

Section 4: Identification of Priorities (Outcomes) and Measures (Actions)

4.1 Introduction: The selection process

Through the data analysis and spatial description at Step 3, strategic priorities and measures have been identified to support nature recovery and other ecosystem services across Derbyshire. All the habitat themes identified within the priorities will play a key role in recovering nature, supporting species, and providing wider environmental benefits that are essential to social and economic prosperity, as well as creating greater resilience to address the longer-term impacts of climate change.

All these priorities and measures were developed through a comprehensive and inclusive stakeholder engagement exercise operating throughout the strategy development and informing the process in a truly iterative manner. All priorities and measures demonstrate how they align with the evidence provided by the data, the opportunities identified through the analysis of that data and the spatial description of the area, and the National Environmental Objectives set by government.

The guiding principles established at the outset, and validated and developed through wider engagement, were to identify priorities and measures that would achieve bigger, better, more, and more connected and protected spaces for nature to thrive. Focus will be on the protection and enhancement of our most valuable and irreplaceable habitats and most threatened species, and then taking the necessary steps to increase the extent of these habitats and species into the areas that support them.

The tables that follow set out those priorities (outcomes) that will guide nature recovery into the future across Derbyshire and the measures (actions) that will be needed to achieve these outcomes. These have been set out under broad habitat themes or under cross-cutting themes that are relevant to all or most parts of the county regardless of the prevailing landscape characteristics.

We might want to add some text here to explain how these priorities and measures relate to the mapping – not clear until the mapping is more advanced

4.2 Upland Moorland and Lowland Heath

The Peak District peatlands are perhaps our most important ecosystem because of the range of ecosystem services they provide. The deep peaty soils not only provide protected blanket bog and heathland habitats supporting several specialist bird species, and recognised internationally for their importance, but are also vital for other essential services such as carbon capture and storage, water management, as well as recreational space for local communities and the tourist economy.

The focus on continued protection and enhancement of these areas is essential given that the opportunities for expansion are more limited because of the exacting physical conditions needed for delivering habitat of this type, but there will be opportunities for creating complimentary habitats around the moorland fringe to assist in their protection whilst providing other benefits and ecosystem services.

ID	Priority	Ref	Measure	Delivery of National Environmental Objective
MH-1	Protect and improve the condition of upland moorland habitats (including a mosaic of upland heath, blanket bog and associated grassland, wetland, scrub, and trees) and its transitional fringe, including for the benefit of associated breeding birds and other dependent species.	001	<ul style="list-style-type: none"> Ensure appropriate management is implemented including controlling grazing, rewetting, ensuring a diversity of heathland structure, controlling scrub and invasive species, and managing fire risk. 	NEO2, NEO12, NEO13
		002	<ul style="list-style-type: none"> Expand the blanket bog resource through creation and restoration in areas with suitable substrate, hydrology, and other conditions. 	NEO1, NEO7, NEO13
MH-2	Expand the upland moorland habitats (including a mosaic of upland heath, blanket bog and associated grassland, wetland, scrub, and trees) and its transitional fringe, into appropriate areas where conditions allow, providing expanded habitat for breeding birds and other dependent species (upland heath assemblage).	003	<ul style="list-style-type: none"> Create and restore upland heathland (and associated grasslands, scrub, and trees) by identifying areas with suitable substrate, manage to ensure nutrient status is appropriate and use heathland establishment (seeding, brash etc) measures, ideally using local sources. 	NEO1, NEO7, NEO12

		004	<ul style="list-style-type: none"> Expand and diversify moorland fringe and transitional habitat areas to provide a mosaic of grassland, heathland, scrub, trees, and woodland. 	NEO2, NEO7
MH-3	Improve the condition of upland peatland in the Local Nature Recovery Strategy area to support ecological functionality and increase carbon sequestration and natural flood management.	005	<ul style="list-style-type: none"> Seek to improve the condition and function of peatlands through appropriate measures to re-wet habitats, to revegetate bare peat, and to stabilise areas of erosion, reducing carbon emissions and creating conditions for future peat formation, carbon sequestration and improved natural flood management. 	NEO7, NEO12, NEO13
MH-4	Improve abundance of breeding bird species in upland peatland.	006	<ul style="list-style-type: none"> Manage the diversity of moorland habitats for the benefit of upland bird species. 	NEO2, NEO3
		007	<ul style="list-style-type: none"> Targeted predator control undertaken as part of an integrated strategy to reduce pressures upon priority species. 	NEO2, NEO3
MH-5	Lowland heathland in Derbyshire is protected and well managed, and the resource is expanded wherever appropriate.	008	<ul style="list-style-type: none"> Existing lowland heathland sites are identified and prioritised for management, restoration, and enhancement to address bracken and scrub dominance and improve heathland structure. 	NEO2
		009	<ul style="list-style-type: none"> Explore the potential for existing lowland heathland sites to be buffered, extended, and connected, ideally with new heathland but alternatively with complementary habitats. 	NEO1, NEO2
		010	<ul style="list-style-type: none"> Opportunities are taken to create new heathland sites, particularly those which can be delivered through quarry working and restoration, new development, or reversion of conifer plantations over suitable soils. 	NEO1, NEO2

4.3 Woodlands and Trees

Woodlands and trees provide another important habitat type across Derbyshire that supports a rich diversity of species, as well as important ecosystem services around carbon capture and storage, natural flood management, improved air quality, timber production, and recreational opportunities. Parts of the county such as the Peak Fringe and Lower Derwent area are particularly rich in irreplaceable ancient semi-natural woodland, whilst areas to the south of the county are becoming more wooded due to the work of the National Forest project. Derbyshire’s Heartwood Community Forest initiative will further this trend in the east of the county. The protection, management, enhancement, and expansion of woodland and tree habitats are all a strong focus of the Local Nature Recovery Strategy, helping to address the impacts of climate change and enhance the wellbeing of residents through the provision of more accessible green space.

ID	Priority	Ref	Measure	Delivery of National Environmental Objective
WT-1	Ancient woodland, historic wood pasture parkland and veteran trees are protected, managed and in good ecological condition.	011	<ul style="list-style-type: none"> Sites are identified and in positive management to maximise their biodiversity value and ensure their longevity. 	NEO2, NEO11, NEO12
		012	<ul style="list-style-type: none"> Specialist tree management techniques are used to extend the life of veteran and ancient trees. 	NEO2, NEO12
		013	<ul style="list-style-type: none"> Restore Plantations on Ancient Woodland sites to native, locally appropriate species. 	NEO2, NEO11
		014	<ul style="list-style-type: none"> Species assemblages associated with ancient woodland, veteran trees, and historic wood pasture parkland - saproxylic invertebrates and fungi, bats etc - should be carefully considered, and their populations enhanced including through specific interventions where necessary. 	NEO2, NEO3

WT-2	Existing woodland is well managed and better for wildlife.	015	<ul style="list-style-type: none"> • Introduce woodland management plans, bringing woodlands into active management to accord with UKFS standards, to promote biodiversity, increase resilience to climate change, and maximise wider environmental benefits such as natural flood management or carbon sequestration. 	NEO1, NEO2, NEO11
		016	<ul style="list-style-type: none"> • Manage and control invasive non-native woodland species, pests and diseases including rhododendron, grey squirrel, and ash die-back disease. 	NEO1, NEO2, NEO11, NEO17
		017	<ul style="list-style-type: none"> • Promote partnership working to develop and implement a landscape scale integrated deer management strategy. 	NEO1, NEO2, NEO11, NEO17
		018	<ul style="list-style-type: none"> • Create and improve woodland structure and species diversity through appropriate management actions including through active management, harvesting and timber, planting, and the use of natural processes. 	NEO1, NEO2, NEO11
		019	<ul style="list-style-type: none"> • Where ash dieback is present, diversify species composition and implement tailored interventions at each site to promote recovery and increase future resilience. 	NEO2, NEO11
WT-3	New woodland creation delivers more, bigger, and better-connected woodland, maximising ecosystem service benefits.	020	<ul style="list-style-type: none"> • Create new UKFS (United Kingdom Forestry Standards) compliant woodland with a preference for semi-natural native woodland, including wet woodland, following sound ecological principles and bring into positive management. 	NEO1, NEO2, NEO4
		021	<ul style="list-style-type: none"> • Buffer existing woodland sites with new woodland creation, to protect core sites from impact, extend their benefit and provide edge habitats. 	NEO1, NEO2, NEO4
		022	<ul style="list-style-type: none"> • Increase transitional habitats around and between woodlands to increase ecotones and establish wildlife rich dynamic mosaics. 	NEO1, NEO2

		023	<ul style="list-style-type: none"> Identify areas for new woodland creation specifically to improve connectivity between woodlands - particularly existing ancient woodlands and core sites - at the landscape scale. 	NEO1, NEO2, NEO4
		024	<ul style="list-style-type: none"> New woodland creation prioritises habitat creation whilst additionally delivering nature-based solutions and ecosystem services, such as Natural Flood Management and/or public access. 	NEO1, NEO2, NEO4, NEO11
		025	<ul style="list-style-type: none"> Allow new woodlands to generate naturally where possible (i.e. adjacent to or close to existing high value woodland) or use planting where necessary. 	NEO1, NEO2, NEO4
		026	<ul style="list-style-type: none"> Planting should use locally appropriate species and a mixture of local provenance and/or climate resilient stock. 	NEO1, NEO2, NEO4, NEO13
		027	<ul style="list-style-type: none"> Take opportunities to create new woodlands for example around new residential developments, new employment land use, and sand and gravel sites, as part of managed change to improve the area for people and wildlife. 	NEO1, NEO2
		028	<ul style="list-style-type: none"> Target wood pasture parkland restoration to historic, neglected, and relict wood pasture parkland sites, planting replacement parkland trees and bringing into active management to ensure their survival and longevity. 	NEO1, NEO2, NEO4, NEO11
WT-4	Increase trees in the wider landscape, including field trees, fruit trees, hedgerow trees and watercourse trees, and agroforestry especially where they can reinforce the local character as well as contributing to biodiversity.	029	<ul style="list-style-type: none"> Protect and manage existing hedgerow trees to support their retention and longevity, and plant locally appropriate hedgerow and in-field trees to diversify hedgerows, provide future mature trees in the farmed landscape, and reinforce the wooded character of suitable landscapes. 	NEO2, NEO4

		030	<ul style="list-style-type: none"> Plant trees along watercourses to provide multiple benefits including habitat, shade/watercourse cooling, water quality improvements, bank stabilisation and Natural Flood Management (NFM). 	NEO2, NEO4
		031	<ul style="list-style-type: none"> Introduce appropriate agroforestry options to increase tree cover in farmed landscapes whilst increasing resilience to climate change, improving soil fertility and carbon sequestration. 	NEO1, NEO2, NEO4
		032	<ul style="list-style-type: none"> Identify and restore existing and derelict traditional orchards and create new community orchards where appropriate. 	NEO1, NEO2, NEO4
WT-5	Trees in the wider landscape are positively managed, and ancient and veteran trees are protected.	033	<ul style="list-style-type: none"> Trees in the wider landscape are managed to ensure their longevity, promote biodiversity, improve their condition, and maintain safety, and to increase their resilience to climate change. 	NEO2, NEO4
		034	<ul style="list-style-type: none"> Ancient and veteran trees in the wider landscape are protected and managed, including considering fencing or root protection measures, to support their retention and longevity. 	NEO2, NEO4
WT-6	Urban trees become more common throughout towns and cities, for amenity, urban shading, and air quality benefits as well as biodiversity.	035	<ul style="list-style-type: none"> Existing street trees are managed positively to promote their longevity and are replaced at the end of their life. 	NEO2, NEO13
		036	<ul style="list-style-type: none"> Incorporate trees into street scene, open spaces, amenity areas, gardens and public open spaces in new developments and existing urban areas. 	NEO2, NEO4, NEO13

4.4 Grassland

Whilst Derbyshire remains an essentially pastoral County, many grasslands have been lost to modern, more productive agricultural practices meaning that remaining grassland habitat is often fragmented and isolated in the landscape. Grasslands are important for a range of plant and animal species, some of which are now becoming endangered. Protecting and enhancing the best areas and expanding and creating new grassland habitat to develop a more connected network will boost biodiversity. Simultaneously, additional grassland habitat will provide wider benefits such as improving agricultural productivity through more pollinators and better soil protection, buffering the effects of diffuse pollution, contributing to the diversity of habitats that make beautiful landscapes that people visit and enjoy, and helping promote cultural connections to the land.

ID	Priority	Ref	Measure	Delivery of National Environmental Objective
GL-1	Protect and enhance high quality and species rich grassland habitats including unimproved grassland, species rich grassland and meadows, and calaminarian grassland.	037	<ul style="list-style-type: none"> Sites are identified and in positive management to maximise their biodiversity value as grasslands and for their associated species. 	NEO2, NEO12
GL-2	Existing grasslands are managed, restored, and enhanced to increase biodiversity (including pollinators and other invertebrates), improve resilience to climate change, and maximise wider environmental benefits such as natural flood management or carbon sequestration.	038	<ul style="list-style-type: none"> Existing moderate quality and neglected sites are enhanced through appropriate management. 	NEO1, NEO2
		039	<ul style="list-style-type: none"> Species poor semi-natural grasslands are restored and diversified, and are subsequently managed to maintain and enhance their species richness. 	NEO1, NEO2
		040	<ul style="list-style-type: none"> Encourage fire planning and preventative measures in grassland areas. 	NEO1, NEO2
GL-3	The grassland resource is increased, connected and existing sites are extended through the restoration and creation of new semi-natural and species rich grasslands.	041	<ul style="list-style-type: none"> Take opportunities to create new species rich grasslands for example around new development, through enhanced green infrastructure. 	NEO1, NEO2
		042	<ul style="list-style-type: none"> Create new species-rich grasslands through the reversion of intensive grassland and arable farmland. 	NEO1, NEO2, NEO5

		043	<ul style="list-style-type: none">• Create high quality, species rich grasslands (calcareous, acidic, neutral, and wet grasslands as appropriate) through the targeted restoration of quarry sites.	NEO1, NEO2
		044	<ul style="list-style-type: none">• Target grassland creation and enhancement to locations adjacent to existing high-quality grasslands sites.	NEO1, NEO2
		045	<ul style="list-style-type: none">• Target grassland creation and enhancement to locations where they can contribute to or enhance connectivity within the grassland network.	NEO1, NEO2

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4.5 Rivers, river corridors and other watercourses

Rivers, river corridors and other watercourses, including reservoirs and canals, are vital in supporting aquatic habitats and species, as well as providing clean water for human consumption. Riverside habitats play a key role in natural flood management and water purification, often intertwined with productive farmland. In recent years flooding has been a major issue within the county particularly within the Derwent Valley and along the River Trent, with several major flood events. The overarching aim of the Local Nature Recovery Strategy is to improve rivers along their length by removing barriers to species migration and better connect watercourses to their wider catchment to improve their resilience to flooding, diversify habitats, improve water quality, and enhance recreational opportunities.

ID	Priority	Ref	Measure	Delivery of National Environmental Objective
RW-1	Improve and restore connectivity of river corridors to restore natural processes and support the free movement of in-channel and riparian species.	046	<ul style="list-style-type: none"> Identify and remove redundant weirs and in-channel structures, allowing the free movement of fish and the restoring natural river processes. 	NEO8, NEO14
		047	<ul style="list-style-type: none"> Address barriers to species movement including by the creation of targeted fish passage for all species (coarse, salmonid and eels), the installation of otter ledges and other measures. 	NEO8, NEO14
		048	<ul style="list-style-type: none"> Develop the River Derwent as a stronghold for riparian mammals including beaver, water vole and otter through habitat management, improved connectivity, and other conservation measures as appropriate including reintroductions for beaver. 	NEO2, NEO3, NEO5, NEO8, NEO12
		049	<ul style="list-style-type: none"> Identify and remove redundant culverts, reopening new stretches of watercourses which are available and accessible to people and wildlife. 	NEO6, NEO8, NEO14

RW-2	Improve connectivity between watercourses and their floodplains to restore dynamic natural processes, reduce flood risk and create high quality semi-natural riparian habitats.	050	<ul style="list-style-type: none"> • Reduce the height of berms and banks where rivers have been over-deepened to allow rivers to spread out into their previously disconnected floodplains. 	NEO1, NEO2, NEO14
		051	<ul style="list-style-type: none"> • Allow natural revegetation of buffer zones next to watercourses to provide space for native species to live and forage. 	NEO1, NEO2, NEO5, NEO8
		052	<ul style="list-style-type: none"> • Introduce new backwater and wetland features including ponds, floodplain meadows and associated habitats to add diversity to riparian habitats and store water. 	NEO1, NEO2, NEO14
		053	<ul style="list-style-type: none"> • Increase the extent of tree and/or woodland planting alongside watercourses and within floodplains, including wet woodland, particularly where they contribute to natural flood management. 	NEO1, NEO2, NEO4, NEO14
		054	<ul style="list-style-type: none"> • Improve the condition of wet woodland / riverside trees by promoting a varied age structure and species diversity. 	NEO1, NEO2, NEO4
		055	<ul style="list-style-type: none"> • Explore and respond to the opportunities presented by sand and gravel extraction in the Trent and Dove valleys to help restore wetland habitat and connect the river to these sites through reduced bank heights, linking wetlands to the river, creating braided channels, etc. 	NEO1, NEO2
		056	<ul style="list-style-type: none"> • Establish a programme for the control and eradication of invasive non-native species that are having an adverse effect on the riverine system. 	NEO2, NEO3, NEO17
		057	<ul style="list-style-type: none"> • Identify and remove redundant hard engineering along riverbanks, giving rivers space to move. 	NEO2, NEO3
RW-3	Improve and increase the biodiversity value and public enjoyment of reservoirs, associated	058	<ul style="list-style-type: none"> • Seek opportunities to enhance and manage the surrounding land in a way that increases biodiversity, including ornithological interest. 	NEO2, NEO3, NEO5,

	habitats and surrounding land whilst protecting their vital role in water supply.	059	<ul style="list-style-type: none"> • Increase access and enjoyment of reservoirs and land surrounding reservoirs through the creation of appropriate public access routes. 	NEO6
RW-4	Improve the water quality of rivers and watercourses.	060	<ul style="list-style-type: none"> • Identify and address point and diffuse sources of pollution, including sources of silt and agricultural run-off. 	NEO5, NEO8
		061	<ul style="list-style-type: none"> • Create and maintain wetland habitats in strategic locations that are able to intercept and filter pollutants before they enter rivers and watercourses. 	NEO5, NEO8

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4.6 Farmland

Derbyshire is still a rural county and retains large areas of highly productive farmland with stock rearing prevalent within the Peak District and its fringes, and mixed arable farmland more noticeable to the east and south of the county. Agricultural habitats can still support a range of wildlife particularly when managed alongside sustainable farming practices, to increase food security and provide economic benefits to local communities. Protecting, enhancing, and connecting these habitats makes farmland more permeable to wildlife, creates more space for nature, and improves soil quality and supports pollinators essential for crop productivity.

ID	Priority	Ref	Measure	Delivery of National Environmental Objective
FL-1	Improve ecological connectivity through the farmed landscape.	062	<ul style="list-style-type: none"> Existing hedgerows are brought into good ecological management, including gapping up to improve connectivity, and the maintenance and introduction of hedgerow trees. 	NEO2, NEO10
		063	<ul style="list-style-type: none"> Opportunities are sought to replant hedgerows on former alignments, or to create new native, locally appropriate hedgerows to improve connectivity. 	NEO1, NEO10
		064	<ul style="list-style-type: none"> Field margins, buffer strips, and ditches and watercourses are used to improve habitat connectivity and landscape permeability for species. 	NEO1, NEO2
FL-2	The farmed landscape is more favourable and permeable to wildlife, particularly pollinators and farmland birds.	065	<ul style="list-style-type: none"> Seek opportunities to improve the farmed landscape for pollinators, including through the establishment of flower-rich grass margins, in-field strips, nectar strips and/or herb rich grass leys, or leaving unsprayed areas in arable fields. 	NEO2, NEO3
		066	<ul style="list-style-type: none"> Establish beetle banks and other areas for natural predators within arable farming. 	NEO2, NEO3

		067	<ul style="list-style-type: none"> • Deliver interventions for the benefit of farmland birds including skylark plots, sowing of wild bird seed mix for winter cover crop, leaving stubble on cropped fields. 	NEO2, NEO3
		068	<ul style="list-style-type: none"> • Support the development of grant or other funding mechanisms that recognise the value and potential of semi-improved grasslands and offer options to deliver further improvements for biodiversity. 	NEO2, NEO3, (NEO13, NEO14)
FL-3	Land use practices are modified to avoid adverse impacts on the wider environment, including freshwater habitats.	069	<ul style="list-style-type: none"> • Farming practices seek to reduce agricultural run-off, particularly to watercourses, especially where they are affecting habitats downstream. 	NEO1, NEO5, NEO8
		070	<ul style="list-style-type: none"> • Where grazing occurs on land adjacent to streams and rivers, access by animals is controlled to prevent sediment entering the watercourse. 	NEO1, NEO5, NEO8
		071	<ul style="list-style-type: none"> • Where evidence demonstrates agricultural land is at risk of becoming a net emitter of carbon, practices are modified to deliver greater carbon sequestration. 	NEO1, NEO5, NEO8
		072	<ul style="list-style-type: none"> • Implement regenerative farming practices such as permanent pasture, no till/minimum tillage practices and the planting of deep-rooted leys, in order to improve soil condition, carbon sequestration, natural flood management and biodiversity. 	NEO1, NEO5, NEO8, NEO14

4.7 Wetlands

Beyond the wet blanket bogs of the Peak District, Derbyshire has other wetland habitat associated with ponds, lowland fen, swamp, marsh and reedbeds, especially evident in the coalfield landscapes, often associated with former colliery lagoons or subsidence flashes caused by past underground coal mining, and along the Trent Valley because of sand and gravel extraction. Many of these wetlands can be isolated but continue to provide valuable habitat in often fragmented landscapes. The focus is on protecting and enhancing existing sites, buffering them from further harm, creating new wetlands where possible to connect the wetland network, particularly using sustainable urban drainage schemes as part of new urban development.

ID	Priority	Ref	Measure	Delivery of National Environmental Objective
WL-1	Protect and enhance wetland habitats including ponds, lowland fen, swamp, marsh, reedbed etc.	073	<ul style="list-style-type: none"> Sites are identified and in positive management to maximise their biodiversity value as wetlands and for their associated species. 	NEO2, NEO8, NEO12
WL-2	Existing wetlands are managed and enhanced to support greater levels of biodiversity, for example for amphibians and invertebrates.	074	<ul style="list-style-type: none"> Existing moderate quality and neglected ponds and wetlands are enhanced through biodiversity-focussed management including dew ponds in the White Peak. 	NEO2, NEO8, NEO14
		075	<ul style="list-style-type: none"> Investigate and improve water quality (for example through use of buffer strips) where this is having a detrimental effect on the condition of wetlands. 	NEO2, NEO8, NEO14
WL-3	The wetland resource is increased, connected, and existing sites are extended and buffered through the creation of new semi-natural wetlands	076	<ul style="list-style-type: none"> Take opportunities to create new ponds and wetlands for example around new development, through enhanced green infrastructure or Sustainable Urban Drainage Systems (SUDS). 	NEO1, NEO2, NEO8, NEO14
		077	<ul style="list-style-type: none"> Create new field ponds in appropriate locations and in areas of complementary habitat. 	NEO1, NEO2, NEO8, NEO14
		078	<ul style="list-style-type: none"> Target new pond and wetland creation to locations adjacent to existing high-quality wetland sites. 	NEO1, NEO2, NEO8, NEO14

		079	<ul style="list-style-type: none">• Buffer and protect existing and new pond and wetland sites, through the creation and enhancement of complementary habitats (grasslands, rough margins, tree planting) to make space for water, improve water quality and help ensure wetlands can function naturally.	NEO1, NEO2, NEO8, NEO14
		080	<ul style="list-style-type: none">• Target wetland creation and enhancement to locations where they can contribute to or enhance connectivity within the wetland or riparian networks.	NEO1, NEO2, NEO8, NEO14

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4.8 Urban Environment and Infrastructure

Although largely a rural county, Derbyshire is home to around 800,000 people predominantly located in the former coalfield communities to the east of the county and in Derby, the only city. Protecting, enhancing, and linking urban habitats can contribute to nature recovery and help connect urban areas to their surrounding countryside for the benefit of its residents. These public health benefits can be secured through greater access to natural green space including woodlands, wetlands, parks, canals, and rivers, which also contribute to climate resilience through better natural flood management and by reducing the urban heat effects. Existing environmental initiatives such as the National Forest and Heartwood Community Forest will be key mechanisms for connecting people with nature.

The urban environment also includes the road and other transport networks that criss-cross the county sometimes creating barriers to habitat and species connectivity whilst conversely providing opportunities to increase these connections, especially when applied alongside other measures in the wider landscape.

ID	Priority	Ref	Measure	Delivery of National Environmental Objective
UE-1	Urban environments become more biodiverse and permeable to wildlife.	081	<ul style="list-style-type: none"> Within urban settings, the most valuable habitat areas and sites for biodiversity are protected and enhanced as reservoirs for wildlife in the area. 	NEO2
		082	<ul style="list-style-type: none"> Habitat creation in urban areas should aim to use native, locally appropriate species where possible. 	NEO1, NEO2, NEO6
		083	<ul style="list-style-type: none"> In redeveloping brownfield land, consideration is given to maintaining a viable resource of open mosaic habitats, for the species that depend on them. 	NEO2, NEO3
		084	<ul style="list-style-type: none"> Urban green spaces, parks, allotments, cemeteries etc are managed with biodiversity in mind, to increase their value for wildlife. 	NEO1, NEO2, NEO6

		085	<ul style="list-style-type: none"> Maximise biodiversity and appropriate public access into publicly owned sites such as country parks, Local Nature Reserves, and greenways and multi-user trails. 	NEO1, NEO2, NEO6
		086	<ul style="list-style-type: none"> Residents are encouraged to make gardens more wildlife friendly, to increase biodiversity and habitat connectivity through urban areas. 	NEO1, NEO2, NEO6
		087	<ul style="list-style-type: none"> Opportunities are sought to deliver new, strategic biodiversity enhancement and green infrastructure, including through land use change and habitat creation within green wedges. 	NEO1, NEO2, NEO6
		088	<ul style="list-style-type: none"> Where new developments are proposed that include underground watercourses, these sections are opened up and incorporated into the new development. 	NEO2, NEO3
		089	<ul style="list-style-type: none"> Urban biodiversity features including green/brown roofs and living walls are considered in the most urban areas where other opportunities are limited. 	NEO1, NEO2, NEO6
		090	<ul style="list-style-type: none"> Increase the use of sustainable alternatives to chemical herbicides, pesticides, insecticides etc where evidence demonstrates they are effective but less harmful to the environment. 	NEO2, NEO5, NEO8
UE-2	Urban wildlife species are supported, particularly where those species need conservation action.	091	<ul style="list-style-type: none"> Watercourses and green spaces are managed with bats in mind, with lighting carefully considered to avoid impacts. 	NEO2, NEO3
		092	<ul style="list-style-type: none"> Bat boxes are installed, and sustainable, permanent bat roosting features are incorporated into appropriate locations where they can remain undisturbed. 	NEO2, NEO3
		093	<ul style="list-style-type: none"> Nesting peregrine falcons in urban areas are supported and public engagement encouraged. 	NEO2

		094	• Swift nest boxes and nest places are incorporated into new development wherever appropriate, and retrofitted to existing buildings where possible.	NEO2, NEO3
		095	• Local Planning Authorities develop and promote urban design guidance/ planning policy requirements for the integration of wildlife friendly measures in the urban environment, including bat boxes, measures to support urban birds, hedgehog friendly neighbourhoods, ponds, and wildlife friendly planting.	NEO2, NEO3
		096	• Promote pollinators throughout urban areas through pollinator friendly planting in parks, gardens, and other amenity areas.	NEO2, NEO3
		097	• Where watercourses are present, they are afforded a minimum 10m buffer managed to ensure there is suitable cover available for water vole and other species.	NEO2, NEO3, NEO5, NEO8
UE-3	Habitat creation and enhancement seeks to deliver an improved network of locally appropriate, accessible, multifunctional green spaces, for the benefit of people and wildlife.	098	• Opportunities are sought to deliver new multifunctional green spaces in locations that will benefit existing and new communities, thereby improving accessibility and biodiversity.	NEO2, NEO6
		099	• New accessible multifunctional green spaces are located adjacent to existing sites of biodiversity value, to create larger and better-connected sites for people and wildlife.	NEO2, NEO6
		100	• Local planning policy is used to target mandatory Biodiversity Net Gain measures to deliver social (public access) as well as environmental gain.	NEO1, NEO2, NEO6
		101	• Local Authorities seek to identify additional sites to designate as Local Nature Reserves.	NEO2, NEO6
UE-4	Roads and other transport networks contribute positively to biodiversity.	102	• Verges along existing roads, railways and other transport corridors are managed positively, to promote biodiversity and improve connectivity across the landscape.	NEO2

		103	<ul style="list-style-type: none"> Biodiversity friendly measures are built into new roads and developments and should include wildflower rich verges, hedgerows, native tree planting, Sustainable Urban Drainage Systems (SUDS) and more. 	NEO1
		104	<ul style="list-style-type: none"> Where major roads currently cause habitat severance and breaks in strategic ecological networks, efforts should be made to reconnect habitats through green bridges, 'undergrounding' of routes etc. 	NEO2
		105	<ul style="list-style-type: none"> New roads and transport infrastructure should aim to avoid habitat severance through careful routing and design, and by building in wildlife underpasses etc. These should be retrofitted to roads where feasible and where significant habitat severance can be evidenced. 	NEO2
		106	<ul style="list-style-type: none"> Road and rail bridges over water should allow space to accommodate wildlife passage even in times of flood, and otter ledges etc should be fitted as required. 	NEO2

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4.10 People and Wildlife

Many of the opportunities identified by our partners lay beyond simply protecting, enhancing, and connecting existing habitats and species but were more associated with better informing our communities about the benefits of a richer natural environment. Priorities and measures have been developed to achieve this through better education, by developing more opportunities for people to access and engage with wildlife, and by working collaboratively with other sectors such as farmers and landowners to create partnerships, share best practice, and provide the necessary advice needed to allow these benefits to be delivered.

ID	Priority	Ref	Measure	Delivery of National Environmental Objective
PW-1	People across Derbyshire are better informed about and more engaged with the natural environment, through education and awareness raising activities.	107	<ul style="list-style-type: none"> Environmental education equips children with knowledge to be able to understand the natural environment and care about local issues. 	NEO2, NEO3
		108	<ul style="list-style-type: none"> Create and increase opportunities for training and development, including through apprenticeships, placements, and taught courses, covering land management, ecological surveying and other nature-based skills. 	NEO2, NEO3
		109	<ul style="list-style-type: none"> Use education and engagement to promote the sustainable and appropriate use of and access to the natural environment in Derbyshire, and to facilitate public understanding and appreciation of biodiversity and environmental issues. 	NEO2, NEO3
		110	<ul style="list-style-type: none"> Install information boards at accessible or visitor focused sites explaining the biodiversity interest, nature recovery value and ecosystem service delivery of habitats on site. 	NEO2, NEO3
PW-2		111	<ul style="list-style-type: none"> Volunteering opportunities increase, and there are more people engaged with local green spaces. 	NEO6

	People have more opportunities to actively engage with the natural environment, supporting and delivering nature recovery in their area.	112	• Communities are engaged to support nature recovery in their area, through 'friends of' groups, community tree planting, 'clean up' events, community wildlife gardens and allotments etc.	NEO1, NEO6
		113	• More people are enabled to support and facilitate nature recovery through species recording, habitat survey, citizen science etc.	NEO1, NEO6
		114	• Create opportunities for children and young people to actively participate in nature recovery projects and to engage with the natural environment through initiatives like Forest Schools.	NEO1, NEO2
		115	• Projects seek to deliver new and improved opportunities for appropriate public access to, enjoyment of and understanding of nature and wildlife sites.	NEO6
		116	• People are enabled and empowered to develop and implement community-led projects for nature recovery.	NEO1, NEO6
PW-3	Promote the sharing of knowledge, information, and best practice to enable better stewardship and effective nature recovery.	117	• Promote cooperation and collaboration between landowners/managers and other practitioners to achieve shared goals or contribute to larger environmental gains.	NEO1, NEO2, NEO3
		118	• Sharing of best practice to enable more effective implementation across wider areas, towards common goals.	NEO1, NEO2, NEO3
		119	• Support increased knowledge and understanding of nature recovery requirements and the natural environment through increased habitat and species surveying.	NEO1, NEO2, NEO3
		120	• Create a countywide invasive non-native species action group to coordinate action, facilitate collaboration, develop communications and engagement, and share best practice.	NEO1, NEO2, NEO3, NEO17

		121	<ul style="list-style-type: none">• To develop an advisory and coordinating service to support farmers and landowners including to access funding to deliver LNRS Priorities and Measures.	NEO1, NEO2, NEO3
		122	<ul style="list-style-type: none">• Businesses and industry are supported to understand how their operation affects the natural environment, and how they can positively deliver nature recovery, including for the benefit of business.	NEO1, NEO2, NEO3
		123	<ul style="list-style-type: none">• Develop a market for green finance and payment for ecosystem services, to generate investment in nature recovery and natural capital in Derbyshire.	NEO2, NEO3, NEO13

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4.11 Species and Species Assemblages

The priorities and measures set out above will help deliver a network of more, bigger, better, and better-connected habitat across Derbyshire. Many species will benefit from this improved habitat network, supporting species recovery and resilience. This will help to halt the decline in species abundance and should deliver increased species abundance over time.

However, where species are at risk of extinction within England, we need to take additional action to halt their decline and promote their recovery. The species priorities set out below have been identified following the Natural England advice and methodology for addressing species recovery in the Local Nature Recovery Strategy, as discussed in section 2.7 of the Statement of Biodiversity Priorities.

This methodology resulted in the identification of a shortlist of 185 potential priority species for which Derbyshire could play an important role in supporting their recovery. Those species were assigned to **x** number of potential priority assemblages, leaving a further 23 species that didn't fit into assemblages because they require bespoke conservation action. Those potential priority species and assemblages were then assessed to identify the highest priorities for inclusion in the LNRS, and those final priority species and assemblages are set out below. Details of the LNRS species long list and priority species shortlist are included as **appendix XX**.

Each priority species, reintroduction priority species, and priority assemblage is accompanied by measures which will support their recovery. It must be noted that the species priorities and measures below must be read in conjunction with the habitat-based priorities and measures set out above. Many of these species below will already benefit from some of the measures identified for the habitat in which they can be found. The measures set out below are those additional actions which are required to safeguard the recovery of these species.

Priority Species

ID	Priority	Ref	Measure
SP-1	Adder (<i>Vipera berus</i>)	001	• Ensure core sites are sympathetically managed for adder.
		002	• Safeguard key basking sites, maternal birthing sites and summer foraging areas.
		003	• Identify areas where adder could expand or disperse to and manage and enhance key habitat corridors. See attached restoration of range map.

		004	<ul style="list-style-type: none"> • Use controlled reintroduction from healthy populations to establish adders in previously occupied sites as necessary.
		005	<ul style="list-style-type: none"> • Raise awareness about threats to adders.
		006	<ul style="list-style-type: none"> • Reduce disturbance to adder from recreation, grazing and other damaging management activities.
		007	<ul style="list-style-type: none"> • Identify measures to reduce the threat of fire.
SP-2	Black Poplar (<i>Populus nigra ssp. Betulifolia</i>)	008	<ul style="list-style-type: none"> • Identify, safeguard and monitor existing trees, bringing them into positive management, including control of pests and diseases.
		009	<ul style="list-style-type: none"> • Increase planting of black poplar in suitable locations, using locally appropriate source stock, whilst seeking to improve the genetic variability in newly planted trees.
		010	<ul style="list-style-type: none"> • Register black poplar stands on Forest Reproductive Materials (FRM) register.
		011	<ul style="list-style-type: none"> • Establish tree nurseries for the provision of local provenance trees taken from registered Forest Reproductive Materials (FRM) sites.
SP-3	Common Toad (<i>Bufo bufo</i>)	012	<ul style="list-style-type: none"> • Identify and map breeding ponds and toad road crossing points
		013	<ul style="list-style-type: none"> • Improve signage for toad crossings.
		014	<ul style="list-style-type: none"> • Ensure new development include measures such as dropped kerbs, amphibian ladders, toad tunnels and fencing for mitigating impacts on toads.
		015	<ul style="list-style-type: none"> • Ensure new ponds are created to meet the needs of toads.
		016	<ul style="list-style-type: none"> • Enhance habitat and connectivity around key ponds.
		017	<ul style="list-style-type: none"> • Biosecurity to minimise and address risks of disease.
SP-4	Hedgehog (<i>Erinaceus europaeus</i>)	018	<ul style="list-style-type: none"> • Create hedgehog highways that connect green space and gardens within urban areas including gaps between new gardens in residential development.

		019	<ul style="list-style-type: none"> Undertake surveys to identify viable hedgehog populations and undertake targeted habitat improvement including restoring and planting new hedgerows, providing suitable scrub and grassland, and leaving field margins and headlands.
		020	<ul style="list-style-type: none"> Encourage installation of hibernacula in gardens.
SP-5	Hen Harrier (<i>Circus cyaneus</i>)	021	<ul style="list-style-type: none"> TBC - moorland measures cover habitat requirements, but measure(s) required to address persecution
SP-6	Leisler's Bat (<i>Nyctalus leisleri</i>)	022	<ul style="list-style-type: none"> Install and monitor specified bat boxes in known locations to mitigate and encourage roost sites in across strategic areas.
		023	<ul style="list-style-type: none"> Avoid felling mature trees, especially parkland trees where roosting opportunities are present.
		024	<ul style="list-style-type: none"> Map distribution and roosts.
		025	<ul style="list-style-type: none"> Reducing disturbance and recreational pressure.
SP-7	Ring Ouzel (<i>Turdus torquatus</i>)	026	<ul style="list-style-type: none"> Increasing scrub and small tree cover on moorland edge to create mosaics of moorland edge.
		027	<ul style="list-style-type: none"> Identification, monitoring and safeguarding of key remaining population strongholds and breeding areas.
SP-8	Water Vole (<i>Arvicola amphibius</i>)	028	<ul style="list-style-type: none"> Reduce and where possible eradicate pressure from introduced predators (e.g. Mink).
		029	<ul style="list-style-type: none"> Manage riverside banks, canals, ditches, and watercourses to create areas of sunny shallow water margins with bankside vegetation but avoid overshadowing of the water from scrub or trees.
		030	<ul style="list-style-type: none"> Restore more natural riverbanks, in appropriate locations, and reduce invasive species.
		031	<ul style="list-style-type: none"> Avoid trampling and intensive grazing along the watercourse edge.
		032	<ul style="list-style-type: none"> Survey watercourses to identify extant populations of White Clawed Crayfish and assess threats and options.

SP-9	White-clawed Crayfish (<i>Austropotamobius pallipes</i>)	033	<ul style="list-style-type: none"> • Manage and monitor ARK sites to ensure translocated populations are maintained.
		034	<ul style="list-style-type: none"> • Protect in-situ populations and prioritise their habitat needs by achieving consistent, steady flows of good or very good quality water.
		035	<ul style="list-style-type: none"> • Manage riverbanks to offer numerous natural or artificial 'refuges' which offer opportunities to hide from predators.
		036	<ul style="list-style-type: none"> • Take suitable effective actions to exclude American Signal Crayfish if effective techniques emerge.
		037	<ul style="list-style-type: none"> • Identify new ARK sites and translocate WCC to new ARK sites.
SP-10	White-letter Hairstreak (<i>Satyrrium w-album</i>)	038	<ul style="list-style-type: none"> • Identify suitable locations for the planting of disease resistant elm trees suited to the needs of WLH.
		039	<ul style="list-style-type: none"> • Establish nursery for disease resistant elm trees.
		040	<ul style="list-style-type: none"> • Monitor the use of disease resistant elm trees by the butterflies to ensure colonies can be sustained throughout the lifecycle.
		041	<ul style="list-style-type: none"> • Retain existing elm trees and do not fell where possible.
		042	<ul style="list-style-type: none"> • Allow Elm suckers to grow where they appear.
		043	<ul style="list-style-type: none"> • In areas where scrub or woods show evidence of Dutch Elm disease, coppice elms on a 7 – 14-year cycle.
		044	<ul style="list-style-type: none"> • Manage hedgerow shelterbelts that contain elm and avoid cutting edges where new elm suckers appear.
		045	<ul style="list-style-type: none"> • Connect habitats with hedgerows containing Wych Elm (<i>Ulmus glabra</i>) as a hedging plant and disease resistant elms as hedgerow trees.
046	<ul style="list-style-type: none"> • Restore and create wet woodlands with young birch, elder, willow and alder. 		

Sp-11	Willow Tit (<i>Poecile montanus</i>)	047	• Retain and create a supply of deadwood, such as tall snags, stumps, fallen trees, within and around wet woodland and scrub.
		048	• Install artificial nesting cavities to increase breeding success.
		049	• Provide seasonal supplementary feeding for core populations.
		050	• Create structural diversity and promote dense scrub growth near Willow Tit nesting sites through selective felling or the reintroduction of coppicing within damp woodlands.
		051	• To improve the stability of Willow Tit populations, link up suitable habitats by creating or retaining scrub lined river corridors and mature hedgerows.

Species Reintroductions

ID	Priority	Ref	Measure
SR-1	Beaver (<i>Castor fiber</i>)	052	• Undertake feasibility studies into the reintroduction of beaver to Trent/Derwent and other catchments.
		053	• Raise awareness about the benefits of beaver reintroduction.
		054	• Develop a plan for addressing concerns and negative impacts from beaver.
		055	• Reintroduce beaver to the wild once Government approved.
SR-2	Pine marten (<i>Martes martes</i>)	056	• Undertake a feasibility study into the reintroduction of pine marten in Derbyshire.
		057	• Establish a network of partners and landowner supporters and stakeholders.
		058	• Develop a reintroduction program for pine marten.
		059	• Raise awareness about the benefits of pine marten reintroduction.

		060	<ul style="list-style-type: none"> Reintroduce pine marten to suitable areas within 5 years if feasible.
SR-3	Black grouse (<i>Lyrurus tetrix</i>)	061	<ul style="list-style-type: none"> Undertake a feasibility study into the reintroduction of black grouse in Derbyshire.
		062	<ul style="list-style-type: none"> Establish a network of partners and landowner supporters and stakeholders.
		063	<ul style="list-style-type: none"> Develop a reintroduction program for black grouse.
		064	<ul style="list-style-type: none"> Reintroduce black grouse to suitable areas within 5 years if feasible.
SR-4	Red-backed shrike (<i>Lanius collurio</i>)	065	<ul style="list-style-type: none"> Undertake a feasibility study into the reintroduction of red-backed shrike in Derbyshire.
		066	<ul style="list-style-type: none"> Establish a network of partners and landowner supporters and stakeholders.
		067	<ul style="list-style-type: none"> Develop a reintroduction program for red-backed shrike.
		068	<ul style="list-style-type: none"> Reintroduce red-backed shrike to suitable areas within 5 years if feasible.

Species Assemblages

ID	Priority	Ref	Measure
SA-1	Deadwood species assemblage (16 species)	069	<ul style="list-style-type: none"> Survey key sites to establish an up-to-date baseline of species occurrence and range.
		070	<ul style="list-style-type: none"> Identify key features for deadwood invertebrates, fungi and lichens at key sites/landscapes.
		071	<ul style="list-style-type: none"> Retain mature and over-mature trees, standing and fallen deadwood within the key sites and in the surrounding countryside.

		072	<ul style="list-style-type: none"> • Create artificial rot holes to increase breeding opportunities for insects.
		073	<ul style="list-style-type: none"> • Increase floristic diversity within parks and wood-pastures.
		074	<ul style="list-style-type: none"> • Ensure supply of deadwood through tree regeneration, ring-barking younger trees where suitable.
SA-2	Grassland fungi (20 species)	075	<ul style="list-style-type: none"> • Identification, safeguarding and monitoring of important remaining sites.
		076	<ul style="list-style-type: none"> • Landowner and land manager engagement and support.
		077	<ul style="list-style-type: none"> • Enhance and appropriately manage remaining semi-natural grasslands with fungi assemblages.
		078	<ul style="list-style-type: none"> • Avoid use of pesticides, herbicides and fertilisers.
		079	<ul style="list-style-type: none"> • Graze sites extensively but ensure short thatch free swards by autumn.
		080	<ul style="list-style-type: none"> • Showcase successful grassland management and encourage awareness of the value of grassland fungi.
SA-3	Threatened grassland flora and fauna (35 species)	081	<ul style="list-style-type: none"> • Identify and map extant locations for all threatened plants and insects.
		082	<ul style="list-style-type: none"> • Ensure sympathetic habitat management at these locations.
		083	<ul style="list-style-type: none"> • Identify threats.
		084	<ul style="list-style-type: none"> • Seek opportunities to expand and increase abundance and range of species along corridors, stepping stone sites and newly created/enhanced sites.
		085	<ul style="list-style-type: none"> • Reintroduce plant species where appropriate e.g. Maiden Pink.
		086	<ul style="list-style-type: none"> • Monitor species assemblage.
SA-4	Threatened wetland flora and fauna (22 species)	087	<ul style="list-style-type: none"> • Confirm current distribution and abundance for wetland species.
		088	<ul style="list-style-type: none"> • Ensure monitoring is in place for key species.

		089	<ul style="list-style-type: none"> • Create new wetlands in strategic locations to benefit these species.
		090	<ul style="list-style-type: none"> • Improve/protect water quality and habitat to benefit key species (stonefly, mayfly, crane fly).
SA-5	Farmland wader assemblage (curlew, snipe, lapwing, redshank)	091	<ul style="list-style-type: none"> • Encourage extensive grazing and avoid cutting and grazing during nesting periods.
		092	<ul style="list-style-type: none"> • Encourage habitat heterogeneity for moorland edge and grassland and restore ditches and wet features including scrapes within fields.
		093	<ul style="list-style-type: none"> • Discourage intensification and drainage.
SA-6	Mixed farming bird and plant assemblage (24 species)	094	<ul style="list-style-type: none"> • Supplementary feeding stations over the winter.
		095	<ul style="list-style-type: none"> • Ensure late autumn, winter and early spring seed sources are available.
		096	<ul style="list-style-type: none"> • Avoid mowing or crop harvesting during periods where nests will be impacted.
		097	<ul style="list-style-type: none"> • Grow and maintain multi-species cover crops, and cut later in the year, to provide food and cover over the winter.
		098	<ul style="list-style-type: none"> • Avoid / minimise use of insecticides on grassland and crops.
		099	<ul style="list-style-type: none"> • Set aside dedicated patches of unmanaged or uncropped areas with tall grasses, along field boundaries and margins, field corners or less productive areas, particularly where they will connect.
		100	<ul style="list-style-type: none"> • Leave arable margins.
		101	<ul style="list-style-type: none"> • Encourage organic and regenerative farming methods.
		102	<ul style="list-style-type: none"> • Install nestboxes for target species.
		103	<ul style="list-style-type: none"> • Restore / create native hedgerow / scrub habitat.
		104	<ul style="list-style-type: none"> • Create or restore farm ponds.

SA-7	Landscape mosaic assemblage (18 species)	105	<ul style="list-style-type: none">• Create large areas of scrub, open grassland and wetlands and manage through naturalistic grazing and natural processes to benefit existing species and encourage colonisation from outside the County.
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