

Chapter 4

Nature

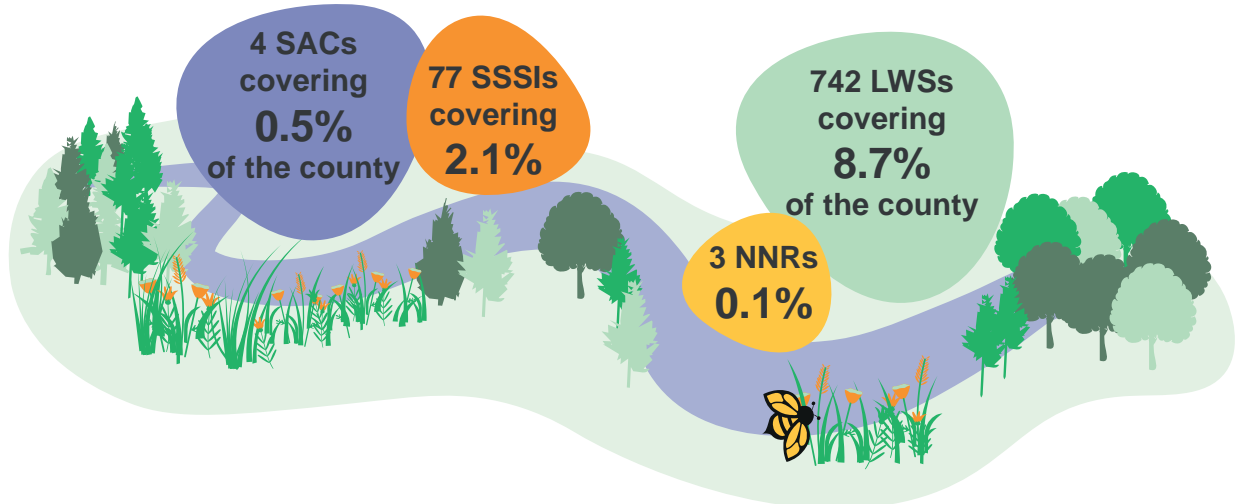
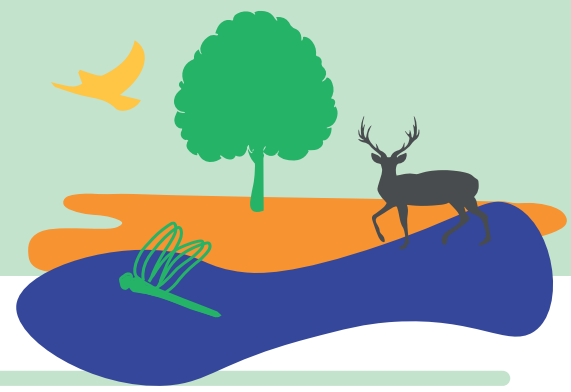
Areas requiring protection, connection, creation and enhancement are identified, providing a framework for resilient networks of habitats and nature recovery within Herefordshire. The potential of Herefordshire's network of rivers, ditches, wetlands and open water in providing habitats and nature-based solutions to county-wide challenges are also examined.

Strategic objectives

- *Multifunctional*: Promote biodiversity through the creation, protection and enhancement of areas for nature, whilst balancing the competing demands of people and the environment.
- *Varied*: Deliver a mosaic of habitats which offer structural complexity and an increased diversity of habitats and species.
- *Connected*: Develop and maintain interconnected nature networks that deliver for wildlife and people.
- *Accessible*: Reduce fragmentation of the GBI network by creating new and improved connectivity between existing wildlife corridors. Ensure that routes designed for people do not fragment habitats, isolate species or reduce wildlife corridors.
- *Responds to Local Character*: Ensure that habitat creation and restoration responds to local variability in geology, hydrology and typology so that GBI contributes to the conservation and enhancement of the natural aspects of the landscape.

Chapter 4 - Nature Summary

Key assets



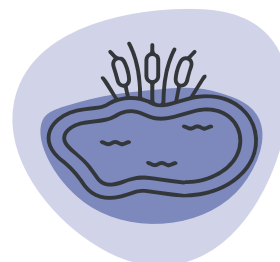
- The expansive designated site network, forms the core of a resilient nature recovery network. Protecting, enhancing, buffering and connecting these sites will be the focus of future Local Nature Recovery Strategies (LNRS) and Herefordshire's GBI assets and corridors provide strategic opportunities which will contribute to achieving this.
- A number of local nature conservation sites exist across Herefordshire in private or trust ownership, including those owned and/or managed by Plantlife, Herefordshire Meadows, Herefordshire Wildlife Trust and the Countryside Restoration Trust.
- Priority habitats of ancient woodland, traditional orchards, hedgerows, upland wetland mosaics and species rich grassland are present across the county.
- Herefordshire provides a stronghold for traditional orchards as it contains a significant proportion (14%) of remaining orchards within England. Traditional orchards cover 1.2% of Herefordshire, representing approximately 2,511ha in total.
- Herefordshire has large number of ice age ponds. These largely ephemeral ponds host breeding amphibians, foraging wildfowl and wading birds. Herefordshire Wildlife Trust was recently awarded Heritage Lottery funding to map, understand and protect these important local habitat features.
- The River Wye Special Area of Conservation (SAC) hosts otter, for which there has been a significant decline in sightings across the Wye catchment over the past decade.



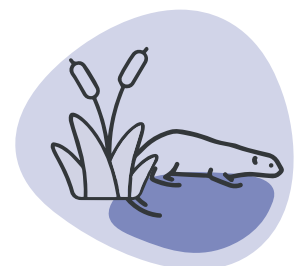
13,446ha of Ancient Woodland, covering 6.2% of the county



27,800ha of woodland covering 12.7% of Herefordshire



2.2km² of ponds, comprising 0.1% of the county's land



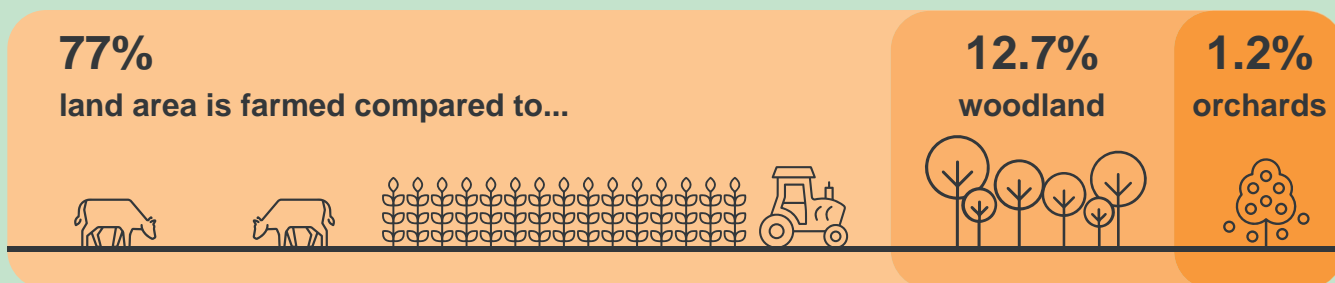
River Wye SAC hosts otter and white clawed crayfish

Drivers and issues

- A number of SSSI units are in declining condition due to issues such as air emission deposition, bracken encroachment, recreational pressure, water quality and deer grazing.



- Recreation pressures on the Malvern Hills AONB risks the Malvern Hills SSSI, designated for its acid grassland, becoming a critical threshold site.
- Lugg and Hampton Meadows SSSI located to the east of Hereford is an important site for ground nesting birds, particularly the endangered curlew. Recreation pressure, particularly loose dogs, has led to the withdrawal of access rights to parts of open access land during the nesting season.



- Fragmentation of core habitat is common, and impacts are compounded by the intensification of farming, incremental spread of development and infrastructure improvements, such as road widening and highway lighting. These factors can result in the loss and degradation of connecting features such as hedgerows, arable margins and woodland. A decline in these habitats can impact a large range of wildlife, including:



- Invasive species, including Japanese knotweed, Himalayan balsam, American skunk cabbage and American signal crayfish present a threat to native flora and fauna throughout the county.
- Trees pests and diseases, including ash dieback, acute oak decline, Dutch elm disease, grey squirrels and browsing deer have negative impacts on the county's tree stocks.
- The loss of traditional orchards through changing agricultural economics and reduced management has resulted in dramatic declines in noble chafer beetles across the county.
- The issues above are likely to be amplified as a result of climate change, including the effects of extreme weather and the need for wildlife to adapt to changing conditions in order to avoid extinction.

- The effects of both point source and diffuse pollution has caused significant nutrient enrichment of the Lugg, Wye and Clun catchments, particularly as a result of phosphate pollution. Causes of this issue include changing agricultural practices, impacts of waste water treatment works, and residential development. This issue threatens the ecological balance and survival of rich habitat and species assemblages, with wider implication on future housing delivery.
- Increased nutrient levels cause severe and prolonged algal blooms with major impact on the Wye and its tributaries. Salmon catches are down 95% since the 1970s and some invertebrate groups and plant species have become mostly absent from the river.
- Future development will need to ensure no significant adverse effect on the River Wye SAC. This could be achieved on site as part of designs or delivered off site through strategic mitigation in the form of integrated wetlands to provide phosphate credits to mitigate the nutrient budget of development proposals. Adverse effects on the integrity of the River Wye SAC due to development proposals should also be avoided.
- The combination of stacking Biodiversity Net Gain (BNG) and nutrient credits provides a significant opportunity for the delivery of multifunctional green and blue infrastructure.
- By 1995, 50% of the River Wye was blocked by culverts, dams, weirs and crossing points.
- 8.1% of Herefordshire’s total land is characterised by active flood plain. Large areas of Herefordshire fall within Flood Zones 2 or 3, including Hereford, Kington, Ross-on-Wye, Bromyard and Leominster.
- The Wye is an important water abstraction source. Irrigated agriculture is highly consumptive and abstraction pressures will be amplified during hotter and drier summers.



Emerging opportunities

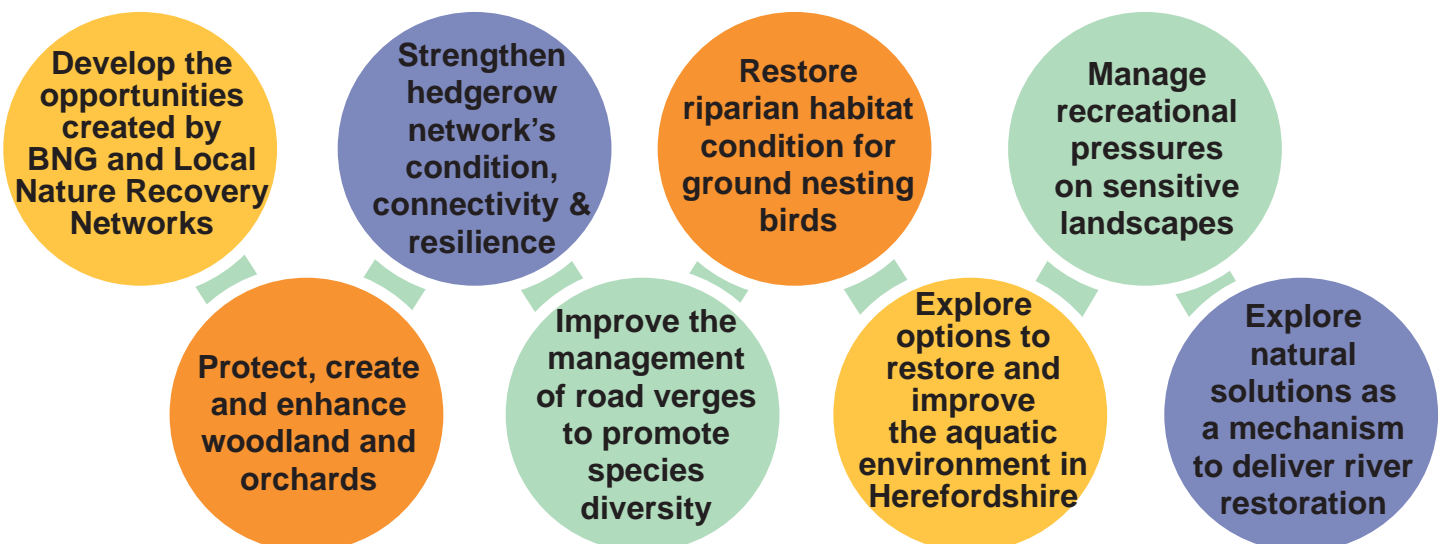


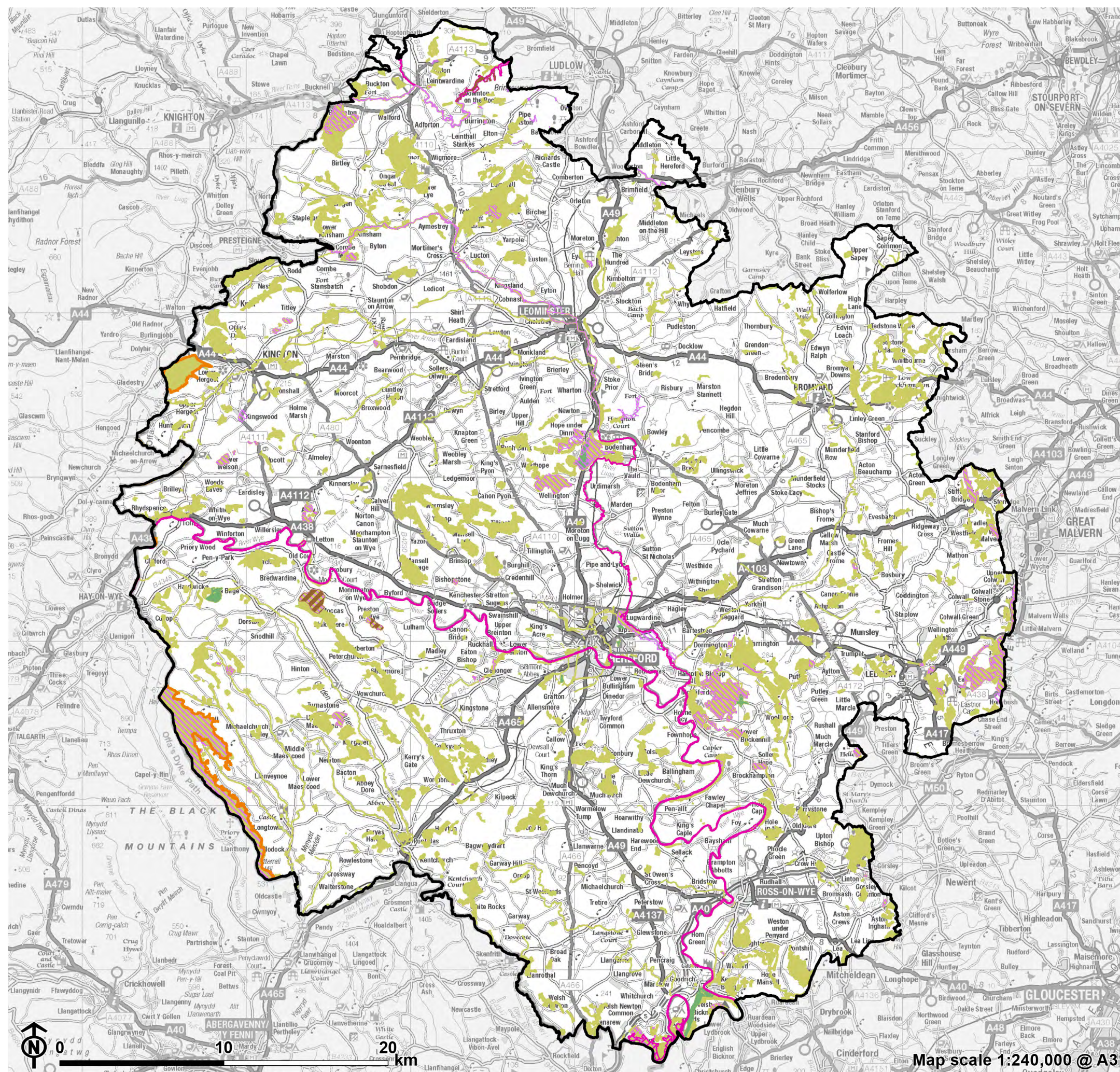
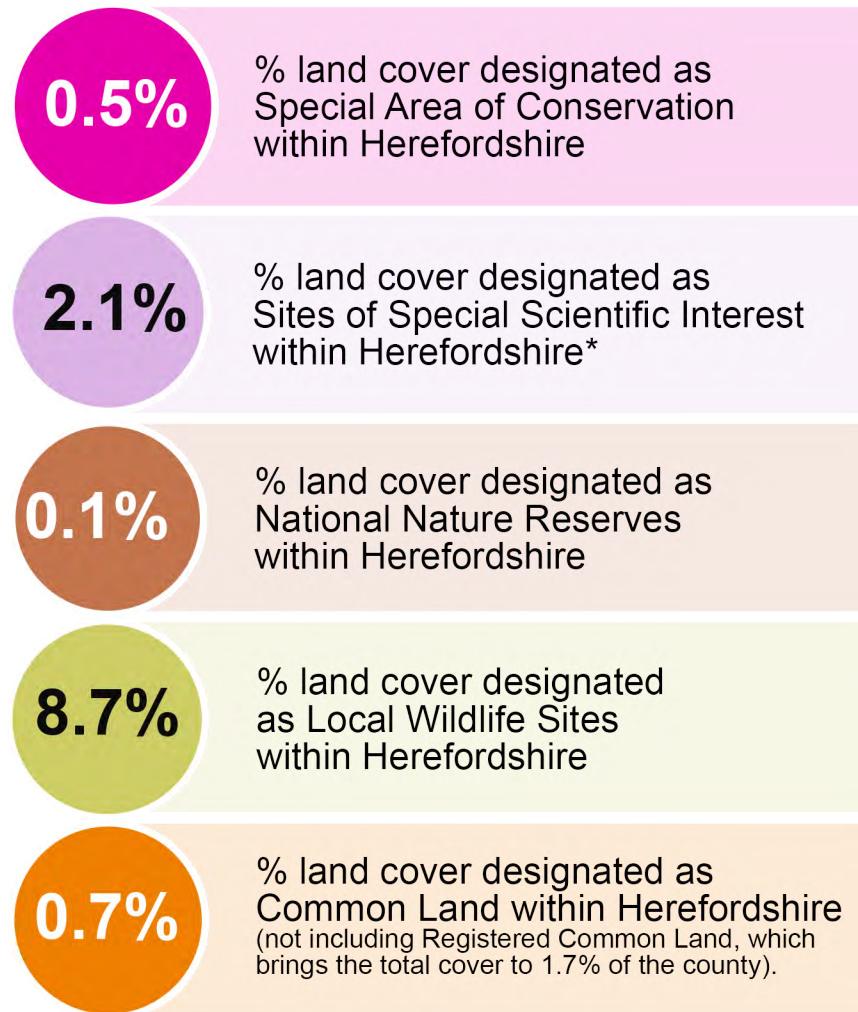


Figure 4.1: Nature conservation designations

- Herefordshire boundary
- Special Area of Conservation
- Site of Special Scientific Interest
- National Nature Reserve
- Local Nature Reserve
- Local Wildlife Site
- Common land



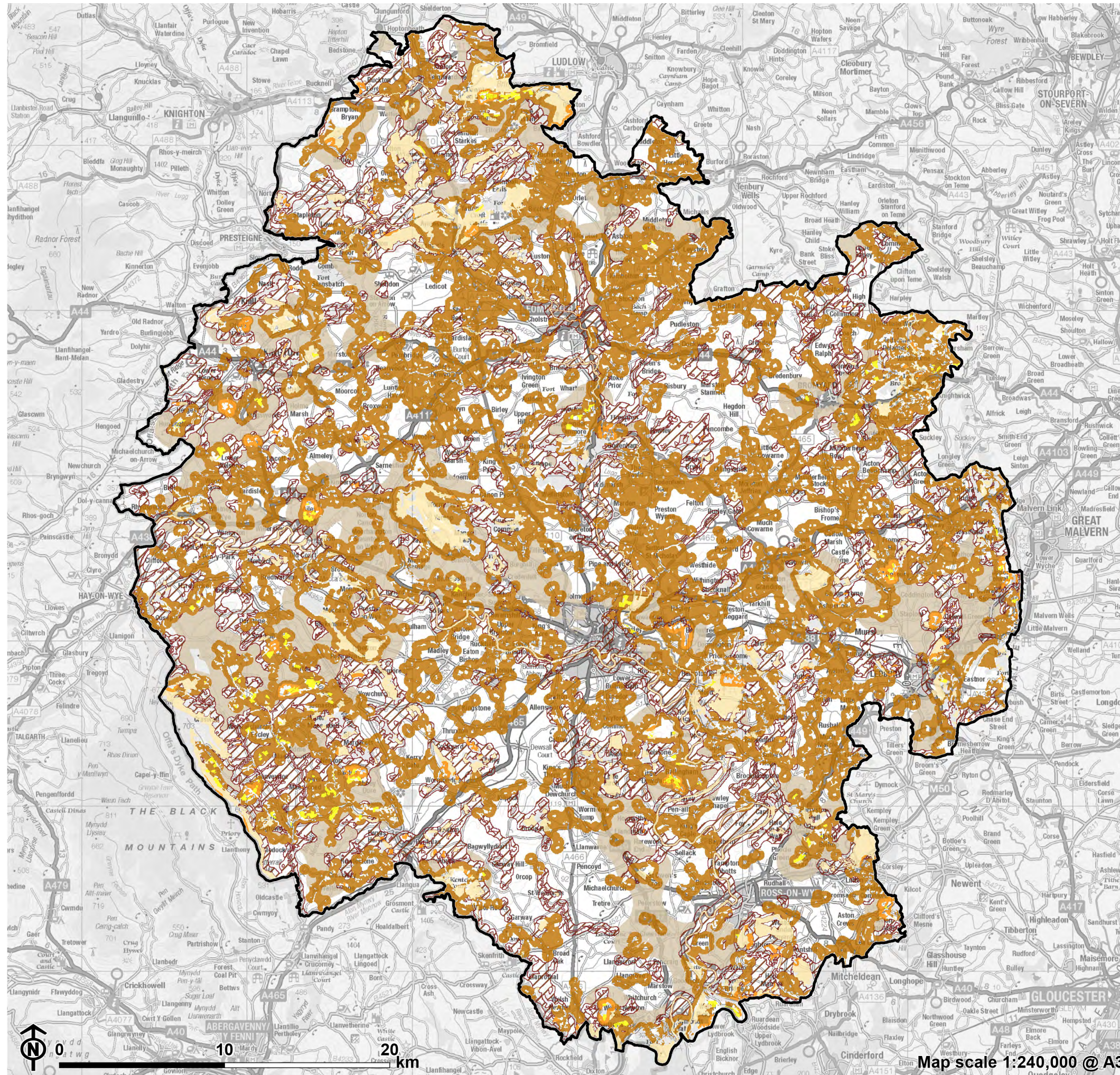
Ecologically distinctive habitats provide habitat permeability for species dispersal within a predominantly agricultural county.



Source: Natural England, Ordnance Survey

* However, all SACs are also designated as SSSI, therefore just under 25% of the County's SSSIs lie within an SAC leaving 1.6% land coverage of SSSIs which are not within an SAC.

Figure 4.2: Strategic Opportunities within the Habitat Network



Herefordshire boundary

Natural England Habitat networks:

- Habitat Restoration-Creation
- Restorable Habitat
- Fragmentation Action Zone
- Network Enhancement Zone 1
- Network Enhancement Zone 2
- Network Expansion Zone

0.9%
of total area

Fragmentation Action Zone
Land within Enhancement Zone 1 where fragmentation could be reduced by habitat creation.

33.8%
of total area

Network Enhancement Zone 1
Land connecting existing patches of primary and associated habitat which is likely to be suitable for creation of primary habitat.

17.0%
of total area

Network Enhancement Zone 2
Land less likely to be suitable for creation of primary habitat. Action in this zone should target enhancements through land management changes and GBI provision.

9.8%
of total area

Network Expansion Zone
Land beyond the Network Enhancement Zones with potential for expanding, linking/joining networks across the landscape

0.4%
of total area

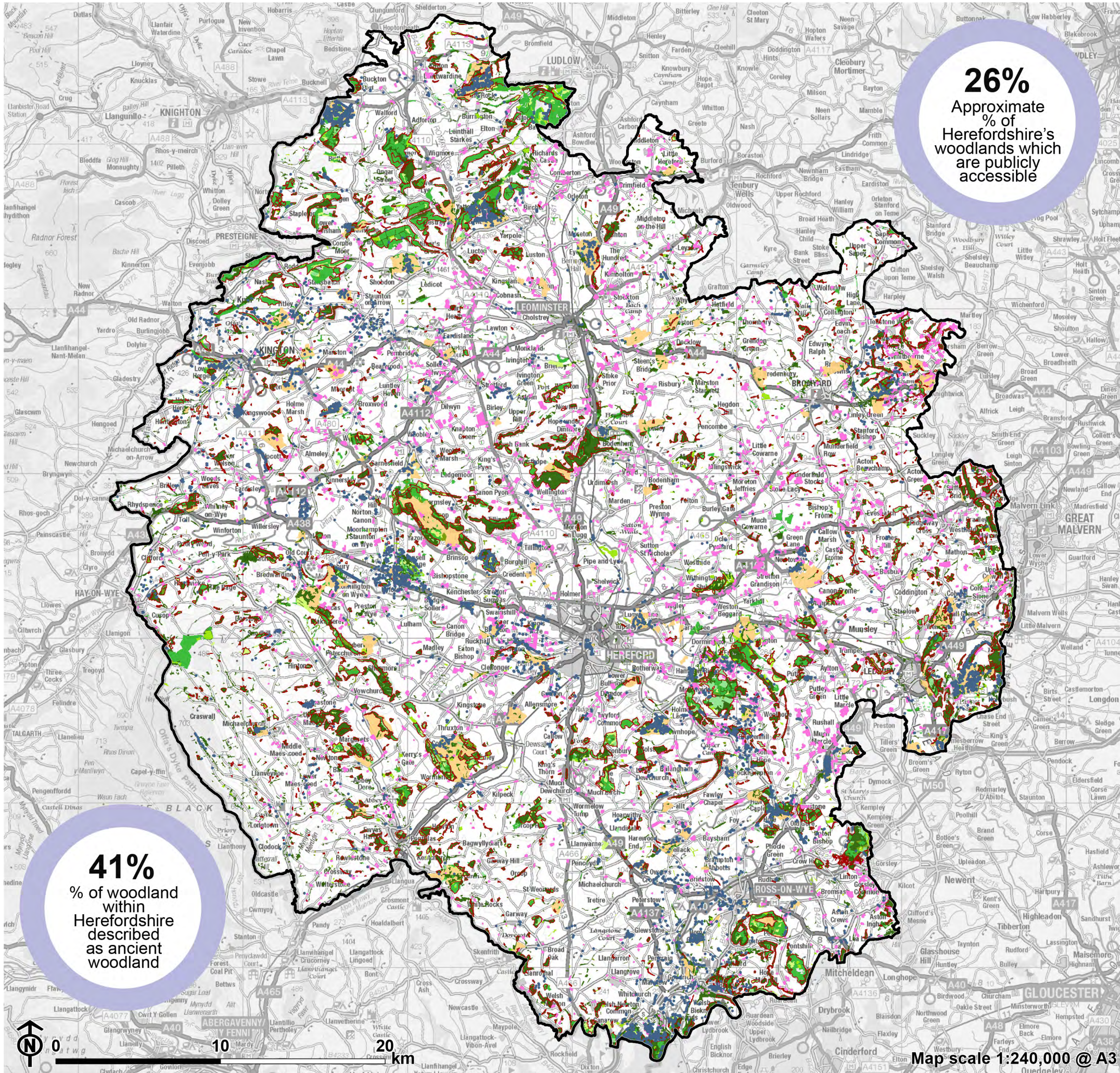
Habitat Restoration / Creation
Areas where work is underway to either create or restore the primary habitat.

4.9%
of total area

Restorable Habitat
Areas of land where the primary habitat is present in a degraded or fragmented form and are likely to be suitable for restoration.

Source: Natural England, Ordnance Survey

Figure 4.3: Woodland



- Herefordshire boundary
- Ancient woodland
- AWI 2022 pilot data
- Traditional orchard
- Wood Pasture and Parkland
- Broadleaved
- Mixed mainly broadleaved
- Conifer
- Mixed mainly conifer
- Young trees
- Felled

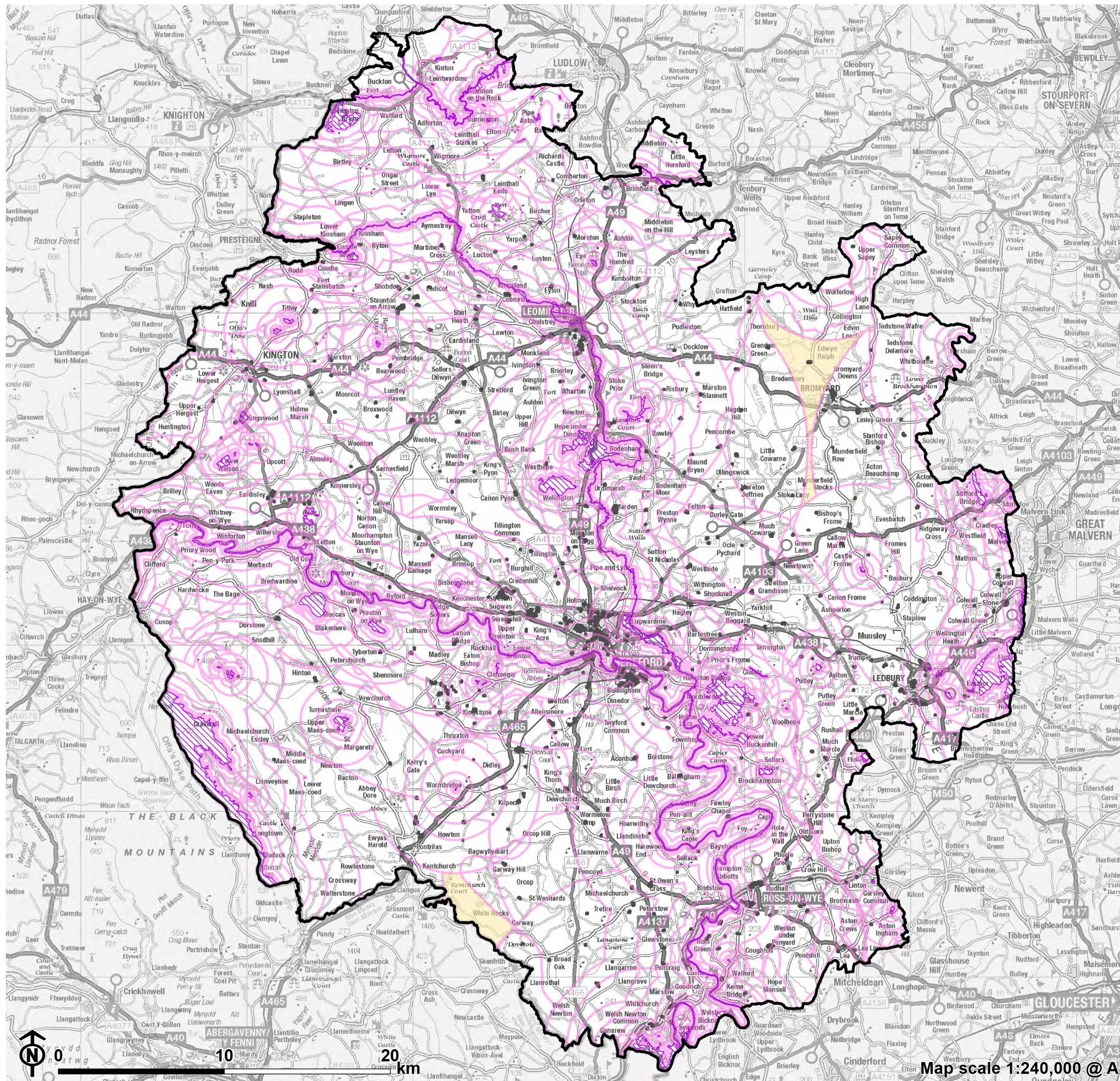
1.2%
of land cover within Herefordshire is traditional orchards



Traditional orchards are a locally significant habitat with particular concentrations in the centre of the county, surrounding Hereford and Leominster.

Source: Natural England, Forestry Commission, Ordnance Survey

Figure 4.4: SSSI Impact Risk Zones



- Herefordshire Boundary
- Urban area (Living England data layer on "Built-up Areas and Gardens")
- Site of Special Scientific Interest
- SSSI Impact Risk Zones
- Area outside of any SSSI Impact Risk Zones

77 Number of nationally designated Sites of Special Scientific Interest (SSSIs)

Impact Risk Zones (IRZs) are a tool which allow a rapid initial assessment of the potential risks new development poses to SSSIs. They are reflective of the individual features of each site, meaning they define zones relating to the particular sensitivities of the designation.

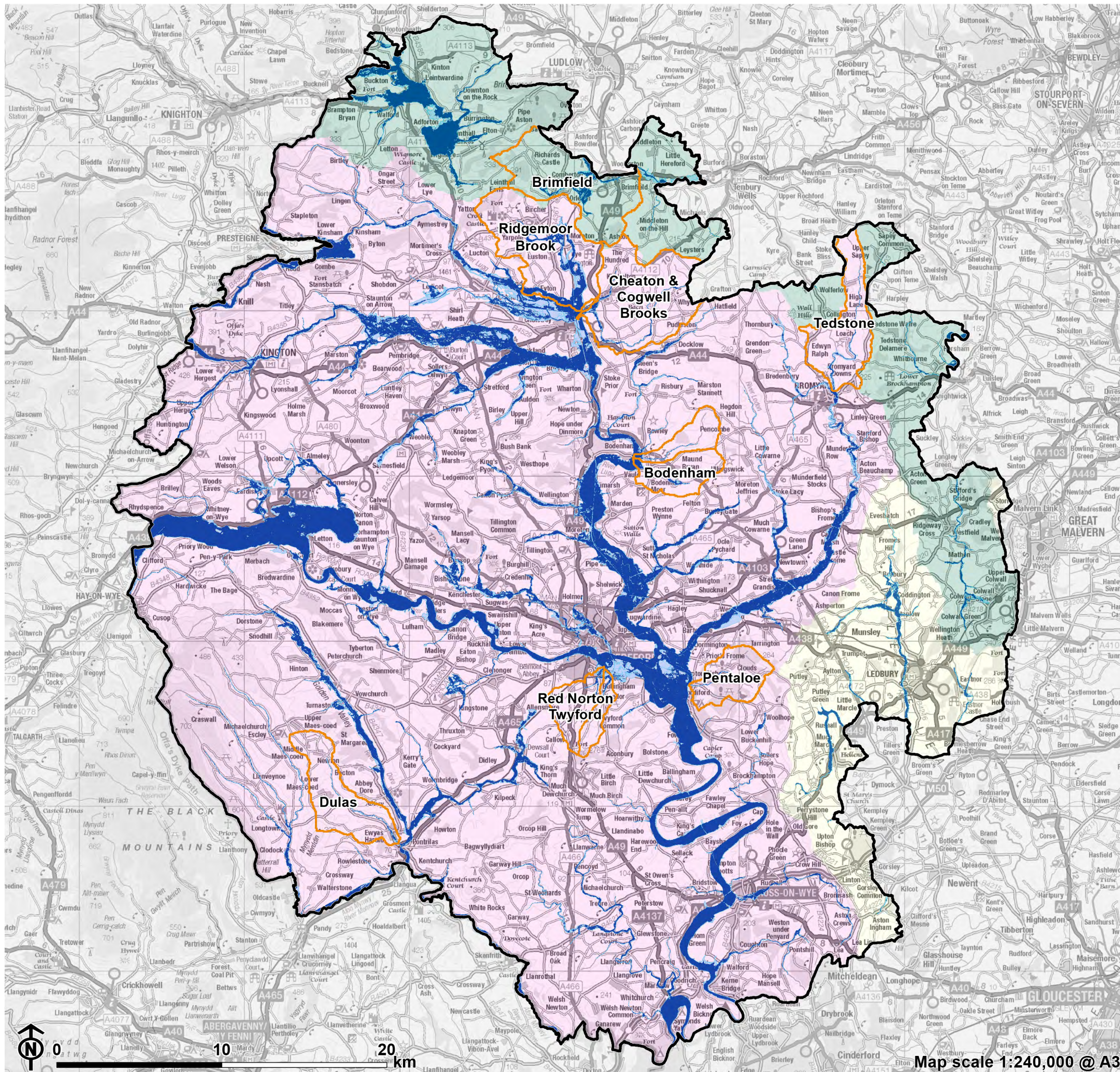
The number of potential impacts from specific types of development reduce at increasing distance from the SSSI. The concentric circles, which form the IRZs, indicate the distances at which potential impacts relate to specific types of development

Of the principal settlements within the county, Hereford, Ross-on-Wye and Leominster are the most constrained by SSSI IRZs due to the presence of the River Wye SSSI and River Lugg SSSI.

Natural Resources Wales (NRW) does not have a published IRZ system, therefore, there are no SSSI IRZs in the south west.

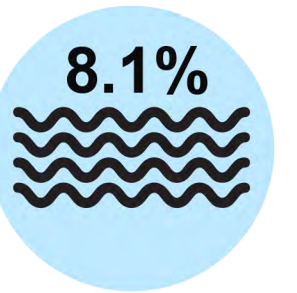
Source: Herefordshire County Council, Natural England, Ordnance Survey

Figure 4.5: Blue Infrastructure



- Herefordshire boundary
- Flood zone 2
- Flood zone 3
- Natural flood management catchment
- River Wye Management Catchment
- River Teme Management Catchment
- Severn Vale Management Catchment

Approximate % area of Herefordshire characterised by active flood plain



In Herefordshire, the River Clun and River Lugg have been identified as 'Critical Threshold' sites for water quality.

'Critical threshold' sites refers to areas that have reached the threshold at which the integrity of qualifying habitats and/or favourable conservation status of qualifying species can no longer be maintained without the intervention of a recognised mitigation strategy, typically across a defined buffer or Zone of Influence (Zoi).

Source: Environment Agency, Ordnance Survey

Key findings from stakeholder consultation

4.1 The key findings from consultation and engagement (see **Chapter 1**) are listed below:

- The network of rivers and streams within Herefordshire form important blue and green corridors, albeit in variable ecological condition.
- The Severn River Partnership is tackling flood management along the river catchments of the Severn, Wye, Warwickshire Avon and Teme; with the aim of delivering an integrated approach to GBI implementation.
- Nutrient neutrality is an important issue within the county, specifically within the River Lugg and Clun catchments. The potential exists to explore natural solutions to river restoration through the integration of wetlands and riparian corridors.
- Traditional orchards are a locally distinctive asset of Herefordshire, although remaining habitat is small and fragmented.
- The ‘Severn Treescapes’ project aims to increase woodland connectivity at a regional scale, particularly to the east of the county.
- A number of existing initiatives aimed at contributing to nature recovery exist within the county. These include ‘A Wilder Herefordshire Project’ and a ‘Network for Nature’ programme along the Lower Lugg Valley, as promoted by Herefordshire Wildlife Trust.
- Opportunities to diversify or enhance biodiversity within rural areas of the county should respond to the distribution of high grade agricultural land.
- The opportunity exists to provide consistency between the Strategy and the emerging Local Nature Recovery Strategy (LNRS). The findings of the Local Wildlife Sites (LWS) review should also inform the development of the Strategy.

Conclusions and next steps

Designated site network

Key issue: Sections of the designated site network are in unfavourable condition.

Next steps: Management should be targeted to address the underlying cause(s) of poor condition. This may involve the reintroduction of conservation grazing or ensuring the management of recreational access to sensitive sites. Priorities for local scale intervention should also be informed by the upcoming Local Wildlife Site review.

Distinctive habitats

Key issue: Herefordshire is home to varied and distinctive habitats (e.g. lowland meadows, floodplain grazing marsh, lowland dry acid grassland, grass moorland and upland heathland, ancient woodland, deciduous woodland, hedgerows and traditional orchards) but these are generally small and fragmented.

Next steps: Protect, create and enhance habitats across the county to support species recovery and greater climate resilience.

Flood zones

Key issue: Large areas of Herefordshire are located within flood zones.

Next steps: Explore opportunities for nature-based solutions to improve resilience and adaptation to flooding along river corridors. This includes wetlands and riparian woodland as well as attenuation features outside of flood zones to slow the flow of water, such as ponds and ditches.

Phosphates and nitrate pollution

Key issue: Excessive phosphates and nitrates due to land use changes are key contributors to the poor ecological condition of Herefordshire's river network.

Next steps: Identify wetland creation and increased nature-friendly and sensitive land use practices to help improve water quality and limit nutrient run-off. Nutrient credits can also offer a delivery mechanism for strategic mitigation and river restoration opportunities. Additionally, recent guidance from DEFRA, published in February 2023 [See reference 13], identifies the opportunity to combine environmental payments. This process is anticipated to be refined during the lifespan of this Strategy but as it currently stands where projects deliver nutrient neutrality, credits from Biodiversity Net Gain can be stacked on top. These combined mechanisms offer significant opportunity for delivering multifunctional GBI but must also acknowledge that some assets may have a priority function.

Agriculture

Key issue: Much of Herefordshire is intensively farmed which can lead to barriers to species movement.

Next steps: The creation of nature-rich arable margins and hedgerow networks would improve landscape permeability for a wide range of locally important species, such as invertebrates, small mammals, bats and farmland birds. Proposals to strengthen the existing hedgerow network through 'gapping up' with locally appropriate species should be explored.

Biodiversity Net Gain (BNG)

Key issue: Requirement for biodiversity to be incorporated into existing and future developments in accordance with upcoming BNG requirements to

create nature-rich urban settlements.

Next steps: Explore opportunities to deliver a minimum of 10% BNG as well as incorporate BNG within developments not currently in scope (e.g. agricultural). Any strategic offsite BNG should be guided by the emerging LNRS.