

Appendix 8

Methodology for Mapped and Unmapped Measures

Theme	ID	Priority	Ref	Measure	Mapped/ unmapped	Mapping Source data and Methodology
Upland moorland and lowland heath	MH-1	Safeguard 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	Ensure appropriate management is implemented including rewetting, gully blocking, sphagnum reintroduction, controlling grazing, ensuring a diversity of heathland structure, controlling invasive non-native species, and managing fire risk. Visitor pressure should be monitored and managed to avoid harm to both habitats and species.	Mapped	Moors For Future project have advised best dataset associated with Upland Moorland Habitats is the NE Peaty Soils data. Blanket Bog is associated with Deep Peat areas (peat depth >40cm) Shallow Peaty Soils associated with all other habitats (peat depth <40cm) MEASURE 001: Areas of Shallow Peaty Soils and Deep Peaty Soils that are also within PDNPA Priority habitats area (any existing priority habitat) Added to this: Any priority Habitat (PDNPA Priority habitats) also within area of the two extra soils types selected for Measure004
	MH-2	Expand the upland moorland habitats (including a mosaic of upland heath, blanket bog and associated grassland, wetland, scrub and trees) and	002	Restore the blanket bog resource in areas with suitable substrate, hydrology and other conditions.	Unmapped	
			003	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	Mapped	Remaining areas of NE Shallow Peaty Soils not in PDNPA Priority Habitat Core existing woodland, grassland, and wetland habitat areas removed (Measure areas 010, 012, 036, 037, 076)

		its transitional fringe, into appropriate areas where conditions allow, providing expanded habitat for breeding birds and other dependent species (upland heath assemblage).		etc) measures, ideally using local sources.		
			004	Expand and diversify moorland fringe and transitional habitat areas to provide a mosaic of grassland, heathland, scrub, trees and woodland	Mapped	Remaining areas of NE Shallow Peaty Soils not in PDNPA Priority Habitat Core existing woodland, grassland, and wetland habitat areas removed (Measure areas 010, 012, 036, 037, 076)
			005	Create, manage, and identify new opportunities for clough woodland, integrated with other high quality moorland habitats, supporting slope stabilisation, carbon sequestration and natural flood management.	Mapped	PDNPA Core Clough woodland data cropped to 'Moorland Slopes and Cloughs' and 'Slopes and Valleys with Woodland' Landscape Character Types (PP LCA) CHECK WHEN AUTHORISED
	MH-3	Improve the condition of upland peatland to support ecological functionality and increase carbon sequestration, natural flood management and water quality benefits.	006	Improve the condition and function of peatlands through appropriate measures to re-wet habitats, to revegetate bare peat, to establish appropriate vegetation, and to stabilise areas of erosion, reducing carbon emissions and creating conditions for future peat formation, carbon sequestration and improved natural flood management.	Mapped	Combined areas of DEEP AND SHALLOW PEAT from NE Peaty Soils data

	MH-4	Lowland heathland in Derbyshire is safeguarded and well managed, and the resource is expanded wherever appropriate.	007	• Existing lowland heathland sites are identified and prioritised for management, restoration and enhancement to address bracken and scrub dominance and improve heathland structure.	Mapped	Any areas from PDNPA Priority habitats and DWT Priority habitats data where priority hab type = Lowland heath
			008	• Identify existing lowland heathland sites to be buffered, extended and connected, ideally with new heathland but alternatively with complementary habitats.	Mapped	Use same area as Measure 007.
			009	• 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 (using the Open Habitats Policy decision framework).	Unmapped (2)	
Theme	ID	Priority	Ref	Measure	Mapped/ unmapped	
Woodlands and Trees	WT-1	Ancient woodland, historic wood pasture parkland and veteran trees are safeguarded, managed and	010	• Sites are identified and in positive management to maximise their biodiversity value and ensure their longevity.	Mapped	The core woodland sites were mapped using the following datasets, these were believed to best represent the woodlands of highest biodiversity value in Derbyshire and so are the highest priority parcels for ensuring positive management. DWT Local Wildlife Sites -Wood Pasture and Parkland sites NE Ancient Woodland Inventory - Ancient and Semi Natural Woodland (ASNW) sites NE Priority Habitat Inventory - Wood Pasture and Parkland sites

		in good ecological condition.	011	• Specialist tree management techniques are used to extend the life of veteran and ancient trees, and near veterans are identified and recorded.	Unmapped (2)	
			012	• Restore Plantations on Ancient Woodland sites to native, locally appropriate species.	Mapped	NE Ancient Woodland Inventory - Plantation Ancient woodlands (PAWS) sites
			013	• Species assemblages associated with ancient woodland, veteran trees and historic wood pasture parkland - saproxylic invertebrates and fungi, lichen, bats etc - should be carefully considered, and their populations enhanced including through specific interventions where necessary.	Unmapped (2, 3)	
	WT-2	Existing woodland is well managed and better for wildlife.	014	• Introduce woodland management plans, bringing woodlands into active management to accord with UK Forestry Standards (UKFS), to promote biodiversity, increase resilience to climate change, and maximise wider environmental benefits such as natural flood management or carbon sequestration.	Unmapped (2)	
			015	• Manage and control invasive non-native woodland species, pests and diseases including rhododendron, grey squirrel, and ash die-back.	Unmapped (2, 3)	

			016	• Promote partnership working to develop and implement a landscape scale integrated deer management and control strategy.	Unmapped (1)	
			017	• 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.	Unmapped (2)	
			018	• Where ash dieback is present, diversify species composition and implement tailored interventions at each site to promote recovery and increase future resilience.	Unmapped (2)	
	WT-3	New woodland creation delivers more, bigger and better connected woodland, maximising ecosystem service benefits.	019	• Create new UKFS compliant woodland with a preference for semi-natural native woodland, including wet woodland, following sound ecological principles and bring in to positive management.	Unmapped (2)	
			020	• Buffer existing woodland sites with new woodland creation and by expanding tree cover, to safeguard core sites from impact, extend their benefit and provide edge habitats.	Mapped	Core Sites as defined by Measure 010 - 30m area around sites to provide a protective buffer for woodland areas of high biodiversity value, standard guidance from NE suggests at least a 15m buffer to protect AW sites from works and the DWT considers 30m suitable for minimising risk to the woodland. Clipped to the National Forestry Inventory, to reduce likelihood of suggesting woodland creation measures on existing woodland sites Core existing moorland/lowland heath, grassland, and wetland habitat areas removed (Measure areas 001, 007, 036, 037, 076)

			021	• Increase transitional habitats around and between woodlands to increase ecotones and establish wildlife rich dynamic mosaics.	Unmapped (2)	
			022	• Identify areas for new woodland creation and/or management of existing woodlands specifically to improve connectivity between woodlands - particularly existing ancient woodlands and core sites - at the landscape scale.	Mapped	DWT Local Wildlife Sites - woodland sites, 250m buffer created around Natural England's Habitat Networks - Ancient Semi Natural Woodland Network enhancement Zone 2 The Network Enhancement Zone 2 for woodland highlights where actions that improve the biodiversity value and help develop landscape connectivity through the creation of habitat mosaics and/or increase in green infrastructure provision. Core existing moorland/lowland heath, grassland, and wetland habitat areas removed (Measure areas 001, 007, 036, 037, 076)
			023	• New woodland creation prioritises habitat creation whilst additionally delivering nature based solutions and ecosystem services, such as Natural Flood Management and/or public access.	Mapped	EA's Working with Natural Processes to reduce flood risk (WWNP) - Catchment, floodplain and riparian woodland, clipped to subcatchments above Derbyshire EA's Communities at risk less than 50km², ensuring highest impact. Core existing moorland/lowland heath, grassland, and wetland habitat areas removed (Measure areas 001, 007, 036, 037, 076)
			024	• Allow new woodlands to generate naturally where possible (for example, adjacent to or close to existing high value woodland) or use planting or mixed techniques where needed.	Unmapped (2)	
			025	• Planting should use locally appropriate species and a mixture of local provenance and/or climate resilient stock.	Unmapped (2)	

			026	Take opportunities to create new woodlands for example around new residential developments, new employment land use, and mineral extraction sites, as part of managed change to improve the area for people and wildlife.	Unmapped (2)	
			027	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.	Mapped	Natural England's Habitat Networks - Wood pasture and Parkland Restorable habitat Areas of land where WPP is present in a degraded or fragmented form and which are likely to be suitable for restoration.
	WT-4	Increase trees in the wider landscape, including field trees, fruit trees, hedgerow trees and watercourse trees, agroforestry, and wood/scrub pasture especially where they can reinforce the local character as well as	028	Safeguard and manage existing boundary 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.	Unmapped (2)	
			029	Encourage trees along watercourses where appropriate to provide multiple benefits including habitat, shade/watercourse cooling, water quality improvements, bank stabilisation and Natural Flood Management (NFM).	Unmapped (2)	

		contributing to biodiversity.	030	Introduce appropriate agroforestry options to increase tree cover in farmed landscapes whilst increasing resilience to climate change, improving soil fertility and carbon sequestration. Where mapped, Measures 20 and 22 are considered priority.	Mapped	Merge of woodland buffer areas, (Measures 20 & 22)
			031	Identify and restore existing and derelict traditional orchards and create new community orchards where appropriate.	Mapped	NE Priority Habitat Inventory - Traditional Orchard category
	WT-5	Trees in the wider landscape are positively managed, and ancient and veteran trees are safeguarded.	032	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.	Unmapped (2)	
			033	Ancient and veteran trees in the wider landscape are safeguarded and managed, including considering fencing or root protection measures, to support their retention and longevity.	Unmapped (2)	
	WT-6	Urban trees become more common throughout towns and cities, for amenity, urban shading and air quality benefits	034	Existing street trees are managed positively to promote their longevity and are replaced at the end of their life.	Unmapped (2)	
			035	Incorporate trees into street scene, open spaces, amenity areas, gardens and public open	Unmapped (2)	

		as well as biodiversity.		spaces in new developments and existing urban areas.		
Theme	ID	Priority	Ref	Measure	Mapped/ unmapped	
Grassland	GL-1	Safeguard and enhance high quality and species rich grassland habitats including unimproved grassland, species rich grassland and meadows, and calaminarian grassland (grassland on lead spoil).	036	Sites are identified and in positive management to maximise their biodiversity value as grasslands and for their associated species.	Mapped	DWT Local Wildlife Sites -Primary ecological classification of: Floodplain grassland semi-improved, Unimproved acid grassland, Unimproved calcareous grassland, Unimproved calcareous grassland on lime spoil, Unimproved hay meadow, Unimproved neutral grassland, Unimproved neutral/acid grassland NE Priority Habitat Inventory - Calaminarian grassland, Coastal and floodplain grazing marsh, Good quality semi improved grassland, Lowland calcareous grassland, Lowland dry acid grassland, Lowland calcareous grassland,Limestone pavement, Lowland dry acid grassland, Lowland meadow, Upland calcareous grassland, Upland hay meadow
	GL-2	Existing grasslands are managed, restored and enhanced to increase biodiversity (including pollinators and other invertebrates), improve resilience to	037	Existing moderate quality and neglected sites are enhanced through appropriate management to improve their species and structural diversity.	Mapped	DWT & PDNP historic surveys - priority grasslands, These areas are known to be grasslands of at least moderate quality, some may remain, many will have been lost or neglected. They provide a key opportunity for enhancement. Countryside Stewardship options from 2023 - Codes indicating management towards moderate-high quality grassland (GS2, GS5, GS6) Above datasets combined and then spatially constrained to the extent of Measure 043. This is to prioritise encouraging enhancement within areas that will contribute or enhance the grassland network.

		climate change, and maximise wider environmental benefits such as natural flood management or carbon sequestration.	038	Species poor semi-natural grasslands are restored and diversified, and are subsequently managed to maintain and enhance their species richness and structural diversity.	Mapped	PDNPA - improved and semi improved grasslands Countryside Stewardship Holdings from 2023 - Grassland management clear from options however unsure of proportion of areas actually managed for high quality grassland. Holdings provide opportunities for further enhancement. Countryside Stewardship options from 2023 - Codes indicating management of low- moderate quality grassland (GS7,GS9, GS10, GS13, OR2, OT2, UP2) Natural England's Habitat Networks - Lowland Calcareous Grassland, Lowland Dry Acid Grassland, Lowland Meadows, Upland Calcareous Grassland, Upland Hay Meadows Habitat Restoration layers - Creation: Areas where work is underway to either create or restore the primary habitat. Natural England's Habitat Networks - Lowland Calcareous Grassland, Lowland Dry Acid Grassland, Lowland Meadows, Upland Calcareous Grassland, Upland Hay Meadows- Restorable Habitats layers: Areas of land, predominantly composed of existing semi-natural habitat where the primary habitat is present in a degraded or fragmented form and which are likely to be suitable for restoration. Above datasets combined and then spatially constrained to the extent of Measure 043, this is to prioritise encouraging enhancement within areas that will contribute or enhance the grassland network.
			039	Encourage fire planning and preventative measures in grassland areas.	Unmapped (1, 2, 3)	
	GL-3	There is more species-rich and semi-natural grassland, which is more diverse, larger and better connected.	040	Take opportunities to create new species rich grasslands for example around new development, through enhanced green infrastructure.	Unmapped (2)	
			041	Create high quality, species rich grasslands (calcareous, acidic, neutral and wet grasslands as appropriate)	Unmapped (2)	

				through the targeted restoration of mineral extraction sites.		
			042	Target species rich grassland creation and grassland enhancement to locations adjacent to existing high-quality grasslands sites.	Mapped	DWT Local Wildlife Sites buffered by 125m Natural England's Habitat Networks Lowland Calcareous Grassland, Lowland Dry Acid Grassland, Lowland Meadows, Upland Calcareous Grassland, Upland Hay Meadows - Fragmentation Action Zones: Land within Enhancement Zone 1 that connects existing patches of primary and associated habitats which are currently highly fragmented and where fragmentation could be reduced by habitat creation. Indicates the areas adjacent to existing high quality grassland sites that if actions are undertaken will have the largest impact on habitat connectivity. Core existing moorland/lowland heath, woodland, and wetland habitat areas removed (Measures 001, 007, 010, 012, 076)
			043	Target species rich grassland creation and grassland enhancement to locations where they can contribute to or enhance connectivity within the grassland network.	Mapped	Natural England's Habitat Networks Lowland Calcareous Grassland, Lowland Dry Acid Grassland, Lowland Meadows, Upland Calcareous Grassland, Upland Hay Meadows Network Enhancement Zone 1: Land connecting existing patches of primary and associated habitats which is likely to be suitable for creation of the primary habitat. Factors affecting suitability include: proximity to primary habitat, land use (urban/rural), soil type, slope and proximity to coast. Action in this zone likely to expand and join up Core existing moorland/lowland heath, woodland, and wetland habitat areas removed (Measures 001, 007, 010, 012, 076)
Theme	ID	Priority	Ref	Measure	Mapped/ unmapped	

Rivers, river corridors and other watercourses	RW-1	Improve and restore connectivity of river corridors to restore natural processes and support the free movement of in-channel and riparian species.	044	• Create in-channel features that promote flow variation and expose spawning gravels including the re-meandering of rivers where required.	Unmapped (2)	
			045	• Identify and remove redundant weirs and in-channel structures, allowing the free movement of fish and the restoring natural river processes.	Mapped	Locations provided by the Environment Agency
			046	• 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.	Mapped	Locations provided by the Environment Agency
			047	• Develop the River Derwent as a stronghold for native riparian mammals including beaver, water vole and otter through habitat management, improved connectivity, and other conservation measures as appropriate.	Unmapped (2)	
			048	• Identify and remove redundant culverts, reopening new stretches of watercourses which are available and accessible to people and wildlife.	Unmapped (2, 3, 4)	
	RW-2	Improve connectivity between watercourses	049	• Reduce the height and profile of berms and banks where rivers have been over-deepened to allow rivers to	Unmapped (2, 4)	

		and their floodplains to restore dynamic natural processes, reduce flood risk and create high quality semi-natural riparian habitats.		spread out into their previously disconnected floodplains.		
			050	Allow natural revegetation of buffer zones next to watercourses to provide space for native species to live and forage.	Mapped	EA's WFD River, Canal and Surface Water Transfer Waterbodies Cycle 2 Channel buffered by 50m
			051	Introduce new backwater and wetland features including ponds, and support the creation and restoration of floodplain meadows and associated habitats to add diversity to riparian areas and store water.	Unmapped (2)	
			052	Increase the extent of tree and/or woodland alongside watercourses and within floodplains, including wet woodland, particularly where they contribute to natural flood management.	Mapped	EA's Working with Natural Processes to reduce flood risk (WWNP) Floodplain and riparian woodland, clipped to subcatchments above Derbyshire EA's Communities at risk less than 50km ² , ensuring highest impact.
			053	Improve the condition of wet woodland / riverside trees by promoting a varied age structure and species diversity.	Unmapped (2)	
			054	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.	Unmapped (2)	

			055	• Implement catchment-based approaches to the control and eradication of invasive non-native species that are having an adverse affect on the riverine system.	Unmapped (2)	
			056	• Identify and remove redundant hard engineering along riverbanks, giving rivers space to move.	Unmapped (2)	
	RW-3	Improve and increase the biodiversity value of reservoirs and canals, their associated habitats and surrounding land, whilst safeguarding their role in water supply, transport and recreation.	057	• Enhance and manage reservoirs, their margins, and the surrounding land to increase biodiversity, including ornithological interest.	Unmapped (2)	
			058	• Reduce disturbance and other impacts to wildlife whilst increasing access and enjoyment of reservoirs and surrounding land through visitor management, the creation of appropriate public access routes, and other measures.	Unmapped (1, 2, 3)	
			059	• Restore derelict canals and reinstate missing sections to create additional habitat, improve ecological connectivity, and relieve recreational pressure from other sites.	Unmapped (2)	
			060	• Manage existing canals and their margins to maximise their biodiversity value whilst retaining and enhancing their value for other uses.	Unmapped (2)	

	RW-4	Improve the water quality of rivers and watercourses.	061	• Identify and address point and diffuse sources of pollution, including sources of silt and agricultural run-off.	Unmapped (2, 4)	
			062	• Create and maintain wetland habitats in strategic locations that are able to intercept and filter pollutants before they enter rivers and watercourses.	Unmapped (2, 4)	
Theme	ID	Priority	Ref	Measure	Mapped/ unmapped	
Farmland	FL-1	Improve ecological connectivity through the farmed landscape.	063	• Existing hedgerows are brought into good ecological management, including gapping up to improve connectivity, and the maintenance and introduction of hedgerow trees.	Mapped	Merge of woodland buffer zones (Measures 20 & 22) EXCLUDING White Peak Landscape Character Area
			064	• Replant hedgerows on former hedgerow alignments, or create new native, locally appropriate hedgerows in hedged landscapes, to improve connectivity and contribute to natural flood management.	Mapped	Merge of woodland buffer zones (Measures 20 & 22) EXCLUDING White Peak Landscape Character Area
			065	• Encourage the maintenance and appropriate management of dry stone walls, particularly where these link up other key habitats, or will benefit key species such as great crested newt or bats.	Unmapped (2, 3)	
			066	• Field margins, buffer strips, and ditches and watercourses are used to improve habitat	Mapped	Merge of Grassland buffer polygons (Measure 43) and Wetland buffer polygons (Measure 83)

				connectivity and landscape permeability for species		
	FL-2	The farmed landscape is more favourable and permeable to wildlife, particularly plants, pollinators and invertebrates, and farmland birds.	067	Where an area is mapped for measure 043 or 083 and that measure cannot be delivered, improve the farmed landscape for pollinators, including through the establishment of herbal leys, flower-rich grass margins, in-field strips, nectar strips, or leaving unsprayed areas in arable fields.	Mapped	Merge of Grassland buffer polygons (Measure 43) and Wetland buffer polygons (Measure 83) EXCLUDING Dark Peak, White Peak and South West Peak
			068	Establish beetle banks and other areas for natural predators within arable farming.	Unmapped (2, 3)	
			069	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.	Unmapped (2, 3)	
			070	Recognise the value and potential of semi-improved grasslands and seek to deliver further improvements for biodiversity.	Unmapped (2, 3)	
	FL-3	Land use practices are modified to avoid adverse impacts on the wider environment, including	071	Farming practices reduce agricultural run-off, particularly to watercourses, especially where they are affecting habitats downstream.	Unmapped (2, 3)	
			072	Where grazing occurs on land adjacent to streams and rivers, access by animals is controlled	Unmapped (2, 3)	

		freshwater habitats, air quality, and soil health.		to prevent sediment entering the watercourse.		
			073	• Where evidence demonstrates agricultural land is at risk of becoming a net emitter of carbon, practices are modified to deliver greater carbon sequestration.	Unmapped (2, 3)	
			074	• Implement regenerative and organic farming practices such as permanent pasture, no till/minimum tillage practices, reducing the use of artificial inputs, and the planting of deep-rooted leys, in order to improve soil condition, carbon sequestration, natural flood management and biodiversity.	Unmapped (2, 3)	
			075	• Reduce and prevent harm to nearby habitats by reducing diffuse pollution and emissions to air and water, particularly ammonia from agricultural activities.	Unmapped (2, 3)	
Theme	ID	Priority	Ref	Measure	Mapped/ unmapped	
Wetlands	WL-1	Safeguard and enhance wetland habitats including ponds, lowland fen, swamp, marsh, reedbed etc.	076	• Sites are identified and in positive management to maximise their biodiversity value as wetlands and for their associated species.	Mapped	DWT Local Wildlife Sites and Wetland Reserves NE Priority Habitat Inventory - Reedbeds, Purple moor grass and rush pastures, Ponds, Lowland raised bog, Lowland fens

	WL-2	Existing wetlands are managed and enhanced to support greater levels of biodiversity, for example for amphibians and invertebrates.	077	• Existing moderate quality and neglected ponds and wetlands are restored and enhanced through biodiversity-focussed management including dew ponds in the White Peak.	Unmapped (2)	
			078	• Investigate and improve water quality (for example through use of buffer strips) where this is having a detrimental effect on the condition of wetlands.	Unmapped (2)	
			079	• Control and eradicate invasive non-native species within wetland habitats, and promote good biosecurity practices to restrict their spread.	Unmapped (2)	
	WL-3	The wetland resource is increased, connected, and existing sites are extended and buffered through the creation of new semi-natural wetlands.	080	• Create new ponds and wetlands for example around new development, through enhanced green infrastructure or Sustainable Drainage Systems (SuDS).	Unmapped (2)	
			081	• Create new field ponds in appropriate locations and in areas of complementary habitat.	Unmapped (2)	
			082	• Target new pond and wetland creation to locations adjacent to existing high-quality wetland sites.	Mapped	30m buffer around Measure 076 Core existing moorland/lowland heath, woodland, and grassland habitat areas removed (Measures 001, 007, 010, 012, 036, 037)

			083	• 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.	Mapped	250m buffer around Measure 076 if it overlaps with woodland, moorland or grassland habitats
			084	• Target wetland creation and enhancement to locations where they can contribute to or enhance connectivity within the wetland or riparian networks.	Mapped	500m buffer around Measure 076 constrained by DWT Nature Recovery Network Core existing moorland/lowland heath, woodland, and grassland habitat areas removed (Measures 001, 007, 010, 012, 036, 037)
Theme	ID	Priority	Ref	Measure	Mapped/ unmapped	
Urban Environment and Infrastructure	UE-1	Urban environments become more biodiverse and permeable to wildlife.	085	• Within urban settings, the most valuable habitat areas and sites for biodiversity are safeguarded and enhanced as reservoirs for wildlife in the area.	Mapped	DWT Local Wildlife Sites, PDNPA Priority habitats and DWT Priority Habitats, Local Nature Reserves , Irreplaceable habitats within urban areas (or crossing boundary)
			086	• Habitat creation in urban areas should use native, locally appropriate species.	Unmapped (2)	
			087	• In redeveloping brownfield land, maintain a viable resource of open mosaic habitats, and retain the most valuable sites, for the species that depend on them.	Unmapped (2)	

			088	Urban green spaces, parks, allotments, cemeteries etc are managed with biodiversity in mind, to increase their value for wildlife.	Mapped	OS Greenspace data (Categories: Allotments or Community Growing Spaces, Cemeteries, Golf Courses, Public Parks and Gardens, and Religious Grounds) within urban areas
			089	Maximise biodiversity and appropriate public access into publicly owned sites such as country parks, Local Nature Reserves, and greenways and multi-user trails.	Mapped	NE Country Parks , and Local Nature Reserves within urban areas
			090	Restore and improve the biodiversity value and functionality of rivers and watercourses through urban areas, address impacts from pollution and drainage, and improve visibility and accessibility to people.	Unmapped (2)	
			091	Residents are encouraged to make gardens more wildlife friendly, to increase biodiversity and habitat connectivity through urban areas.	Unmapped (2)	
			092	Deliver new, strategic biodiversity enhancement and green infrastructure, including through land use change and habitat creation within green wedges.	Mapped	Derby City Local Plan, Green wedges data
			093	Where new developments are proposed that include underground watercourses, these sections are opened up and incorporated into the new development.	Unmapped (2)	

			094	• Urban biodiversity features including green/brown roofs and living walls are implemented in the most urban areas where other opportunities are limited.	Unmapped (2)	
			095	• Identify and control invasive non-native species in urban areas e.g. Japanese knotweed, working collaboratively to develop schemes for their eradication and to prevent their spread.	Unmapped (2)	
			096	• Increase the use of sustainable alternatives to chemical herbicides, pesticides, insecticides etc where evidence demonstrates they are effective but less harmful to the environment.	Unmapped (2, 3)	
	UE-2	Urban ¹ wildlife species are supported, particularly where those species are in need of conservation action.	097	• Watercourses and green spaces are managed with bats in mind, with lighting carefully considered to avoid impacts.	Unmapped (2, 3)	
			098	• Sustainable, permanent bat roosting features, or bat boxes, are incorporated into locations where they can be managed but otherwise remain undisturbed.	Unmapped (2, 3)	
			099	• Nesting peregrine falcons in urban areas are supported and public engagement encouraged.	Unmapped (2, 3)	

			100	Wildlife friendly measures for example bat boxes, measures to support urban birds, hedgehog friendly neighbourhoods, ponds, and wildlife friendly planting are incorporated into new and existing development, facilitated through planning policy, urban design guidance or local projects as appropriate.	Unmapped (2, 3)	
			101	Provide for pollinators throughout urban areas through pollinator friendly planting in parks, gardens, and other amenity areas.	Unmapped (2, 3)	
			102	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.	Unmapped (2, 3)	
	UE-3	Habitat creation and enhancement delivers for nature recovery and wildlife whilst maximising opportunities to deliver an improved network of locally appropriate,	103	Target nature recovery action, particularly habitat creation and enhancement, in areas of green belt and/or near to communities, to improve public access to nature, biodiversity, and environmental benefits.	Mapped	Areas of Green belt, Derby City Green Wedge, and OS Greenspaces considered pertinent to Nature recovery (categories: Allotments or Community Growing Spaces, Cemeteries, Golf Courses, Public Parks and Gardens, and Religious Grounds) that are within a 15min walk of the most deprived communities (1km buffer to LSOAs with a deprivation decile score of 1, 2, or 3 from NE Green Infrastructure data)
			104	Target nature recovery action to locations adjacent to existing sites of biodiversity value to create larger, more robust and more resilient multifunctional blue and green	Unmapped (2)	

		accessible, multifunctional green spaces, for the benefit of people.		spaces, which are better connected for people and wildlife.		
			105	Biodiversity Net Gain and other nature recovery measures associated with development also deliver other social and environmental benefits (public access, Natural Flood Management etc), enabled through local planning policy and/or urban design guidance as appropriate.	Unmapped (2)	
			106	Local Authorities seek to identify additional sites to declare as Local Nature Reserves.	Unmapped (2)	
	UE-4	Roads and other transport networks contribute positively to biodiversity.	107	Verges (and other vegetation) along existing roads, railways, greenways, and other transport corridors are managed positively, to promote biodiversity and improve connectivity across the landscape, and contribute to natural flood management.	Unmapped (2)	
			108	Biodiversity friendly measures are built in to new roads, other transport routes, and developments and include wildflower rich verges, hedgerows, native tree planting, Sustainable Drainage Systems (SuDS) and more.	Unmapped (2)	

			109	Where major roads currently cause habitat severance and breaks in strategic ecological networks, reconnect habitats through green bridges, 'undergrounding' of routes, etc.	Unmapped (2)	
			110	New roads and transport infrastructure should 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.	Unmapped (2)	
			111	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.	Unmapped (2)	
Theme	ID	Priority	Ref	Measure		
People and wildlife	PW-1	People across Derbyshire are better informed about and more engaged with the natural environment, through education and awareness	112	Environmental education equips children with knowledge to be able to understand the natural environment and care about local issues.		
			113	Create and increase opportunities for training and development, including through apprenticeships, placements and taught		

		raising activities for the benefit of nature.		courses, covering land management, ecological surveying and other nature based skills.		
			114	• Use education and engagement to promote the sustainable and appropriate use of and access to the natural environment to help safeguard environmental assets.		
			115	• Install information boards (and/or online and remotely accessed resources) at accessible or visitor focussed sites explaining the biodiversity interest, nature recovery value and ecosystem service delivery of habitats on site – to ensure that site use is appropriate, supportive of nature and avoids harm.		
	PW-2	People have more opportunities to actively engage with the natural environment, supporting and delivering nature recovery in their area.	116	• Conservation volunteering opportunities increase, and there are more people engaged with local green spaces.		
			117	• 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, community farming, etc.		

			118	• More people are enabled to support and facilitate nature recovery through species recording, habitat survey, citizen science, etc.		
			119	• 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.		
			120	• Deliver new and improved opportunities for appropriate public access to, enjoyment of and understanding of nature and wildlife sites, to foster appropriate stewardship and use of the natural environment.		
			121	• People are enabled and empowered to develop and implement community-led projects for nature recovery.		
	PW-3	Promote the sharing of knowledge, information, and best practice to enable better stewardship and effective nature recovery.	122	• Promote cooperation and collaboration between landowners/managers and other practitioners to achieve shared goals or contribute to larger environmental gains.		
			123	• Share best practice to enable more effective implementation of conservation action across wider areas, towards common goals.		

			124	• Increase knowledge and understanding of nature recovery requirements and the natural environment through increased habitat and species surveying.		
			125	• Coordinate action for controlling invasive non-native species, including facilitating collaboration, developing communications and engagement, and sharing best practice.		
			126	• Develop an advisory and coordinating service to support farmers and landowners including to access funding to deliver LNRS Priorities and Measures.		
			127	• Develop nature recovery projects involving a broad range of other sympathetic and aligned user groups for example ramblers, horseriders, canoeists, anglers, shooting groups, etc. to maximise their impact and success and deliver better outcomes for nature.		
			128	• 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.		

			129	• Develop a market for green finance and payment for ecosystem services, to generate investment in nature recovery and natural capital in Derbyshire.		
	PW-4	Safeguard high quality habitats and sensitive species by reducing the impact from people and managing visitor pressure.	130	• Where impacts on high quality habitat and sensitive species are known to exist, develop strategies to reduce and mitigate visitor pressures.		
			131	• Promote public access and divert visitor pressure towards more local and less sensitive locations to reduce harm to more valuable habitats and species.		
Species priorities and measures						
Theme	ID	Priority	Ref	Measure	Mapped/ unmapped	
Priority species	SP-1	Adder (<i>Vipera berus</i>)	001	• Ensure core sites are sympathetically managed for adder.	Unmapped (5)	
			002	• Identify and safeguard key basking sites, maternal birthing sites and summer foraging areas.	Unmapped (5)	
			003	• Identify areas where adder could expand or disperse to and manage and enhance key habitat corridors to increase resilience and create sustainable populations.	Unmapped (5)	
			004	• Use controlled reintroduction from healthy populations to	Unmapped (5)	

				establish adders in previously occupied sites as necessary.		
			005	• Raise awareness about threats to adders.	Unmapped (5)	
			006	• Reduce and manage disturbance to adder from recreation, grazing and other damaging management activities.	Unmapped (5)	
			007	• Identify measures to reduce the threat of fire.	Unmapped (5)	
	SP-2	Black-poplar (<i>Populus nigra</i> ssp. <i>Betulifolia</i>)	008	• Identify, safeguard and monitor existing trees, bringing them into positive management, including control of pests and diseases.	Mapped	Known locations of <i>Populus nigra</i> ssp. <i>Betulifolia</i> - Derbyshire Wildlife Trust
			009	• Increase planting of black poplar in suitable locations, predominantly within the Trent Valley Washlands NCA, using locally appropriate source stock, whilst seeking to improve the genetic variability in newly planted trees.	Unmapped (2)	
			010	• Register black poplar stands on Forest Reproductive Materials (FRM) register.	Unmapped (1)	
			011	• Establish tree nurseries for the provision of local provenance trees taken from registered Forest Reproductive Materials (FRM) sites.	Unmapped (1)	
	SP-3	Common Toad (<i>Bufo bufo</i>)	012	• Identify and map breeding ponds and toad road crossing points.	Unmapped (1)	
			013	• Improve signage for toad crossings and support	Unmapped (5)	

				volunteer groups/toad crossing groups.		
			014	• Ensure new development include measures such as dropped kerbs, amphibian ladders, toad tunnels and fencing for mitigating impacts on toads.	Unmapped (2, 5)	
			015	• Ensure new ponds are created to meet the needs of toads.	Unmapped (2, 5)	
			016	• Enhance habitat and connectivity around key ponds.	Unmapped (5)	
			017	• Biosecurity to minimise and address risks of disease.	Unmapped (5)	
	SP-4	Hedgehog (<i>Erinaceus europaeus</i>)	018	• Create hedgehog highways that connect green space and gardens within urban areas and include gaps or holes in fences and other boundaries to improve connectivity for hedgehogs through gardens, including through new gardens in residential developments.	Unmapped (2)	
			019	• 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.	Unmapped (2)	
			020	• Encourage installation of hibernacula in gardens.	Unmapped (2)	

			021	• Reduce or eliminate pesticide use in gardens and green spaces	Unmapped (2)	
			022	• Identify barriers to movement and population interaction and install mitigation such as wildlife tunnels under roads	Unmapped (2)	
	SP-5	Hen Harrier (<i>Circus cyaneus</i>)	023	• Support action to halt illegal persecution.	Unmapped (2)	
	SP-6	Leisler's Bat (<i>Nyctalus leisleri</i>)	024	• Install and monitor specified bat boxes in known locations to mitigate and encourage roost sites in across strategic areas.	Unmapped (4)	
			025	• Avoid felling mature trees, especially parkland trees where roosting opportunities are present.	Unmapped (2)	
			026	• Map distribution and roosts.	Unmapped (1)	
			027	• Reducing disturbance and recreational pressure.	Unmapped (4)	
	SP-7	Ring Ouzel (<i>Turdus torquatus</i>)	028	• Create moorland edge mosaics by increasing scrub and small tree cover including berry bearing rowan and bilberry.	Mapped	Areas of Deep and Shallow peat from NE Peaty Soils data, combined with areas under Measure 004 Edited to remove small area gaps/holes in data
			029	• Provide grassy foraging areas managed through extensive mixed grazing with cattle and ponies to promote a more varied vegetation structure.	Unmapped (2)	
			030	• Identification, monitoring and safeguarding of key remaining population	Unmapped (1)	

				strongholds and breeding areas.		
			031	• Manage recreational pressure on nesting sites by, for example, voluntary climbing exclusion zones during the breeding season.	Unmapped (2)	
	SP-8	Water Vole (<i>Arvicola amphibius</i>)	032	• Reduce and where possible eradicate pressure from introduced predators (e.g. Mink).	Unmapped (2)	
			033	• 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.	Unmapped (2)	
			034	• Restore more natural riverbanks, in appropriate locations, and reduce invasive non-native species.	Unmapped (2)	
			035	• Avoid trampling and intensive grazing along the watercourse edge and reduce disturbance, particularly from dogs entering the watercourse.	Unmapped (2)	
	SP-9	White-clawed Crayfish (<i>Austropotamobius pallipes</i>)	036	• Survey watercourses to identify extant populations of White Clawed Crayfish and assess threats and options.	Unmapped (1)	
			037	• Manage and monitor ARK (safe haven) sites to ensure translocated populations are maintained	Unmapped (5)	

			038	• Protect in-situ populations and prioritise their habitat needs by achieving consistent, steady flows of good or very good quality water.	Unmapped (5)	
			039	• Manage riverbanks to offer numerous natural or artificial 'refuges' which offer opportunities to hide from predators.	Unmapped (2)	
			040	• Take suitable effective actions to exclude American Signal Crayfish if effective techniques emerge.	Unmapped (2)	
			041	• Identify new ARK sites and translocate WCC to new ARK sites.	Unmapped (2, 4)	
			042	• Implement biosecurity measures, particularly for anglers and other people and equipment that enters the water.	Unmapped (2)	
	SP-10	White-letter Hairstreak (<i>Satyrrium w-album</i>)	043	• Identify suitable locations for the planting of disease resistant elm trees suited to the needs of White-letter Hairstreak, with a focus on sites close to existing populations.	Unmapped (2)	
			044	• Identify and safeguard existing populations of White-letter Hairstreak.	Unmapped (1)	
			045	• Establish nursery for disease resistant elm trees	Unmapped (1)	
			046	• Monitor the use of disease resistant elm trees by the butterflies to ensure colonies	Unmapped (2)	

				can be sustained throughout the lifecycle.		
			047	• Retain existing elm trees and do not fell where possible and allow elm suckers to grow where they appear.	Unmapped (2)	
			048	• Identify surviving or potentially dutch-elm disease resistant elm trees and assess their suitability for supporting White-letter Hairstreak.	Unmapped (2)	
			049	• In areas where scrub or woods show evidence of Dutch Elm disease, coppice elms on a 7 – 14-year cycle.	Unmapped (2)	
			050	• Manage hedgerow shelterbelts that contain elm and avoid cutting edges where new elm suckers appear.	Unmapped (2)	
			051	• Connect habitats with hedgerows containing Wych Elm (<i>Ulmus glabra</i>) as a hedging plant and disease resistant elms as hedgerow trees.	Unmapped (2)	
	SP-11	Willow Tit (<i>Poecile montanus</i>)	052	• Restore and create wet woodlands with young birch, elder, willow and alder with a focus on sites close to existing/recent populations.	Unmapped (2)	
			053	• Retain and create a supply of deadwood, such as tall snags, stumps, fallen trees, within and around wet woodland and scrub.	Unmapped (2)	

			054	• Create structural diversity and promote dense scrub growth near Willow Tit nesting sites through selective felling or the reintroduction of coppicing within damp woodlands.	Unmapped (2)	
			055	• To improve the stability of Willow Tit populations, link up suitable habitats by creating or retaining scrub lined river corridors and mature hedgerows.	Unmapped (2)	
Theme	ID	Priority	Ref	Measure	Mapped/ unmapped	
Species reintroductions	SR-1	Beaver (<i>Castor fiber</i>)	056	• Undertake feasibility studies into the reintroduction of beaver to Trent/Derwent and other catchments.	Unmapped (1)	
			057	• Raise awareness about the benefits of beaver reintroduction.	Unmapped (1)	
			058	• Develop a plan for addressing concerns and negative impacts from beaver.	Unmapped (1)	
			059	• Reintroduce beaver to the wild once Government approved.	Unmapped (4)	
	SR-2	Pine marten (<i>Martes martes</i>)	060	• Undertake a feasibility study into the reintroduction of pine marten in Derbyshire.	Unmapped (1)	
			061	• Establish a network of partners and landowner supporters and stakeholders.	Unmapped (1)	
			062	• Develop a reintroduction program for pine marten	Unmapped (1)	

			063	• Raise awareness about the benefits of pine marten reintroduction.	Unmapped (1)	
			064	• Reintroduce pine marten to suitable areas within 5 years if feasible.	Unmapped (4)	
	SR-3	Black grouse (<i>Lyrurus tetrix</i>)	065	• Undertake a feasibility study into the reintroduction of black grouse in Derbyshire.	Unmapped (1)	
			066	• Establish a network of partners and landowner supporters and stakeholders.	Unmapped (1)	
			067	• Develop a reintroduction program for black grouse.	Unmapped (1)	
			068	• Reintroduce black grouse to suitable areas within 5 years if feasible.	Unmapped (4)	
	SR-4	Red-backed shrike (<i>Lanius collurio</i>)	069	• Undertake a feasibility study into the reintroduction of red-backed shrike in Derbyshire.	Unmapped (1)	
			070	• Establish a network of partners and landowner supporters and stakeholders.	Unmapped (1)	
			071	• Develop a reintroduction program for red-backed shrike.	Unmapped (1)	
			072	• Reintroduce red-backed shrike to suitable areas within 5 years if feasible.	Unmapped (4)	
Theme	ID	Priority	Ref	Measure	Mapped/unmapped	
Species assemblage	SA-1	Deadwood species assemblage (16 species)	073	• Survey key sites to establish an up-to-date baseline of species occurrence and range.	Unmapped (4)	Areas provided by Derbyshire Wildlife Trust
			074	• Identify key features for deadwood invertebrates, fungi	Unmapped (2)	

				and lichens at key sites/landscapes.		
			075	• Retain mature and over-mature trees, standing and fallen deadwood within the key sites and in the surrounding countryside.	Unmapped (2)	
			076	• Create artificial rot holes to increase breeding opportunities for insects.	Unmapped (2)	
			077	• Increase floristic diversity within parks and wood-pastures.	Unmapped (2)	
			078	• Ensure supply of deadwood through tree regeneration, ring-barking younger trees where suitable.	Unmapped (2)	
	SA-2	Grassland fungi (20 species)	079	• Identification, safeguarding and monitoring of important remaining sites.	Unmapped (1)	
			080	• Landowner and land manager engagement and support.	Unmapped (2)	
			081	• Enhance and appropriately manage remaining semi-natural grasslands with fungi assemblages including ensuring appropriate soil hydrology.	Unmapped (2)	
			082	• Avoid use of pesticides, herbicides and fertilisers.	Unmapped (2)	
			083	• Graze sites extensively but ensure short thatch free swards by autumn.	Unmapped (2)	
			084	• Showcase successful grassland management and encourage awareness of the value of grassland fungi.	Unmapped (2)	

	SA-3	Threatened grassland flora and fauna (35 species)	085	• Identify and map extant locations for all threatened plants and insects.	Unmapped (1)	
			086	• Ensure sympathetic habitat management at these locations.	Unmapped (2)	
			087	• Identify threats.	Unmapped (2)	
			088	• Seek opportunities to expand and increase abundance and range of species along corridors, stepping stone sites and newly created/enhanced sites.	Unmapped (2)	
			089	• Reintroduce plant species where appropriate e.g. Maiden Pink.	Unmapped (2)	
			090	• Monitor species assemblage.	Unmapped (2)	
	SA-4	Threatened wetland flora and fauna (22 species)	091	• Confirm current distribution and abundance for wetland species.	Unmapped (1)	
			092	• Ensure monitoring is in place for key species.	Unmapped (2)	
			093	• Create new wetlands in strategic locations to benefit these species.	Unmapped (2)	
			094	• Improve/protect water quality and habitat to benefit key species (stonefly, mayfly, crane fly).	Unmapped (2)	
	SA-5	Farmland wader assemblage (curlew, snipe,	095	• Encourage extensive grazing and appropriate rush management, avoiding cutting and grazing during the breeding season.	Unmapped (2)	

		lapwing, redshank)	096	• Encourage habitat heterogeneity for moorland edge and grassland and restore ditches and wet features including creating scrapes within fields.	Unmapped (2)	
			097	• Discourage intensification and drainage to retain wet grassland and rush pasture.	Unmapped (2)	
			098	• Targeted predator control undertaken as part of an integrated strategy to reduce pressures upon priority species.	Mapped	
	SA-6	Mixed farming bird and plant assemblage (24 species)	099	• Supplementary feeding stations over the winter.	Unmapped (2)	
			100	• Ensure late autumn, winter and early spring seed sources are available.	Unmapped (2)	
			101	• Avoid mowing or crop harvesting during periods where nests will be impacted.	Unmapped (2)	
			102	• Grow and maintain multi-species cover crops, and cut later in the year, to provide food and cover over the winter.	Unmapped (2)	
			103	• Avoid / minimise use of insecticides on grassland and crops.	Unmapped (2)	
			104	• 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.	Unmapped (2)	

			105	• Leave arable margins.	Unmapped (2)	
			106	• Encourage organic and regenerative farming methods.	Unmapped (2)	
			107	• Install nestboxes for target species.	Unmapped (2)	
			108	• Restore / create native hedgerow / scrub habitat.	Unmapped (2)	
			109	• Create or restore farm ponds.	Unmapped (2)	
	SA-7	Urban bird assemblage (4 species)	110	• Identify, monitor and safeguard nesting and roosting sites and seek to identify hotspots for urban bird species within this assemblage.	Unmapped (2)	
			111	• Incorporate universal nest bricks for swift, starling and house sparrow, as well as house martin nesting cups, into new development, and retrofit these into existing buildings.	Unmapped (2)	
			112	• Increase awareness and education about urban bird species and the importance of the built environment as habitat for these species.	Unmapped (2)	
			113	• Support local action groups to undertake surveys, and to engage with householders/landlords and local tradespeople to increase awareness of swift nests and help them avoid destroying access holes when undertaking repairs to buildings.	Unmapped (2)	
	SA-8	Landscape mosaic	114	• Identify and record areas that are or have the potential	Unmapped (2)	

		assemblage (18 species)		to function as landscape mosaic sites.		
			115	• Maintain and enhance existing areas of mosaic habitats through a combination of grazing and natural processes.	Unmapped (2)	
			116	• 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.	Unmapped (2)	