great crested grebes and coots along the Thames, while the numbers of mute swans recorded in recent years by the annual Swan Upping exercise has been falling.

Kennet (Chalk stream)

The River Kennet from Marlborough to Woolhampton (42km) and the whole length of the River Lambourn (23km) are designated as SSSI's, noted for their high quality and diverse habitats. The River Lambourn is also designated a Special Area of Conservation (SAC) under the EU Habitats Directive for supporting populations of bullhead and brook lamprey, as well as having a water crowfoot and starwort vegetation community. These designations illustrate their importance in a national and international context. The river valley of the Kennet, particularly upstream of Newbury, is characterised by much low-intensity land-use with a range of woodland, scrub and fen/tall herb habitats forming a mosaic on large estates, including a number of sites which are included in the Kennet and Lambourn Floodplain SSSI/SAC (designated for the rare Desmoulin's Whorl Snail) and the Kennet valley Alderwoods SAC. Thatcham Reedbeds SSSI downstream of Newbury is the largest reedbed in the county and is fed by small tributaries which run to the Kennet on the south side of the site.

Despite this, the catchment has been extensively modified over the last few centuries for a variety of reasons including milling, water meadows, agriculture and land drainage, navigation, flood defence and urban development. Population increases both within and outside of the catchment have increased demand for water and the amount of treated effluent being discharged into the river. The Kennet and Avon Canal was re-opened in 1990 and its interaction with the river can impact upon water quality, notably in the River Dun (from overspills) and the River Kennet below Kintbury where the canal and Kennet first come together in one channel.

The Canal & River Trust (formerly British Waterways) has operated the Kennet & Avon Canal since its restoration and has statutory obligations as a navigation authority. The Trust has positively engaged with the Environment Agency, Natural England, and the local Catchment Partnership Group (Action for River Kennet) to mitigate the effects of the canal on the chalk streams, which are integrally connected. This includes substantial works to construct by-pass channels at canal locks, installing weir boards, managing boat numbers and mooring locations, installing fish passes, preferentially using soft bank repairs, and annually reviewing their River Kennet SSSI Action Plan to identify additional enhancements. However, the Trust is also required to balance conservation and water quality requirements against navigation and flood demands, which means the canal can temporarily impact the chalk streams at certain times.

The value of the canal for wildlife is determined by several factors, particularly water quality, boat traffic, and bank and channel structure. The richest biodiversity is generally found where water quality is high, boat traffic is low, and where banks and channels are natural rather than highly modified structures with hard, steel sheet piled, or wholly concrete, banks.

Natural and engineered soft banks support a rich abundance of aquatic plants, providing habitat for many species of invertebrates and fish, and, in turn, animals higher up the food chain, such as otters and kingfishers. Some areas hold important populations of scarce plants, insects and molluscs. In the margins there are more plants that provide shelter, and dragonflies, water beetles, water bugs and snails can be found here. Generally, the more species-rich and abundant the vegetation, the richer the community of invertebrates. The canal supports

populations of fish, dominated by coarse fish such as carp, perch and roach and rarer species like eel and bullhead. The ecological importance of the canal developed over the years benefitting from the decline and eventual abandonment of the canal as a commercial waterway. Today's ecological inheritance is significant for a variety of reasons.

The canal includes 87 miles of lowland mildly eutrophic slow-flowing water crossing the water-deficient chalklands of central Wiltshire and Berkshire. It crosses five National Character Areas and interconnects with the River Kennet and River Avon. Throughout most of its length the canal has good water quality although it can occasionally suffer from natural problems associated with its slow-flowing nature. It supports a diversity of habitats and vegetation types across the channel profile and along the length. Several of the habitats are virtually continuous for its entire length.

The Kennet and Avon Canal provides a wildlife corridor through urban and intensively managed agricultural land. Varying adjacent land use influences the canal's ecological diversity and in turn the canal supports species and habitats important to the local area. In the Kennet Valley, parcels of wetland and water meadow have survived undrained, isolated between the canal, river, and railway.

Surveys have demonstrated that the canal is species rich, with 546 species of higher plants, 103 bird species and 19 Odonata (dragonflies and damselflies) species recorded within the canal corridor. Many waterside habitats have become fragmented or have vanished from the countryside entirely, making waterways especially valuable habitats and much needed corridors for wildlife. For some species, our waterways are among their last remaining strongholds, and, for many others, they provide vital resources now scarce in the wider countryside. With the variety of waterway habitats along the canal, work is needed to maintain and enhance their biodiversity value, while at the same time ensuring that the canal and towpath can be enjoyed safely.

The Kennet has been subject to a concerted programme of river restoration, particularly the SSSI reaches, involving Environment Agency, Natural England, Action for the River Kennet (ARK) and private landowners, and many reaches have been restored to a much more natural and functional river habitat.

The Kennet and parts of the Kennet and Avon Canal are a stronghold for water vole in the county, and otters are active throughout the catchment. The Kennet has a rich diversity of aquatic invertebrates, and parts of the floodplain with their diversity of fen, scrub and woodland are important for sedge, reed and Cetti's warbler, with some areas still supporting nightingale including a significant population around the restored gravel pits in the lower part of the catchment. These gravel pit complexes also support significant numbers of breeding and wintering waterfowl.

A number of non-native species are present within the catchment, one of the most ecologically damaging of these being the American signal crayfish (*Pacifastacus leniusculus*) which exist in high numbers throughout the catchment. Floating pennywort has, until recently, also been a common sight in parts of the catchment, namely the Foudry Brook and in the lower reaches of the River Kennet as it flows through Reading. Partnership working to remove this has been very successful in recent years and the amount of floating pennywort present has significantly reduced.

The River Kennet provides an important resource for anglers. Estate trout fisheries (rainbow and brown trout) dominate in the middle reaches, and between Newbury and Reading the river supports good coarse fish populations including chub, dace, roach and barbel.

Enborne (Chalk Stream)

The River Enborne rises from chalk springs near the village of West Woodhay in the Berkshire Downs and flows west for approximately 20km, before heading northeast to join the River Kennet at the Old Mill in Aldermaston. Although it rises on chalk, the river soon flows over clays and much of the catchment is underlain by impermeable clay strata, with smaller tributaries running over clays and sands.

The Enborne is typically a narrow, meandering river, with fairly heavy shading resulting from high, steep banks and lines of bankside trees. It is less than 5m deep throughout and generally has a fast flow with good pool-riffle sequences over clean gravels. Further downstream, the river has been over-widened, and flow is slack. Unlike the main River Kennet, the Enborne is more "flashy" in character, responding quickly to heavy rainfall and subsequent surface water run-off within the catchment.

Lambourn (Chalk Stream)

The River Lambourn is a tributary of the River Kennet, flowing for 23km from its source at Lynch Wood, north of Lambourn, to its confluence with the River Kennet east of Newbury. As noted above, it is designated a SSSI and SAC and is a prime example of a lowland chalk stream. The catchment of the river is almost entirely chalk which results in a predominantly gravelly riverbed. The springs feeding the head of the river disappear in the drier parts of the year and generally flow during late autumn, winter and spring, giving the upper reaches a classic winterbourne character. The Lambourn is very little impacted by groundwater abstraction.

Substantially less modified than the Kennet, the Lambourn does however still have several mills with subsidiary channels. There are also some features which relate to the former use of parts of the floodplain for water meadows. There are still one or two locations where existing structures cause impoundments and are barriers to fish migration, although many restoration and fish pass projects have been completed on the Lambourn, and most barriers to fish passage have now been addressed. The Lambourn receives storm water runoff directly from the M4 motorway, which brings the risk of highly toxic pollutants including heavy metals and other toxic pollutants.

The river has good native brown trout and grayling populations, with limited introductions of reared trout, and is a historically important chalk stream trout fishery. Minor species such as brook lamprey and bullhead are also widespread. The main recreational activity related to the use of the river is fishing. A large part of the river and river corridor is under private ownership and therefore access and recreation for the general public is limited. As with the Kennet, many high-quality nature conservation sites are found in the river valley, including component sites of the Kennet and Lambourn Floodplain SSSI/SAC. In March 2022, Natural England advised that because the River Lambourn SAC is still not meeting its long-term nutrient targets, that plans or projects within the catchment that may give rise to additional nutrients will need to demonstrate nutrient neutrality.

Sulham Brook (Chalk Stream)

The Sulham Brook rises to the north of Theale (at times of maximum flow) and flows through Sulham to its confluence with the Thames to the east of Pangbourne.

It generally supports rich channel and marginal plant communities of mainly emergent species. It has generally been deepened and some of it has been straightened, partially as a result of the construction of the M4. As a result there is little diversity of in-channel features. The substrate is flint gravel in some places with silt dominating on many modified reaches. Most of the important adjacent habitats are woodland sites.

Sulham and Tidmarsh Woods and Meadows SSSI lies between the lower Pang and Sulham Brook and consists of a mosaic of damp copses and seasonally flooded meadows with a varied flora and rich invertebrate fauna. Berkshire, Buckinghamshire and Oxfordshire Wildlife Trust (BBOWT) manages Moor Copse which forms a significant portion of Sulham and Tidmarsh Woods and Meadows SSSI.

The Sulham Brook contains modest numbers of coarse fish but these numbers fluctuate according to flows in the River Thames. There have been some small scale habitat enhancement works in recent years.

In response to the CaBA Chalk Stream Restoration Strategy, the Pang and Sulham Brook Catchment has been selected as one of 12 national Chalk Flagship Catchments. This aims to restore the chalk stream over the 10 year period from 2025-2035 and hosts an engaged and active group of partners from across the catchment to do so.

Pang (Chalk Stream)

The River Pang is a rural chalk stream that rises to the north of Hampstead Norreys and joins the River Thames at Pangbourne. The source of the Pang is a winterbourne and moves seasonally up or downstream depending on water table levels. A few tributaries flow into the Pang between Bucklebury and Tidmarsh, the largest of which is the River Bourne. From its source to its confluence the Pang is approximately 23km long and drains a catchment area of 183km^2. The River Pang flows mostly through agricultural areas. The town of Reading lies to the east of the catchment and Newbury lies to the south west.

Fed by chalk streams, the Pang is one of the least polluted rivers in the Thames area and contains a naturally high biological diversity. There are six Sites of Special Scientific Interest (SSSIs) in the catchment, the largest of which is Sulham and Tidmarsh Woods and Meadows towards the lower end of the catchment. The rural nature of the catchment means that sewage disposal is mainly dealt with in small localised systems. However, there are six sewage treatment works on the Pang discharging into the river and citizen science data suggests that phosphate levels are elevated.

The River Pang has been quite heavily modified in places and a number of reaches have been straightened and raised above adjacent land level to provide a head of water for flood meadows and mills. Where the channel is more natural, there are well developed riffle and pool sequences. However, even where the channel has a more natural, meandering course, it has often been historically deepened to facilitate agricultural improvement. The river is rich in emergent vegetation and the river corridor supports a range of habitats but intensive land management often detracts from the potential of bankside habitats and causes problems of excessive siltation of river gravels. There have been several habitat enhancement schemes and fish pass projects on the Pang but there remains much to be done to address poor habitat as a result of historic engineering, and to overcome barriers to fish passage and improve connectivity.

Low river flows in the past have led to a substantial variation in the fish populations of the upper reaches. Previous abstraction pressures arising from the groundwater source at Compton was addressed through voluntary cessation of use followed by the licence being revoked in 2011 , and currently it is not considered that the flow regime on the Pang is compromised by abstraction for water supply. Downstream of Stanford Dingley there are moderate to good populations of wild brown trout and grayling, and coarse fish populations are present in the lower reaches. Besides fishing, recreational use of the Pang is mainly in the form of informal bankside use and it is a valued area for walking and informal leisure. Despite there being no statutory rights of navigation, some stretches of the river are used by small craft, primarily canoes.

Water voles are currently absent or only present as a very remnant population; otter are now active throughout much of the river, although it isn't large enough on its own to support more than part of one or two territories.

Slough tributaries

There are a number of watercourses in and around Slough. These include: the Boveney Ditch, Chalvey Ditch, Salt Hill Stream, Myrke Ditch and Datchet Common Brook. Many of these watercourses are small and heavily modified with substantial lengths which are culverted. Consequently, these watercourses are in a generally poor condition in terms of their ecological potential, although some small-scale enhancement schemes have taken place. Slough is a densely built-up area and the effects of urbanisation on the watercourses can be seen through littering, fly tipping, road runoff and suspected misconnections.

Within the catchment of the Chalvey Ditch, Salt Hill Stream and Datchet Common Brook, there are over 1,800 properties at risk of fluvial flooding and an additional 1,000 properties at risk of surface water flooding. The Environment Agency, Slough Borough Council and Wetlands and Wildfowl Trust are working together, in a scheme named Project Sponge, to investigate the potential options to reduce flooding, both from river and surface water, in these areas. This is an opportunity for enhancement and restoration of the Slough tributaries.

Loddon and tributaries

The River Loddon rises from chalk fed springs in Basingstoke (Hampshire) and flows north-easterly over chalk and clay before reaching the River Thames just west of Wargrave. The upper reaches of the Loddon and associated tributaries flow through Hampshire and cross the county boundary into Berkshire south-west of Swallowfield. The lower reaches of the Loddon within Berkshire lie almost entirely on clay bedrock, and it joins the Thames east (downstream) of Reading.

A tributary of the Loddon, the Emm Brook, flows through the town of Wokingham, and the lower reaches of the Blackwater, one of the main tributaries of the Loddon, also flows through the county of Berkshire east of Swallowfield after forming the county boundary further upstream in the Eversley area. Continued development and its associated infrastructure still represent a significant pressure on the catchment, including subsequent increases in demand on water supplies and wastewater treatment works, as well as the impact on water quality from urban run-off. Many of the rivers in this catchment have been modified in some way, including channel straightening, bank reprofiling and installing in-stream structures. These activities, for flood prevention, drainage and milling purposes, have led to the loss of habitat diversity and the impediment of fish migration.

Despite this, a diverse range of habitats in the Loddon catchment support a variety of species. The Blackwater in particular was subject to extensive gravel extraction, which now form a range of lakes, woodlands and semi-improved grassland, with the Eversley area on the Berkshire border now being of notable interest for wildfowl. Significant species include nationally restricted Loddon Pondweed, which is also found in the River Thames downstream of the confluence. The otter, which have been slowly making a comeback in the Thames catchment over the last 25 years, have been slow to recolonize the Loddon catchment for unknown reasons, and the water vole is currently considered absent from at least the Berkshire part of the catchment. The River Loddon and its major tributaries support generally healthy populations of coarse and game fish. Downstream the river is noted for barbel but other species include roach, dace, gudgeon, perch and pike. The last records for the native white-clawed crayfish on the River Loddon were prior to 1999, except for a single specimen found in the Barkham Brook in 2020. Non-native invasive species in the catchment, some of which are widespread, include Himalayan balsam, American mink and signal crayfish.

There are a number of wildlife-rich sites along the river including Loddon Nature Reserve and Dinton Pastures Country Park. A stretch of the Loddon near Stanford End Mill, together with the adjacent hay meadows, has been designated as a Site of Special Scientific (South East River Trust, n.d.).

Colne

The lower Colne Valley is a large delta: the river starts dividing just upstream of Berkshire to form ultimately eight distributaries of the Colne that feed into the Thames. The main channel of the Colne in Berkshire is the Colne Brook which leaves the Colne upstream of the county (at Uxbridge) and flows through (the aptly-named) village of Colnbrook, then Horton and Wraysbury before joining the Thames at Hythe End. Other Colne Branches are the Poyle Channel that takes water from the Wraysbury River into the Colne Brook and the County Ditch, a historic branch of the Colne Brook, that runs through the village of Poyle. The Horton Brook and other small streams through Horton and Wraysbury have been widely altered by 20th century gravel extraction and reservoir construction but still retain much of their historic courses in places.

In between this complex network of watercourses sit a complex network of reservoirs and former and current gravel pits which are important for waterbirds and many of which are designated as SSSI's and SPA. This area in Berkshire forms the South West quadrant of the Colne Valley Regional Park: the wider area of the lower Colne is "a vast cone of blue on the map" (Mabey, 1973).

This area, sitting as it does immediately adjacent to London, faces many threats. The biggest threat to the value of this important wildlife area and wider ecological connectivity between the Thames and the Chilterns is proposed expansion of Heathrow Airport. These proposals have included a new runway, which will culvert four rivers under concrete for up to 2km and divert a fifth through a landfill site disconnecting it from groundwater.

The Cut and tributaries

The Cut consists of one main channel and three smaller tributaries: Bull Brook, Chawbridge Bourne and Heywood Stream. The Cut rises north of Bracknell and flows West until it changes course and turns North near Binfield and eventually flows into the Thames at Bray.

Historically, the upper reaches of The Cut were part of a stream that joined the Loddon at Twyford. In the Middle Ages, a new cut (hence the name) was made south of Paley Street to connect with the Thames. The old channel was blocked off. As a result of this, the upper reaches are characteristic of a natural, meandering stream and the lower reaches consist of straightened sections with a more uniform profile, although this part of the stream has become more naturalised over time.

The tributaries of The Cut are generally narrow and shallow clay streams that have been modified by dredging and straightening. In places, they still exhibit characteristics of semi-natural streams with some natural features present, such as riffles.

The Cut and its tributaries predominantly flow through agricultural land, although there are a number of expanding towns nearby, such as Bracknell and Maidenhead. Where the river flows past more urban areas bank reinforcement is common and low stone or concrete weirs are frequent throughout the catchment. Silt is a problem in more sluggish flows, especially where weirs are holding up the natural flow. In the upper reaches the channels are prone to drying up, particularly on the Chawridge Bourne. Sewage pollution and road runoff, as well as the presence of invasive himalayan balsam, are also issues.

As a result of the historic dredging the bank profiles are generally uniform. Aquatic vegetation is not widespread and this is possibly due to nutrient rich waters from sewage works and storm drains, as well as shading of the channel by bankside trees. Stands of emergent plants frequently occur at the channel edge and within the channel itself but are limited in places by shading. Areas of woodland, some of which have been designated as ancient woodlands, can be found adjacent to the river and these are important semi-natural habitats.

Other tributaries - Roundmoor Ditch, Boveney Ditch and Bisham Brook

The Roundmoor Ditch is a chalk-fed stream that rises in Taplow and flows southeast, under the Jubilee River, to Dorney Common. It is joined by the Cress Brook and continues as the Boveney Ditch, until it joins with the River Thames. The outfall from Slough sewage treatment works discharges into the Roundmoor Ditch and this makes up a significant proportion of the flow.

The Bisham Brook, a c.12km long watercourse running west to east through Hurley and Bisham, is fed from two offtakes from the River Thames, one of which has been in place since the mid-19th century. Originally this would have been a groundwater-fed stream running through Thames gravels, but the flow is now dominated by flow from the Thames. The channel has been highly modified over time with limited flow-dependent (gravel-bedded sections of the watercourse), but it does provide a refuge for fish from the main Thames under higher flows at the bottom reach.

Appendix 3
Internationally important sites within each of Berkshire's NCAs

The Berkshire and Marlborough Downs NCA (NCA116)

Area of Berkshire within Berkshire and Marlborough Downs NCA	324km²
% of Berkshire within the NCA	26%
% of NCA within Berkshire	29%
% of NCA within Berkshire that is APIB	5%
% of NCA within Berkshire that is proposed ACB	32%



Red Kite © Stu Mclellan

SSSIs within Berkshire and Marlborough Downs NCA	
Ashridge Wood SSSI	Easton Farm Meadow SSSI
Croker's Hole SSSI	Freeman's Marsh SSSI
Fognam Chalk Quarry SSSI	White Shute SSSI
Winterbourne Chalk Pit SSSI	River Kennet SSSI
Seven Barrows SSSI	Boxford Water Meadows SSSI
Parkfarm Down SSSI	Chilton Foliat Meadows SSSI
Streatley Warren SSSI	Kennet and Lambourn Floodplain SSSI
Cleeve Hill - 1004082 SSSI	Kennet Valley Alderwoods SSSI
Boxford Chalk Pit SSSI	River Lambourn SSSI
Westfield Farm Chalk Bank SSSI	

SACs within Berkshire and Marlborough Downs NCA
Kennet & Lambourn Floodplain
Kennet Valley Alderwoods
River Lambourn

The Thames Valley NCA (NCA115)

Area of Berkshire within Thames Valley	366km²
% of Berkshire within the NCA	29%
% of NCA within Berkshire	43%
% of NCA within Berkshire that is APIB	14%
% of NCA within Berkshire that is proposed ACB	17%

SSSIs within Thames Valley NCA:
Bray Pennyroyal Field SSSI
Chawridge Bourne SSSI
Great Thrift Wood SSSI
Lodge Wood & Sandford Mill SSSI
Bray Meadows SSSI
Wykery Copse SSSI
Staines Moor SSSI
Windsor Forest and Great Park SSSI
Wraysbury & Hythe End Gravel Pits SSSI
Pincent's Kiln SSSI
Englemere Pond SSSI
Wraysbury No. 1 Gravel Pit SSSI

SPAs within Thames Valley NCA:
South West London Waterbodies (x2)

SACs within Thames Valley NCA:
Windsor Forest & Great Park (x24)

RAMSAR sites within Thames Valley NCA:
South West London Waterbodies



Puffball mushroom © Stu Mclellan

The Thames Basin heaths NCA (NCA129)

Area of Berkshire within the Thames Basin Heaths	454km²
% of Berkshire within the NCA	36%
% of NCA within Berkshire	43%
% of NCA within Berkshire that is APIB	18%
% of NCA within Berkshire that is proposed ACB	32%

SSSIs within Thames Basin Heaths NCA:	
Wasing Wood Ponds SSSI	Old Copse, Beenham SSSI
Blackwater Valley SSSI	Broadmoor to Bagshot Woods and Heaths SSSI
Briff Lane Meadows SSSI	West's Meadow, Aldermaston SSSI
Catmore and Winterly Copses SSSI	Brimpton Pit SSSI
Bowdown and Chamberhouse Woods SSSI	Avery's Pightle SSSI
Decoy Pit, Pools & Woods SSSI	Snelsmore Common SSSI
Sulham and Tidmarsh Woods and Meadows SSSI	Wellington College Bog SSSI
Hamstead Marshall Pit SSSI	Greenham and Crookham Commons SSSI
Stanford End Mill and River Loddon SSSI	Inkpen and Walbury Hills SSSI
King's Copse SSSI	River Kennet SSSI
West Woodhay Down SSSI	Kennet and Lambourn Floodplain SSSI
Inkpen Crocus Fields SSSI	Kennet Valley Alderwoods SSSI
Irish Hill Copse SSSI	River Lambourn SSSI
Cold Ash Quarry SSSI	Thatcham Reed Beds SSSI
Enborne Copse SSSI	Chobham Common SSSI
Woolhampton Reed Bed SSSI	Inkpen Common SSSI
Coombe Wood, Frilsham SSSI	Redhill Wood SSSI
Longmoor Bog SSSI	Englemere Pond SSSI
Heath Lake SSSI	Aldermaston Gravel Pits SSSI
Sandhurst to Owlsmoor Bogs and Heaths SSSI	Swinley Park and Brick Pits SSSI

SPAs within Thames Basin Heaths NCA:
Thames Basin Heaths (x6)

SACs within Thames Basin Heaths NCA:
Kennet & Lambourn Floodplain
Kennet Valley Alderwoods (x8)
River Lambourn
Thursley, Ash, Pirbright & Chobham (x2)



Kingfisher © Stu Mclellan

The Chilterns NCA (NCA110)

Area of Berkshire within the Chilterns	112km²
% of Berkshire within the NCA	9%
% of NCA within Berkshire	7%
% of NCA within Berkshire that is APIB	13%
% of NCA within Berkshire that is proposed ACB	31%

SSSIs within Chilterns NCA:
Cannoncourt Farm Pit SSSI
Cock Marsh SSSI
Sulham and Tidmarsh Woods and Meadows SSSI
Holies Down SSSI
Hartslock SSSI
Lardon Chase SSSI
Bisham Woods SSSI

SACs within Chilterns NCA:
Hartslock Wood
Chilterns Beechwoods



Pippestrelle © Stu Mclellan

The Hampshire Downs NCA (NCA130)

Area of Berkshire within the Hampshire Downs	8km²
% of Berkshire within the NCA	1%
% of NCA within Berkshire	1%
% of NCA within Berkshire that is APIB	23%
% of NCA within Berkshire that is proposed ACB	62%

SSSIs within Hampshire Downs NCA:
Combe Wood and Linkenholt Hanging SSSI
Hog's Hole SSSI
Inkpen and Walbury Hills SSSI

More information on management requirement for SSSIs.



Oak Tree © Stu Mclellan

Appendix 4
Detail of the Berkshire Local Nature Recovery Strategy Engagement Process

Part 1 – Initial Awareness, interest and engagement

Website

A website was created, using the Royal Borough of Windsor and Maidenhead community engagement website platform. See here: Berkshire's Local Nature Recovery Strategy | RBWM Together. During strategy development, the website contained information on the Supporting Authorities, stakeholder workshop outputs, important updates on the process, key dates, contacts, an interactive online mapping tool, links to watch webinar recordings, FAQs, the species longlist, the newsletter signup link and media features of the Berkshire LNRS.

Introductory Webinars (September 2023)

Stakeholders across Berkshire were identified by the RA and SAs. Using this list, a series of bespoke Introductory Webinars were designed and run. These were for the following stakeholder groups:

Developers, Businesses, Public Bodies, Councillors, NGOs, Interested Residents, Farmers, Foresters, Landowners and Land managers

The Introductory webinars were well attended and recorded. Recordings were added to the website for those who couldn't attend to learn about the Berkshire LNRS. Each webinar had an introduction to the LNRS process, the aims of the strategy, the steps to completing it, how the strategy could benefit the target stakeholder group, and time for questions.

To ensure an inclusive, bottom-up approach to the creation of the Berkshire LNRS, working groups were established to represent diverse ranges of views from the county. The structure and representatives of each are described in Figure 4 (Section 1), and the roles of each detailed group in Figure 21 (below).

For use at the introductory webinars, a short inspiring film about the Berkshire LNRS was created. This was also added to the website and can be viewed here: LNRS 2023 18 October 2023 - 4K on Vimeo

Composition of Steering Group and Working Groups

The Berkshire LNRS steering group and its working groups were comprised of individuals from a range of sectors that are connected to the natural environment in Berkshire, with members bringing a diverse skill set and knowledge base to the LNRS development process. A variety of individuals were chosen according to their expertise, their geographical area of interest within Berkshire and the sector they represented. This approach ensured that the groups were multi-disciplinary in composition and each member offered a fresh and critical thinking to discussions. Through a process of consensus building, these diverse memberships helped the groups to reach balanced and equitable decision-making. Members were recruited from across Berkshire and broadly from large and small organisations in the public, private and third sectors, and representing a range of interests including agriculture, conservation, business and local and national government.

Engaging the local community in nature recovery action is incredibly important to help drive nature recovery in the future. This 'grass roots' approach is a core pillar of Local Nature Recovery Strategies, with regulations requiring Responsible Authorities to reach far and wide in their engagement activities. From the outset, the Berkshire LNRS development

process has sought to enrol local community groups with links to the natural environment into the decision-making process by recruiting them to be part of the technical working groups. Whilst typically not affiliated to a larger organisation, these groups contain considerable skills and expertise and, importantly, have a passion for pursuing nature recovery which aligns with the goals of Local Nature Recovery Strategies.

Opportunities to participate in the LNRS working groups were widely advertised on public platforms on numerous occasions and across different media. These included LNRS email newsletters, public noticeboards, surveys, and residents' newsletters. SAs were specifically invited to participate in the Stakeholder Engagement Working Group, Mapping and Data Working Group, and Data Prioritisation Working Group. RBWM is the Responsible Authority for the Berkshire LNRS and hence had representation in all working groups. As can be seen in Figure 4 Section 1, SAs had representation across most working groups. Where not every SA was represented, a key SA partner was appointed as a lead to feed back to other RAs on any key information.

Group	Role	Membership	Key Stages of involvement
Steering Group	To provide high level steer on the Berkshire Local Nature Recovery Strategy	Wokingham ecologist, NFU, Senior officer West Berkshire, NE, EA, FC, The Crown Estate, University of Reading, RBWM Lead Member for Climate and Sustainability, BBOWT, LNP, Englefield Estate	Entire process
Berkshire Local Authorities Ecologists Group	To be a first port of call in each. Supporting Authority of Berkshire. To provide ecological advice for each Borough with regards to the LNRS	Bracknell Forest Borough Council, Reading Borough Council, Royal Borough of Windsor & Maidenhead, Slough Borough Council, West Berkshire District Council and Wokingham Borough Council	Entire process
Stakeholder Engagement working group	To support development of, advise and review the stakeholder engagement plan and stakeholder engagement delivery	BBOWT, RBWM Engagement Manager, West Berks and RBWM Councillors, TVERC, Thames Catchment Partnership, FC, Community groups (Earley Environmental Group), RBWM Equalities and Community Engagement Officer, CPRE Communications Officer	Stakeholder initial engagement, main engagement workshops
Farmer and Landowner engagement working group	To provide expertise and advice so that Berkshire farmers and landowners engage with the LNRS as widely and successfully as possible	East Berks Agricultural Society, NFU, The Crown Estate, BCA, AWE, CLA, CPRE, National Trust, Farmer Cluster manager, BASC, BioCap, NE	Initial engagement, main engagement period
Mapping and data working group	To advise on creation of the Baseline Map. This includes providing advice on licencing, data for strategy description, assisting with the prioritisation process, liaising with neighbouring counties and the presentation of data.	Planning policy officers for Bracknell, Reading, Slough, Wokingham, West Berks and RBWM, BBOWT, TVERC, GIS officers for RBWM and West Berkshire, NWD	Creation Areas of Particular importance map

Data prioritisation working group	To create and edit the List of Priorities and Measures, with input from stakeholders. To refine/transform conservation features (data sets) and targets (priorities), to input into Marxan, that will create the Berkshire LNRS Opportunity Map	Planning policy officers; BBOWT; SA officers for: Bracknell, Wokingham, West Berkshire; TVERC; SCP consultant; NWD; NE; FC; EA; community groups: (Wokingham Veteran Tree Society, Binfield Environmental Group, Berkshire Ornithological Club, Earley Environmental Group); University of Reading; Imperial College - Silwood Campus; BioCap	Creation of Areas that could become of particular importance (Parameters for data prioritisation decisions, creation of List of priorities and measures, systematic conservation planning process)
Species recovery working group	To create a Species Recovery longlist and Shortlist and the measures for recovering these species.	Berkshire Moth Group, Berkshire Ornithological Club, Berkshire Bat Group, Swift Local Network Planning Group, Middle Thames Bird Conservation Trust, Wild Cookham, Wild Maidenhead, Lavells Wetlands Trust, Bisham Barn Owl Group, Eton Wick Waterways Group, EA, FC, Nature Space, community specialists (coleoptera, diptera, spiders, flora, dragonflies, flora, riverfly)	Creation of species longlist, creation of species shortlist

Figure 21: Roles, membership and key stages of involvement of each working group of the Berkshire LNRS

Decision making process

Decisions were generally made in the LNRS process through discussion in meetings between informed members of steering groups. Majority rules were used to finalise. Where final decisions didn't have enough Working Group representation to be made (50% attendance), or votes were hung, the Steering Group had the final say over Working Group decisions. This ensured an open, fair and transparent process to the LNRS.

Part 2: Engage people in investigating priorities for nature

January-April 2024

During this part of the LNRS process, local facilitation and engagement experts, 'Just Ideas', were commissioned to design and run Berkshire LNRS Engagement Workshops.

As seen in Figure 22, stakeholders were categorised into two groups: landowners and farmers (including foresters, land managers and others), and the wider stakeholder community. Workshops were run for wider stakeholders in each unitary authority of Berkshire.

	Examples / Organisations	Specific outreach and engagement methods
A Landowners and farmers	National Trust Woodland Trust BBOWT (Berkshire, Buckinghamshire Oxford Wildlife Trust) Crown Estate National Farmers Union	Invitation to workshops: inperson, online Steering group representations & links Invitation to members for relevant workshops Inclusion in their newslettersetc Identifying key influencers, connectors and communicators Survey
B. Wider Stakeholder (split into residents, community groups, voluntary sector/ charities; local businesses, statutory partners etc)	Local councils Environmental charities Local green, environmental community groups Local community interest groups Local business groups Local schools Residents	Invitation to workshops: in person, online Steering group representations & links Invitation to members, their communities for relevant workshops Inclusion in their newsletters etc Identifying key influencers, connectors and communicators Social media, LinkedIn Survey

Figure 22: Stakeholder spread of engagement workshops of the LNRS, with main organisations attending and outreach methods

See information in Figure 23 on timings and locations of each workshop.

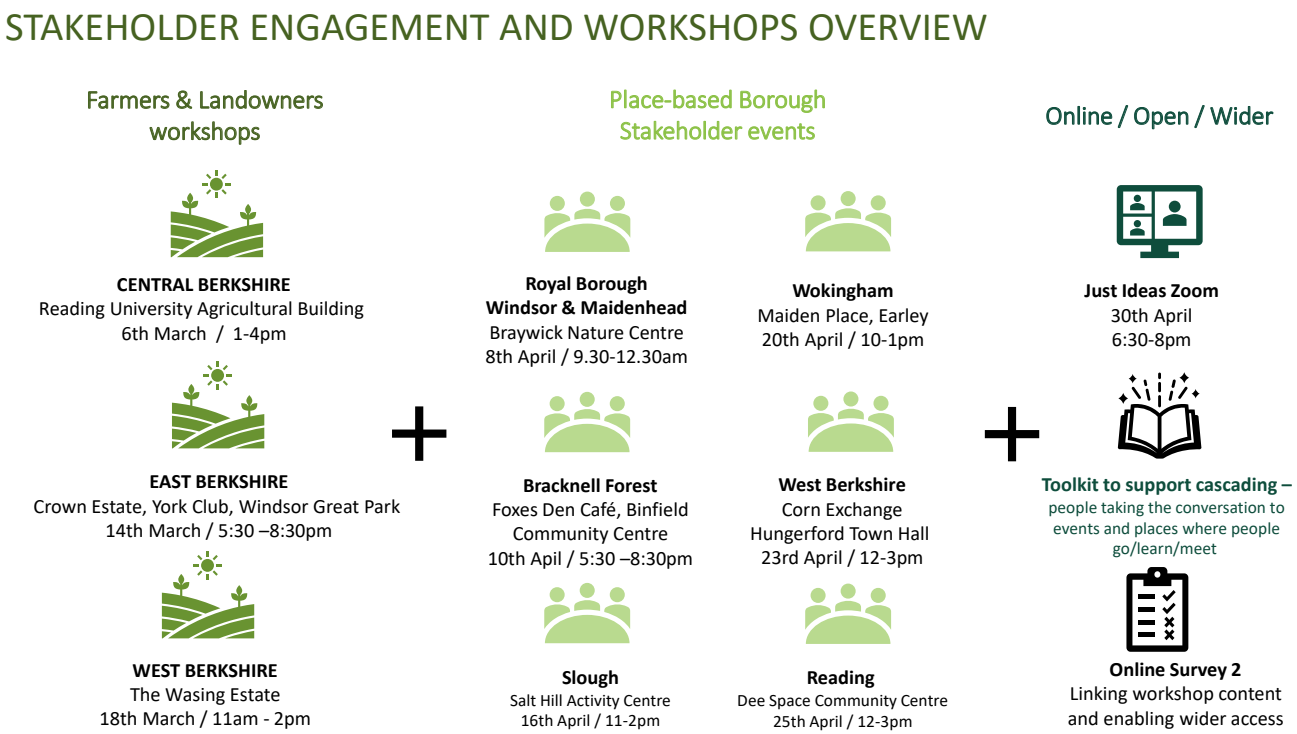


Figure 23: Graphic depicting overview of stakeholder engagement workshops and survey, with dates

The aims of each workshop were broadly to:

-Explain the LNRS process

-Allow participants to network and learn about nature recovery activities already occurring in their local areas

-Find out participants' thoughts on which habitats are most important in Berkshire

-Find out participants' ideas for actions to recover nature

For the farmers and landowners workshop specifically, an extra aim was to:

-Find out specific patches of land that landowners would like to be part of the Local Habitat map and likely to undergo nature recovery activity.

Information collected from workshops

Information gathered from the workshops was split into three activities.

Activity 1. Developing a vision for Berkshire
Activity 2. What are your priorities for habitats and species?
Activity 3. What can we do to protect or support these habitats or species.

See more details on the questions asked during each activity below.

Activity 1



1. Developing a Vision for Berkshire

*Try and respond on the related colour of post-it

1. What do you love or value about the nature where you live? [Green]
2. What worries you about the nature near you? [Blue]
3. What is your vision for nature in Berkshire, near where you live – what would you like to see more or less of? And why? [Yellow/Orange]

Activity 2



2. What are your priorities for habitats and species?

Activity Outline

- Each choose a habitat and a species that you find important
- Go round and share why (table facilitator taking notes)
- Spread the ones discussed in the centre of the table and call us to take a photo

"This habitat / species is important to me because ....."

Activity 3



3. What can we do to protect these habitats and species?

Activity outline

- ☐ In pairs explore the habitats and species around the room
- ☐ Add ideas on post-its responding to the question
- ☐ For particular places you can also log these on the online map (QR code)

"What do you think is the best way to protect or restore this habitat and these species?"

Community groups presented at workshops

Each group detailed below presented in person at community workshops. These presentations helped to inform and inspire participants, from local communities, of the excellent work for nature that is already happening in their local areas. This was an opportunity for networking for these existing groups.

CPRE (Countryside Protection for Rural England); Wild Maidenhead; Wild Cookham; Wildlife in Ascot; Wild Eton Wick; Wild about Datchet; Binfield Environmental Group; Wild Bracknell; Warfield Environmental Group; WWT (Wildfowl and Wetlands Trust) presenting the Slough Sponge City project; Burnham Beeches; Earley Environmental Group; Newbury Nature Corridor; Action for the River Kennet presenting Sparkling Streams Project; Kennet Valley Wetland Trust; Lousehill Copse group; Econet; Wild Tilehurst; Berkshire Buckinghamshire and Oxfordshire Wildlife Trust.

Survey

To accompany workshops, a survey was conducted between March and May 2024. This detailed similar questions to those asked in workshops. Over 400 responses were recorded.

Workshop Results

Detailed information on the general responses from the stakeholder workshops, and the process of shortlisting them into our current List of Priorities and Measures can be seen on the website.

Some general outputs from the workshops and surveys can be seen below.

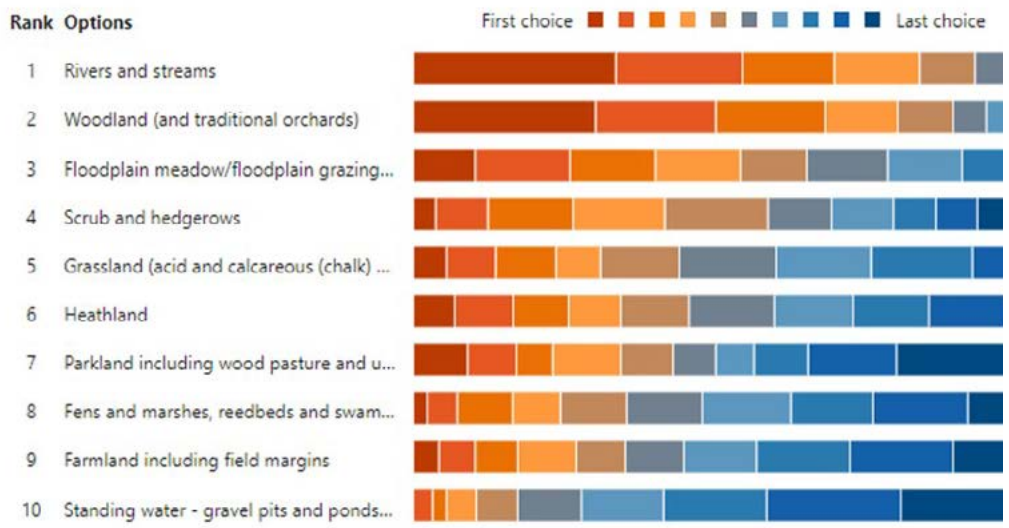


Figure 24: Survey results regarding habitat importance in Berkshire. Rivers and streams ranked most important, farmland and standing water as least important.

Top mentioned species

Species	Number of Mentions
Hedgehogs	72
Birds (general)	24
Stag beetle	21
Water vole	20
Bees	17
Deer	14
Badgers	11
Swift	18
Oak tree	11
Hazel dormouse	11
Kingfishers	10
Common frog	10

Figure 25: The top mentioned species by stakeholders across workshops and survey.

Engagement Part 3 – Engage people in draft strategy development

May-November 2024

After workshops and collection of data, and during the data prioritisation, engagement activities centred around keeping stakeholders updated and finding new audiences to engage with the LNRS.

Progress Update Webinar

A webinar took place in June 2024, which was recorded and viewable on our website.

During this session, participants were updated on

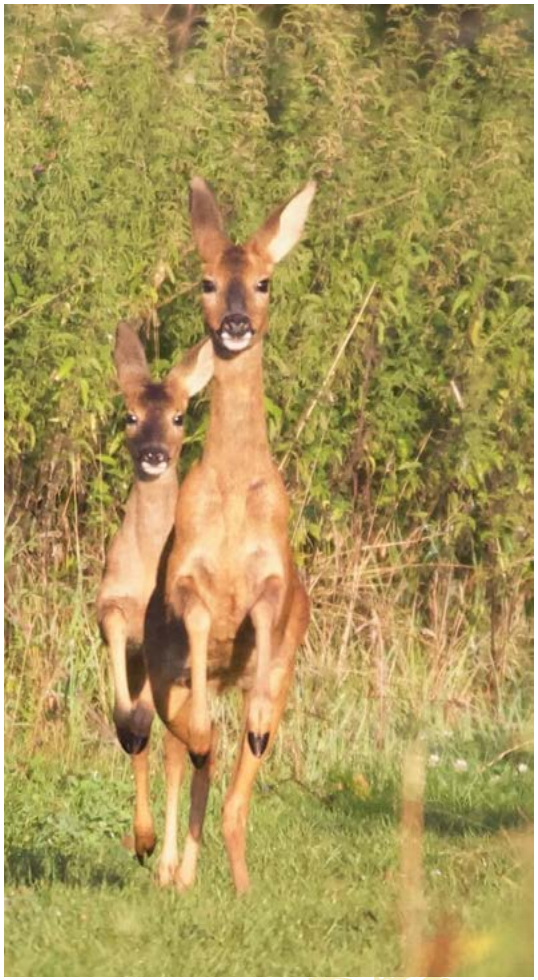
- An overview of Stakeholder Engagement (Speaker: Just Ideas)
- Defra regulations on mapping and measures (Speaker: Natural England)
- Methods of mapping priorities for nature and examples (Speaker: Professor Bob Smith)
- Next steps for mapping (Speaker: TVERC)
- Continued involvement for the community

More information and a recording of the webinar can be seen at the following link: Berks LNRS Webinar 11 June 2024 - HD 720p on Vimeo

Newsletters

Monthly newsletters detailed engagement opportunities during this period. An archive of these can be read on the website. Groups that hadn't previously engaged as much, such as school children and adults with learning difficulties were reached out to, with bespoke stalls at a number of events and sessions.

Following the first draft of the Berkshire Local Nature Recovery Strategy documents, a full Public Consultation was run. Results of this consultation were used to inform updates to the strategy, and helped produce the final version. More information can be viewed in the 'Public Consultation Responses Report' on the website.



Roe Deer © Nick Bell

Appendix 5

Other plans and strategies considered in the creation of the Berkshire Local Nature Recovery Strategy

Source type	Source
Species	“A review of the status of the macro-moths of Great Britain”. Butterfly Conservation report to Natural England, 2019. Richard Fox1, Mark S. Parsons1 and Colin A. Harrower2 - In 2019, Butterfly Conservation prepared a report for Natural England identifying and categorising all British macro moth species by reference to IUCN guidelines
Species	Berkshire Local Nature Recovery Strategy – Submission by the Berkshire Ornithological Club.
Species	Berkshire Bird Species of Conservation Concern, Berkshire Ornithological Club. Prepared by Neil Bucknell & Renton Righelato, August 2022
Species	Notes for Berkshire LNRS “Long List”. Neil Bucknell, chair Berkshire Ornithological Club conservation sub-committee.
Species	Species Recovery Trust Guidance - Priority Plant and Invertebrate Species Recovery within Local Nature Recovery Strategies
Species	Delivering-for-Invertebrates-in-LNRS-buglife
Species	Plantlife-LNRS Guidance
Defra	Data standards for Local Nature Recovery Strategies
Defra	Defra LNRS Species Advice: Identifying threatened bird species whose drivers of decline operate outside England
Defra	Delivering for nature on or nearby road and rail: ask for LNRS RAs
Defra	Identifying and agreeing priorities and potential measures within Local Nature Recovery Strategies
Defra	Inclusive Engagement within Communities - Non statutory guide for Responsible Authorities
Defra	LNRS National Environmental Objectives JAN2024

Defra	Mapping potential measures in Local Nature Recovery Strategies advice
Defra	Local Nature Recovery Strategies: how to prepare and what to include
Defra	The Environment (Local Nature Recovery Strategies) (Procedure) Regulations 2023
Defra	Statutory guidance - Local nature recovery strategy: what to include
AWE	Nature Recovery Plan AWE
North Wessex Downs	North Wessex Downs Nature Recovery Plan
Berkshire LNP	Berkshire BAP
UK Hab	UKHab Ltd (2023). UK Habitat Classification Version 2.0
Colne Valley Regional Park	Green Infrastructure Strategy - Colne and Crane Valleys
Gov.uk	Thames River Basin Management Plan
General	Kennet and Avon Canal Action Plan for the River Kennet SSSI
The Tree Council	Trees and Woodland Strategy Workshops: A Summary of Discussions
Earley Environment Group	Earley Wildlife Corridors
Wild Cookham	Cookham Wildlife Habitats - Cookham Neighbourhood Plan
Neil Bucknell	Berkshire's Habitats - Simplified
State of Nature Partnership	State of Nature Report
Cornwall County Council	Cornwall LNRS Pilot
Manchester City Council	Greater Manchester LNRS Pilot
Buckinghamshire County Council	Buckinghamshire LNRS Pilot

Figure 26: The sources of information that informed the creation of the Berkshire Local Nature Recovery Strategy

Appendix 6

Data Layers for inclusion in the Systematic Conservation Planning Process Opportunity Layer

Layer	Source	Date
ALC grade soils	Natural England	2019
BBOWT Nature Reserves	BBOWT	2021
Bracknell Forest Council Sites	Bracknell Forest Council	
Charvil Nature Recovery Sites [rough boundary]	Charvil Parish	2024
Cookham Wildlife Habitats (drafted from Cookham Neighbourhood Plan) [rough boundary]	Wild Cookham	2024
Coombes Woodlands Planned Project Area [rough boundary]	Barkham Parish Council / Arborfield Green Community Centre	2023
Countryside Stewardship Scheme 2016 Management Areas	Natural England	2024
English Woodland Grant	Forestry Commission	2017
Environmental Stewardship Scheme Agreements	Natural England	2024
Farm & landowners Berks consultation feedback areas	RBWM	2024
Little Hidden Farm	Landowner	2024
National Trust Land (Always Open & Limited Access)	National Trust	2024
National Trust Nature Recovery Areas	National Trust	2024
Potential sites for nature recovery	University of Reading	2024
RSPB Reserves	RSPB	2023
SANGs	TVERC	2020
Sulham Estate Project Area [rough boundary]	BioCap	2024
Thames Path [buffered 10m]	OCC	2024
Thames/Caversham Route [rough boundary]	Econet / Reading Natural History Society	2024
West Berks Englefield NR Sites	WBC	2024
West Berks Road Verge Nature Reserves	WBC	2024
Wokingham Borough Council Potential LNRS Sites	Wokingham	2024
Woodland Trust Sites	Woodland Trust	2020
Woolley Park Estate BNG Scheme [rough boundary]	Bidwells	2024

Figure 27: The data layers that have been included in the Opportunity Layer of the Systematic Conservation Planning process. These helped inform areas that were selected for the Opportunity (ACB) layer of the Local Habitat Map.

Appendix 7
Local Plans

It is important to recognise that some of the Local Planning Authorities in Berkshire were at an advanced stage in local plan preparation when this LNRS was being developed and some had recently adopted new Local Plans. For recently adopted Local Plans and Local Plans being prepared whilst the LNRS was still in draft form (before October 2025), it was clearly not possible for the individual LPAs to fully consider and describe how their plans should 'have regard' to this final version of the LNRS.

Local Planning Authorities in the early stages of plan preparation should be able to fully consider how their plans and policies interact with the LNRS and should seek to take a positive approach, where possible identifying opportunities to help delivery of the LNRS. It may not always be possible to avoid situations where allocations for alternative uses overlap with the mapped extent of the LNRS, particularly where land suitable for development is in very short supply. In these circumstances, LPAs should seek to plan positively for the delivery of the potential measures identified in the LNRS within the proposed development and use this as a driver for the delivery of on-site BNG and green infrastructure networks.

Where existing or proposed allocations within more advanced or recently adopted Local Plans overlap with the mapped extent of the LNRS, this can be viewed as a positive opportunity for the potential measures identified for that part of the network to be delivered. This could include targeting on-site BNG at delivery of the potential habitat measures identified in the LNRS and integrating appropriate habitats into green-infrastructure networks and landscaping for the proposed development. It may not always be possible to accommodate the exact mapped extent of the LNRS within the developments but opportunities to link and connect habitats within the sites green infrastructure should be taken.

Appendix 8
Urban Wildlife Corridors

Below are some further examples of community initiated urban wildlife corridors across Berkshire. Please note, at the time of publication, these were the only corridors that were known about, but others could exist in Berkshire.

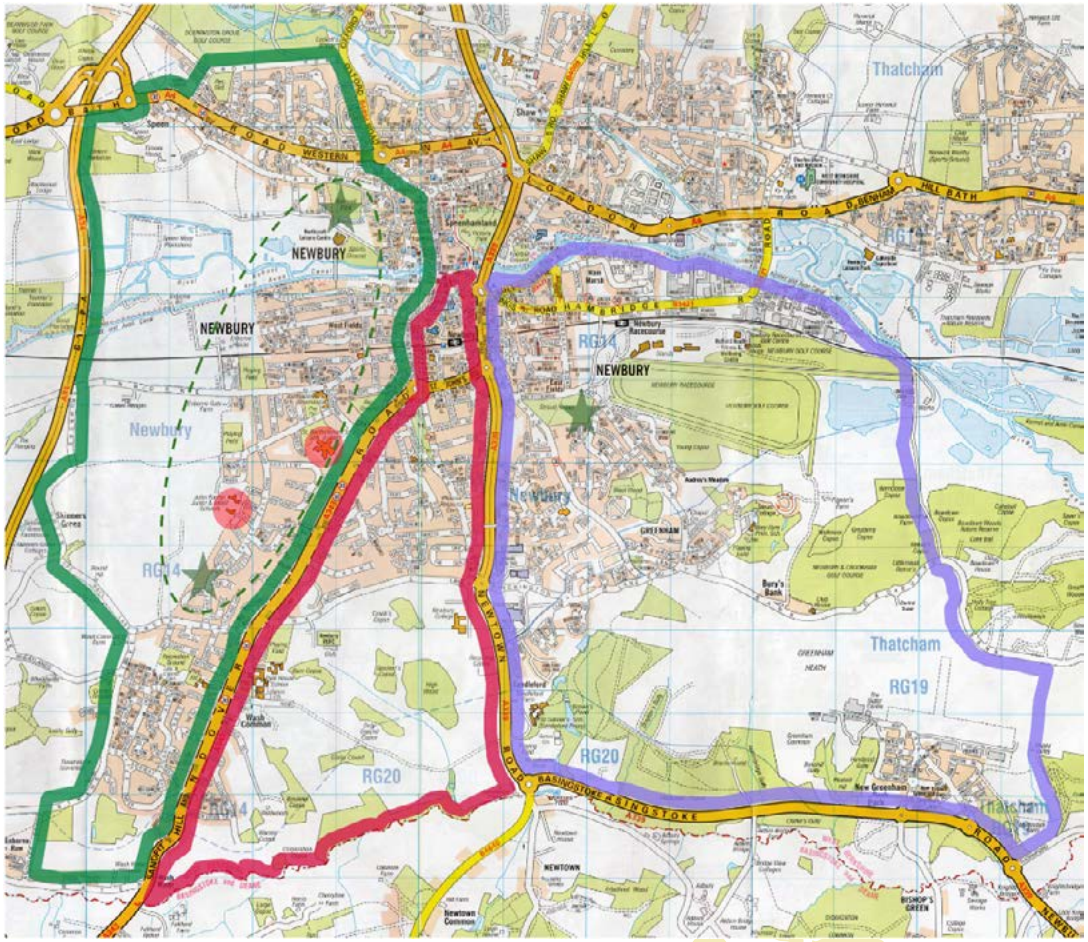


Figure 28: The Newbury Friends of the Earth corridor. The original corridor is marked with a dotted line. In green is the western corridor. Red is the central corridor, and blue/purple is the eastern corridor.

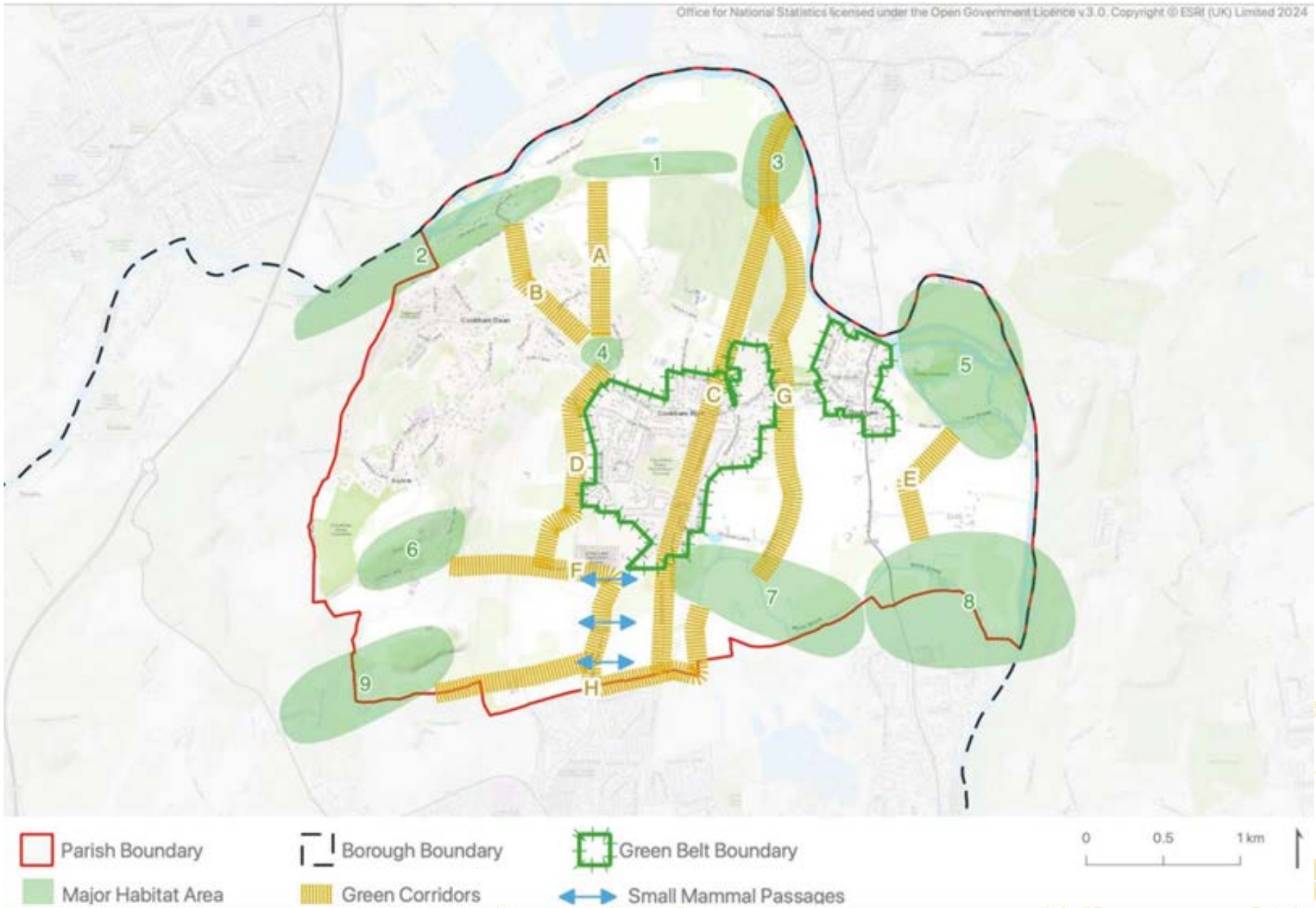


Figure 29: Wildlife corridors as part of the Cookham Neighbourhood plan, as created by WildCookham. These show green corridors and connected habitats in Cookham Parish. Find out more on the Cookham Neighbourhood Plan.

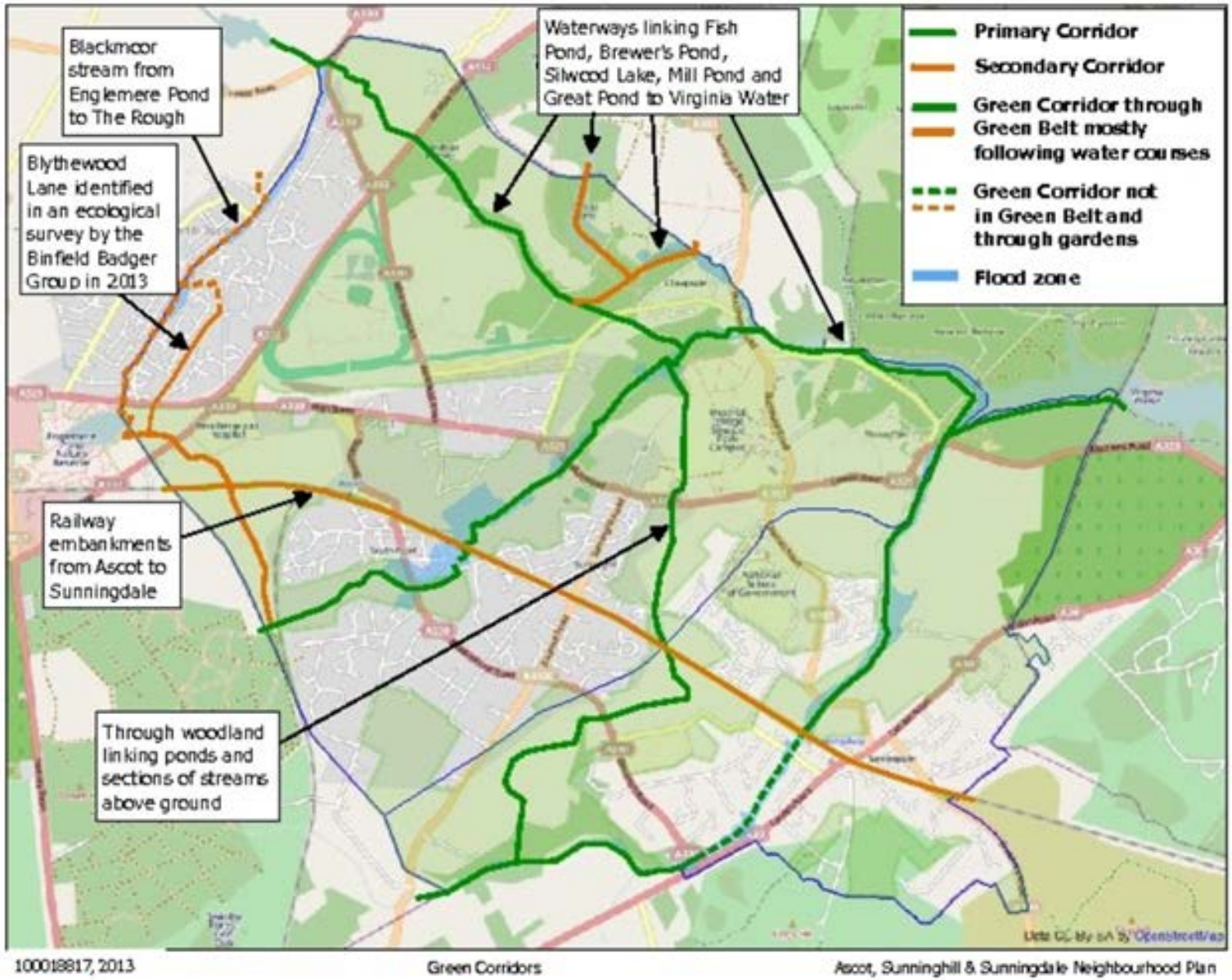


Figure 30. Green corridors developed by members of the local community working on the Ascot Neighbourhood Plan. Some of these people and others then formed Wildlife in Ascot with aims to support the green corridors further. The corridors provide routes for ground-based flora and fauna to travel between Windsor Forest, Swinley Forest and Chobham Common. They follow existing waterways and woodland.

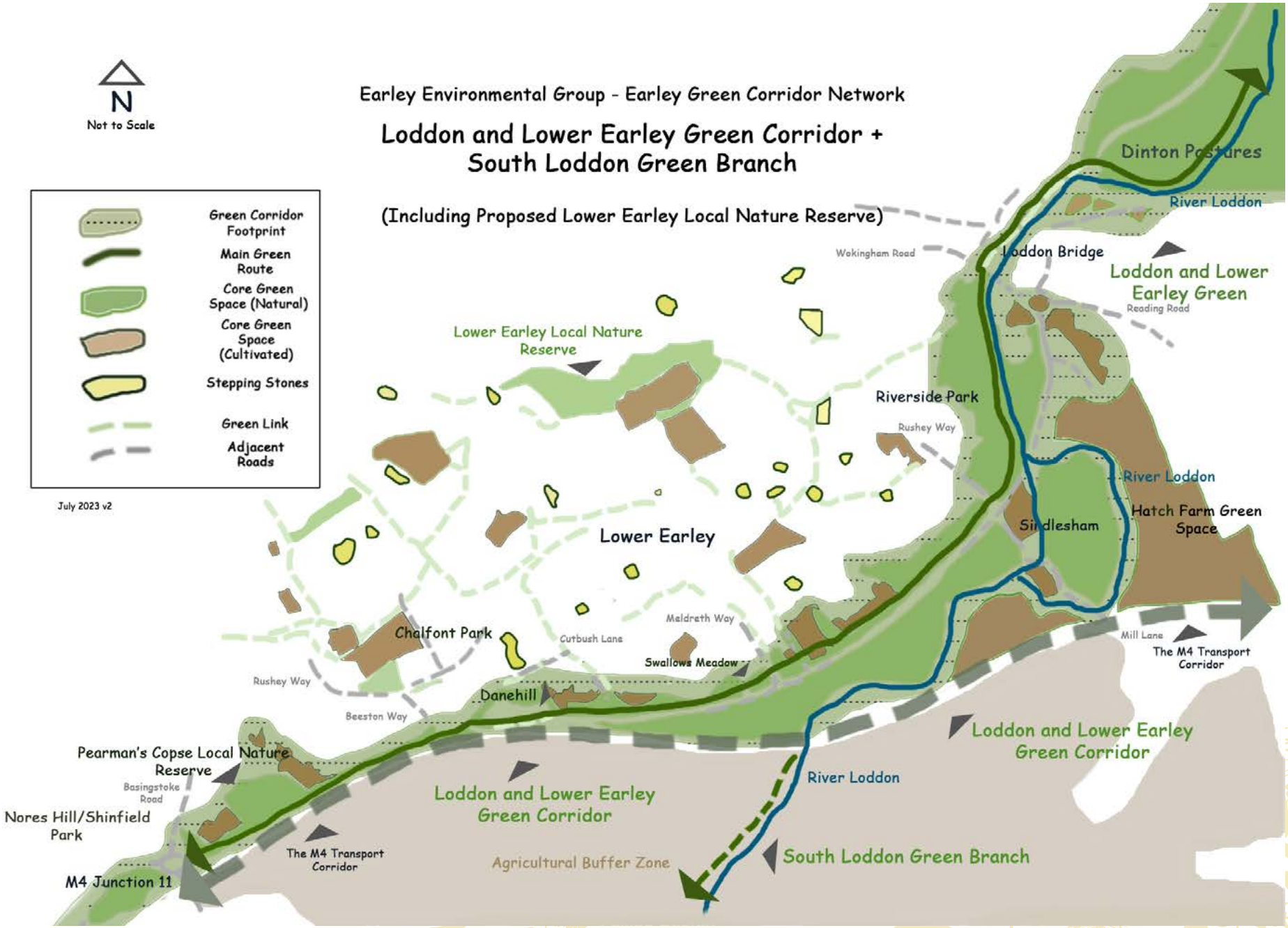


Figure 31: The Loddon and Lower Earley Green Corridor as created by the Earley Environmental Group, part of the Earley Green Corridor Network.

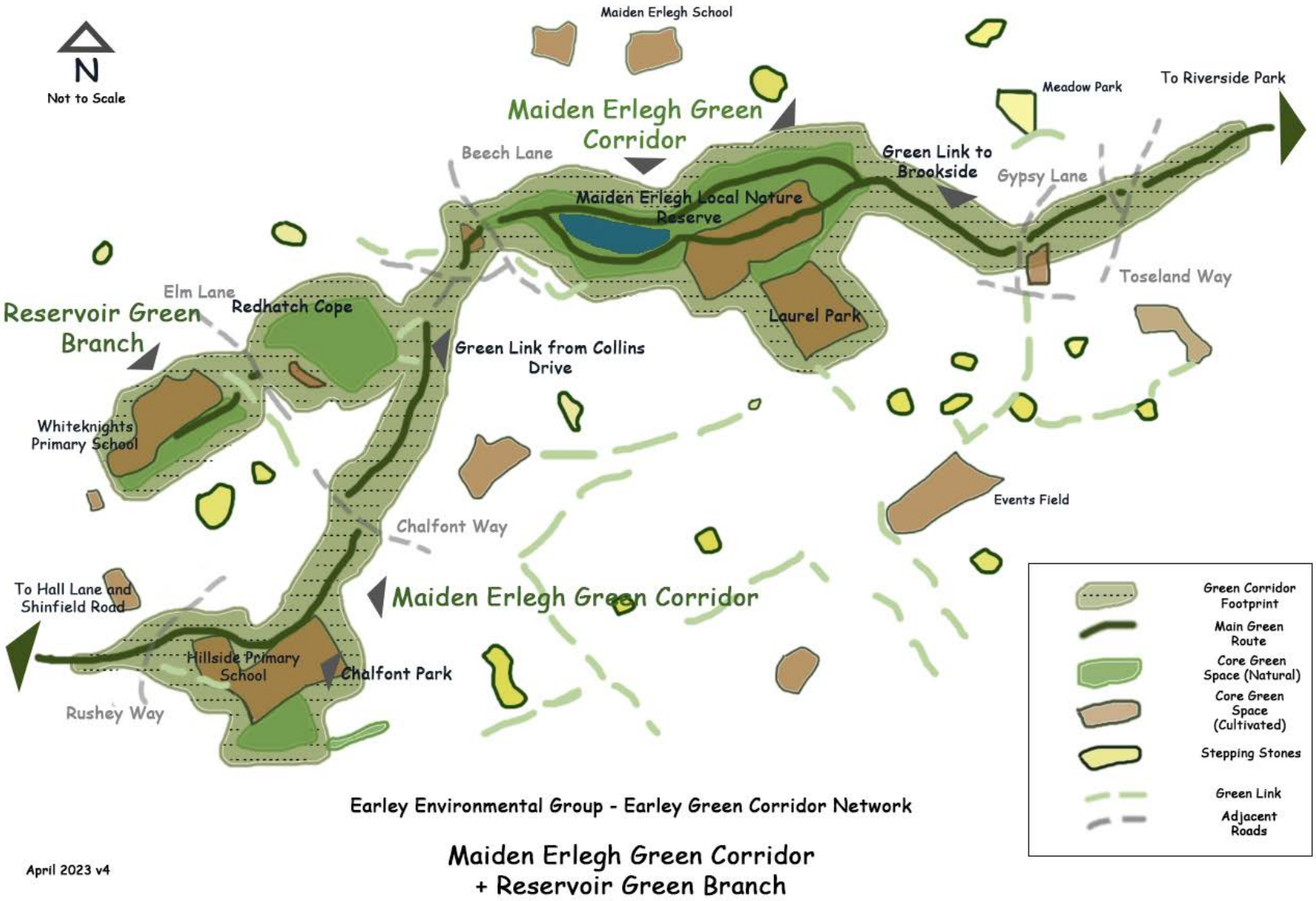


Figure 22: The Maiden Erlegh Green Corridor as created by the Earley Environmental Group, part of the Earley Green Corridor Network.

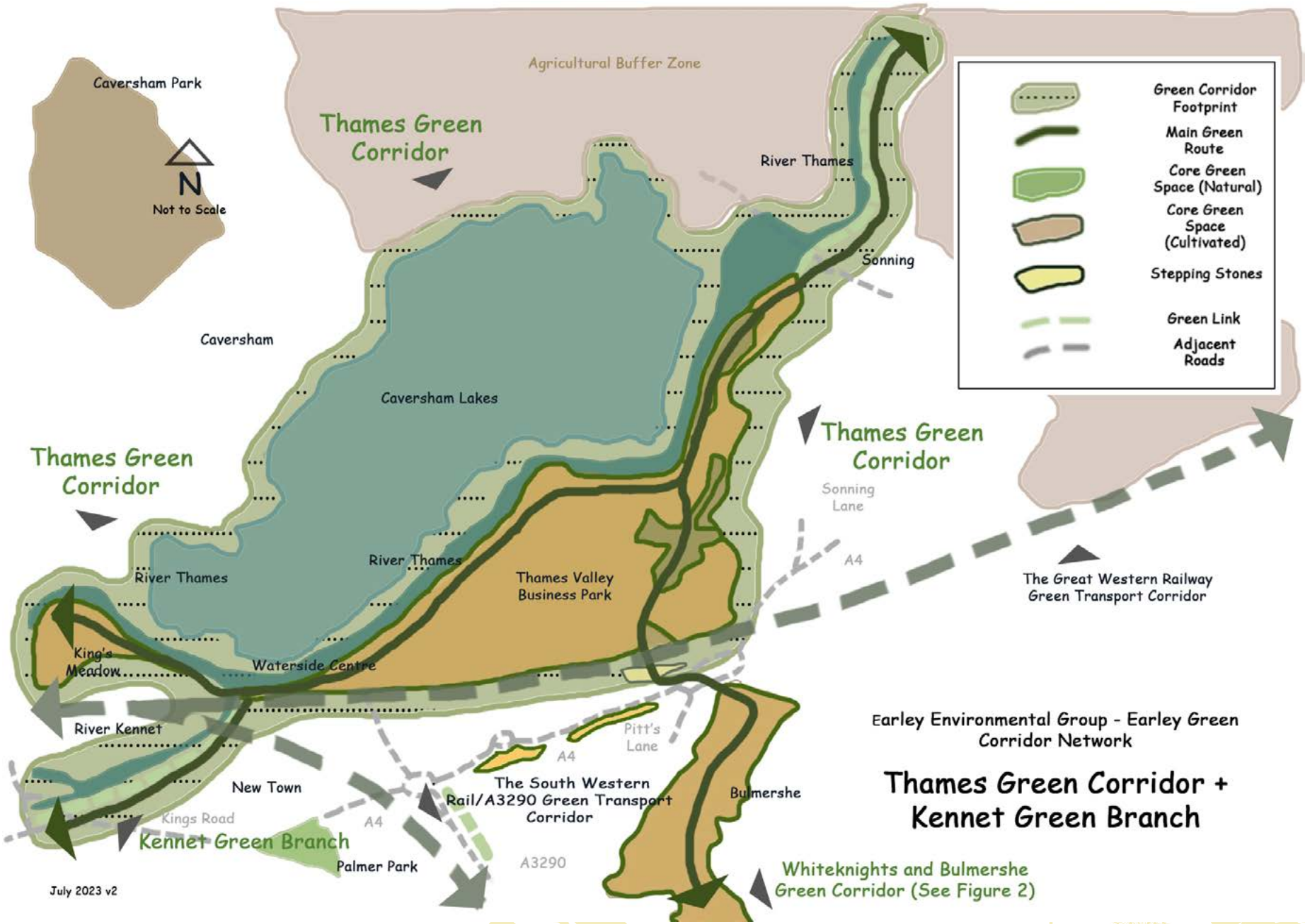


Figure 22: The Maiden Erlegh Green Corridor as created by the Earley Environmental Group, part of the Earley Green Corridor Network.

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