

Durham Local Nature Recovery Strategy - Draft Priorities and Measures

Grassland and Heathland

Code	Priority	Measures
G1	Priority grasslands are conserved, enhanced, extended and connected.	<p>G1-01: Priority grasslands are managed appropriately to maintain or achieve good ecological condition</p> <p>G1-02: Buffer and connect priority grasslands through the creation of priority grasslands habitats where soil fertility allows.</p> <p>G1-03: Identify and catalogue priority grasslands and those that offer potential for enhancement or restoration.</p> <p>G1-04: On highly fertility land provide connections for priority grasslands and their associated species through delivery of agricultural margins and conservation headlands.</p> <p>G1-05: End-use restoration of Magnesian limestone mineral sites to include significant restoration to grassland communities</p>
G2	Heathlands are conserved, enhanced, extended and connected.	<p>G2-01: Heathlands are managed appropriately to maintain or achieve a structurally diverse habitat in good ecological condition.</p> <p>G2-02: Buffer and connect heathlands through the creation of heathland and appropriate semi-natural habitats.</p> <p>G2-03: Identify and catalogue existing heathlands and historic heathlands identifying those sites that can be targeted for restoration and enhancement.</p>
G3	Open Mosaic Habitats are conserved, enhanced, extended and connected.	<p>G3-01: Open Mosaic Habitats are managed appropriately to achieve good ecological condition.</p> <p>G3-02: Buffer and connect Open Mosaic Habitats through the creation of OMH or appropriate open semi-natural habitats.</p> <p>G3-03: Identify sites at risk from anti-social behaviour and develop partnerships to tackle misuse and raise awareness of their ecological value.</p> <p>G3-04: Identify and catalogue Open Mosaic Habitat and those that offer potential for enhancement</p>
G4	Peatlands are conserved and restored to be in good hydrological and biological condition	<p>G4-01: Peatlands are managed appropriately to achieve good ecological and hydrological condition.</p> <p>G4-02: Hydrologically linked land is managed to protect the hydrological and nutrient status of peatland</p>

Woodland, Hedgerows, Scrub and Trees

Code	Priority	Measures
W1	Ancient Woodlands and ancient and veteran trees are conserved, enhanced, extended and connected, with Planted Ancient Woodlands (PAWS) actively restored.	<p>W1-01: Buffer and connect ancient woodland through planting native tree and scrub species and/or through natural colonisation</p> <p>W1-02: Protection of ancient woodland / veteran / ancient trees via Tree Preservation Orders</p> <p>W1-03: Appropriate management of ancient woodland to achieve good ecological condition.</p> <p>W1-03: Restore PAWS, conserving any remaining ancient woodland features, through careful active management.</p> <p>W1-04: Increase awareness and provide advice to support retention and positive management of ancient and veteran trees among landowners and land managers.</p> <p>W1-05: Targeted planting of parkland, hedgerow and field trees and <u>veteranisation</u> of existing trees.</p>
W2	The area of native woodland is increased	W2-01: Increase the area of native woodland cover through planting and/or natural colonisation, as appropriate, particularly targeting expansion and connecting of existing woodlands and in areas that increasing woodland will contribute to development of robust woodland habitat networks.
W3	All woodland types are managed appropriately to enhance their biodiversity and their wider ecosystem services	W3-01: Woodland management is encouraged to deliver greater biodiversity benefits and a diverse range of ecosystem services and National Environmental Outcomes
W4	Native hedgerows are conserved, managed and enhanced, and new species rich native hedgerows with hedgerow trees are created, increasing connectivity and reforming lost connections.	<p>W4-01: Improve the condition of existing hedgerows through increasing species diversity, planting hedgerow trees and providing buffer strips and headlands.</p> <p>W4-02: Plant new species rich native hedgerows with hedgerow trees.</p>

Running Waters and Wetlands

Code	Priority	Measures
RW1	Water quality is improved with a reduction in pollutants	<p>RW1-01: Encourage farmers and landowners to reduce diffuse pollution by adopting restorative agricultural techniques, such as riparian buffer strips, woodland planting and minimal tillage techniques.</p> <p>RW1-02: Develop collaborative catchment plans to tackle both 'point' and 'diffuse' sources of pollution, including phosphate and nitrogen, supporting interventions such as nutrient balancing and reducing soil erosion.</p> <p>RW1-03: Reduce the water pollution caused by historical metal mining including through continuing and expanding the Water and Abandoned Metal Mines programme across the Rivers' Wear and Tees.</p> <p>RW1-04: Encourage management of water quantity and quality in the urban environment and at a local level through mechanisms such as reducing drain misconnections and retro-fitting <u>SuDS</u>.</p> <p>RW1-05: Awareness raising program to increase public awareness around water pollution to encourage behaviours that support healthy river habitats.</p> <p>RW1-06: Integrate data collected from a variety of sources (for example Environment Agency, Northumbrian Water, stakeholders, citizen science) and encourage greater monitoring of water quality through encouraging volunteers to collect data in conjunction with local partners such as the Rivers Trusts</p>
RW2	Modified and artificial river habitats are restored	<p>RW2-01: Work with nature to restore physical complexity and dynamism to the river network by providing the space for our rivers to move and flood, naturalising longitudinal connectivity and improving the lateral connectivity to our floodplains through actions such as re-meandering, grading banks, restoring and creating new floodplain wetlands, backwaters and connecting channels.</p> <p>RW2-02: Remove culverts, obsolete artificial barriers and structures or mitigate the impacts of such structures.</p> <p>RW2-03: Create and restore riparian habitats through creation or natural regeneration of appropriate grassland, wetland and woodland habitats.</p>
RW3	Ponds, Fens, Swamps are conserved, enhanced, extended and connected.	<p>RW3-01: Create new wetlands and restore relic wetlands and ghost ponds forming ecologically connected clusters of wetland habitats</p> <p>RW3-02: Undertake desktop analysis and field surveys to identify relic wetlands and ghost ponds that can be targeted for restoration.</p>
RW4	The distribution and abundance of Invasive Non-Native Species are sustainably reduced.	<p>RW4-01 - Encourage landowners to undertake plant INNS control, concentrating on the furthest upstream locations and where INNS are impacting designated sites</p> <p>RW4-02: Alongside partners develop and deliver a strategic approach to plant INNS control which aligns with neighbouring LNRS which concentrates on eradication of plant INNS at the furthest upstream locations.</p> <p>RW4-03: Awareness raising amongst landowners, community groups and the general public to encourage reporting of INNS to improve monitoring, increase local control and raise awareness of biosecurity measures to reduce the spread of INNS.</p>

Urban

Code	Priority	Measures
U1	There is greater range and abundance of wildlife in the urban environment which is protected, positively managed, and better connected across the urban landscape.	<p>U1-01: Creation of community woodlands of various typologies in the urban and peri-urban environment, which are easily accessible from urban centres.</p> <p>U1-02: Planting of street trees and individual trees in the urban environment</p> <p>U1-03: Production and delivery of a Strategic Open Space Strategy for local authority owned urban green spaces which promotes wildlife friendly management practises, the creation of wildlife habitats and engagement with nature.</p> <p>U1-04: Encourage action to create habitats for wildlife in urban spaces such as gardens, schools, churchyards and other urban areas, to encourage nature and enhance connectivity.</p> <p>U1-05: Design and implement targeted nest box schemes for birds, bats and invertebrates.</p> <p>U1-06: Areas of value to wildlife and accessible nature friendly spaces in urban areas to be better protected through appropriate designation such as Local Nature Reserve designation.</p>

Coastal

Code	Priority	Measures
C1	Recreational access to the coast is sustainably managed, minimising impacts on local wildlife and the environment.	<p>C1-01: Develop and implement a specific strategy for the coast that addresses the recreational impacts by, engaging with the public, rationalising and improving the path network, protecting sensitive areas through path rationalisation, fencing and signage and undertaking habitat management to support the designations.</p> <p>C1-02: Create or enhance existing publicly accessible green spaces to provide nature rich environments and reduce recreational pressures on the coasts European Designations</p>

Day-Flying Moths

A group of day-flying moths comprising of Cistus Forester, Chalk Carpet and Least Minor

Code	Priority	Measures
BM1	Populations of the Coastal Day-Flying Moth Assemblage are secured and their connectivity and distribution increased.	BM1-01: Re-survey of known, historic and potential sites to ensure we have up to date information on the day-flying moth assemblage BM1-02: Magnesian limestone grasslands are managed to achieve good condition enabling them to support populations of the day flying moth assemblage BM1-03: Quarry restorations prioritise the creation of Magnesian limestone grassland capable of supporting species within the assemblage BM1-04: Coastal grasslands are managed to increase plant diversity and opportunities to create bare ground habitat populated with appropriate foodplants on Magnesian limestone are taken. BM1-05: Scope opportunities for species-specific projects, and take bespoke practical action where possible.

Northern Brown Argus (butterfly)

Code	Priority	Measures
BM2	Populations of Northern Brown Argus are secured and their connectivity and distribution increased.	<p>BM2-01: Re-survey of known, historic and potential sites to ensure we have up to date information on Northern Brown Argus.</p> <p>BM2-02: Assessments of habitat quality and management is undertaken at known sites, with this information used to ensure all known sites are brought under appropriate long term management.</p> <p>BM2-03: Introductions of Northern Brown Argus onto sites that have (or could have) the capacity to support viable populations once appropriate enhancement and long term management is in place.</p> <p>BM2-04: The expansion of Northern Brown Argus and connectivity between known populations is encouraged through habitat creation and appropriate land management.</p> <p>BM2-05: Undertake a genetic study to determine the extent of colonisation and distribution of brown argus and the inter-relationships between the two species.</p> <p>BM2-06: Undertake a research project alongside Durham University and local horticulturalists to assess various methods for the successful introduction of rock rose</p>

Small Pearl-Bordered Fritillary (butterfly)

Code	Priority	Measures
BM3	Populations of Small Pearl-Bordered Fritillary are secured and their connectivity and distribution increased.	<p>BM3-01: Assessment of habitat management at known sites, with all known sites being brought into appropriate long term management.</p> <p>BM3-02: The expansion of Small Pearl-Bordered Fritillary and connectivity between known populations is encouraged through habitat creation and appropriate land management.</p> <p>BM3-03: Identify clusters of potential reintroduction sites to create additional, sustainable networks outside of the current known</p>

Brownfield Butterflies and Moths

A group of day-flying butterflies and moths comprising of Grayling, Green Hairstreak, Small Heath, Wall, Dingy Skipper, Six-Belted Clearwing and Small Blue

Code	Priority	Measures
BM4	Populations of the Brownfield Lepidoptera Assemblage are secured and their connectivity and distribution increased.	<p>BM4-01: Assessment of habitat management at brownfield sites supporting species within the assemblage, with all sites being brought into appropriate long term management.</p> <p>BM4-02: Buffer and connect brownfield sites supporting any of the assemblage through the creation of brownfield and appropriate semi-natural habitats.</p> <p>BM4-03: Re-survey of known, historic and potential sites to ensure we have up to date information on the species within the assemblage.</p> <p>BM4-04: Identify sites for potential introduction of specific species within the assemblage and their foodplants if required and assess the ability of sites to support small blue, especially along the Durham Coast.</p> <p>BM4-05: Scope opportunities for species-specific projects, and take bespoke practical action where possible.</p>

White-letter Hairstreak

Code	Priority	Measures
BM5	The distribution of White-letter hairstreak is increased across the County	BM5-01: Dutch elm disease resistant hybrids are planted as hedgerow and in-field trees.

Moss Carder Bumblebee

Code	Priority	Measures
BB1	Populations of Moss Carder Bee are secured and their distribution increased.	<p>BB1-01: Species rich grassland are provided at a field scale.</p> <p>BB1-02: Road side verges are managed to promote the diversity of flowering plants.</p> <p>BB1-03: Permanent flower-rich field margins and headlands are created.</p> <p>BB1-04: Permanent field margins, beetle banks and headlands are created that are managed to form tussocky grasslands suitable for nesting and hibernation.</p> <p>BB1-05: Provide training and encourage further field surveys to establish more accurate distribution mapping.</p> <p>BB1-06: Land management advice and information about moss carder bee is provided to land managers to encourage appropriate management and an affinity with the bee.</p>

Broken-belted Bumblebee

Code	Priority	Measures
BB2	Populations of Broken-Belted Bumblebee are secured and their distribution increased.	<p>BB2-01: Species rich grasslands are created at a field scale with management regimes that allow plants to flower into early October.</p> <p>BB2-02: Road side verges and other linear corridors along features such as ditches are managed to promote the diversity of flowering plants.</p> <p>BB2-03: Permanent flower-rich field margins and headlands are created that provide nectar sources into early October.</p> <p>BB2-04: Permanent field margins, beetle banks and headlands are created that are managed to form tussocky grasslands suitable for nesting and hibernation.</p> <p>BB2-05: Encourage further field surveys to establish more accurate distribution mapping.</p> <p>BB2-06: Land management advice and information about broken-belted bumblebee bee is provided to land managers to encourage appropriate management and an affinity with the bee.</p>

Willow Tit

Code	Priority	Measures
BR1	Populations of Willow Tit are secured and their distribution increased.	<p>BR1-01: Known populations are secured through appropriate land management, including <u>veteranising</u> appropriate trees, coppicing, creating scrubby woodland rides, and halting maturation of some woodland in suitable areas.</p> <p>BR1-02: Buffer, extend and connect wet woodlands, damp woodlands and scrubby margins along watercourses to facilitate an increase in distribution and secure known populations.</p> <p>BR1-03: Install species specific 'nestboxes' in suitable areas to encourage expansion of population.</p> <p>BR1-04: Encourage further field surveys to establish more accurate distribution mapping and identification of key core areas.</p>

Black Grouse

Code	Priority	Measures
BR2	Populations of Black Grouse are secured and their distribution increased.	<p>BR2-01: Known populations and lek sites are secured through appropriate land management, maintaining and enhancing a mosaic of structurally diverse heathland, wetlands, grassland, scrubby and open native woodland.</p> <p>BR2-02: Expand the distribution of black grouse by creating or enhancing a network of suitable habitats including structurally diverse heathland, wetlands, grassland and scrubby and open native woodland.</p> <p>BR2-03: Encourage further field surveys to establish more accurate distribution mapping and population monitoring.</p> <p>BR2-04: Alongside other Measures, mitigate any significant, demonstrable impacts of predators on the breeding success of Black Grouse through proportionate, responsible and legal predator control, (e.g. the use of predator exclusion fencing, diversionary feeding, targeted control of particular species)</p>

Wading Birds

A group of wading birds comprising of lapwing, Curlew, Snipe, Redshank and Golden Plover

Code	Priority	Measures
BR3	Populations of the Wader Assemblage are secured and their distribution increased	<p>BR3-01: Improve habitat suitability in core areas for waders by providing the right conditions for breeding and wintering birds through managing water levels throughout the year, promoting the creation of wetland scrapes and appropriate grassland management to create the right sward conditions.</p> <p>BR3-02: Expand the distribution of waders by providing the right conditions for breeding and wintering birds through managing water levels throughout the year, promoting the creation of wetland scrapes and appropriate grassland management to create the right sward conditions for waders outside of their core areas.</p> <p>BR3-03: Ensure that woodland and hedgerow planting schemes are sensitive to wading birds and the ambition to expand their distribution outside of their core areas.</p> <p>BR3-04: Encourage further field surveys to establish more accurate distribution mapping and identification of key core areas.</p> <p>BR3-05: Scope opportunities for species-specific projects, and take bespoke practical action where possible.</p> <p>BR3-06: Alongside other Measures, mitigate any significant, demonstrable impacts of predators on the breeding success of waders in the <u>assemblage</u> through proportionate, responsible and legal predator control, (e.g. the use of predator exclusion fencing, diversionary feeding, targeted control of particular species)</p>

Farmland Birds

A group of birds comprising of Yellowhammer, Corn Bunting, Gray Partridge, Tree Sparrow, Linnet, Reed Bunting, Yellow Wagtail and Skylark

Code	Priority	Measures
BR4	Populations of the Lowland Farmland Bird Assemblage are secured and their distribution increased	<p>BR4-01: Retain post harvest stubble fields through the winter and potentially through the spring to mid-summer providing winter food for seed eating birds and spring and summer foraging and nesting opportunities.</p> <p>BR4-02: Encourage the retention of arable weeds both 'in crop' and at the periphery of fields.</p> <p>BR4-03: Encourage the use of wild bird seed mixes to provide food for adults and young and overwintering cover.</p> <p>BR4-04: Increase tussocky, wildflower rich grassland margins, beetle banks and headlands, especially when associated with existing mature hedgerows.</p> <p>BR4-04: Encourage further field surveys to establish more accurate distribution mapping and identification of key core areas</p> <p>BR4-05: Scope opportunities for species-specific projects, and take bespoke practical action where possible.</p>

Fish

A group of fish comprising of Sea Trout, Atlantic Salmon, Sea Lamprey, River Lamprey, Brook Lamprey, Eel and Bullhead

Code	Priority	Measures
F1	An increase in self-sustaining populations of the wild Fish Assemblage	<p>F1-01: Restore natural river function and physical condition by re-meandering, improving floodplain connectivity and introducing natural flood management measures.</p> <p>F1-02: Remove culverts, obsolete artificial barriers and structures or mitigate the impacts of such structures.</p> <p>F1-03: Create and restore riparian habitats through planting or natural regeneration of appropriate grassland, wetland and woodland habitats.</p> <p>F1-04: Encourage effective Catch and Release Techniques across the catchments of County Durham</p> <p>F1-05: Encourage data collection by angling clubs and anglers to improve collective understanding of the river environment, including the Water Quality Monitoring Network and <u>Riverfly</u> Monitoring Initiative.</p> <p>F1-06: Scope opportunities for species-specific projects, and take bespoke practical action where possible.</p>

Adder

Code	Priority	Measures
R1	Populations of Adder are secured and their distribution increased.	<p>R1-01: Land management advice and information about adders is provided to land managers to encourage appropriate management and an affinity with adders</p> <p>R1-02: Appropriate land management is in place to secure adder populations and expand increase their distribution.</p> <p>R1-03: Projects to tackle public misconceptions about adders are undertaken in order to reduce persecution and encourage engagement with their conservation.</p> <p>R1-04: Undertake a of population genetics study in the NPNL in conjunction with Newcastle University, building on previous work in this area.</p> <p>R1-05: Continue and encourage further field surveys across the county to enable more accurate distribution mapping.</p>

Slow Worm

Code	Priority	Measures
R2	Populations of slow worm are secured and their distribution increased	<p>R2-01: Land management advice and information about slow worm is provided to land managers to encourage appropriate management and an affinity with slow worm</p> <p>R2-02: Appropriate land management is in place to secure slow worm populations and expand increase their distribution.</p> <p>R2-03: Encourage further field surveys across the county, and especially along the Durham coast, to enable more accurate distribution mapping.</p> <p>R2-04: Undertake a population genetics study in the County in conjunction with Newcastle University.</p>

Upland Alchemilla (plants)

A group of plants comprising of Starry Lady's mantle, Clustered Lady's mantle, Velvet Lady's mantle, Large-toothed Lady's mantle and Rock Lady's mantle

Code	Priority	Measures
P1	Populations of the Upland Alchemilla Assemblage are secured and their distribution increased	<p>P1-01: Enhance the populations at known roadside verges and expand these populations through appropriate management and introductions where conditions allow.</p> <p>P1-02: Undertake surveys to identify other sites for the Upland Alchemilla Assemblage and locations where conditions are suitable for establishing populations of the assemblage.</p> <p>P1-03: Alongside Durham University and local horticulturists investigate the potential to collect seed and provide plug plants for introduction projects.</p> <p>P1-04: Engage with and educate the public on the botanical value of roadside verges and the management required to maintain and enhance these assets.</p> <p>P1-05: Scope opportunities for species-specific projects, and take bespoke practical action where possible.</p>

Flat Sedge (plants)

Code	Priority	Measures
P2	Populations of Flat-sedge secured and the distribution increased	<p>P2-01: Enhance the populations at known sites through appropriate management and introductions.</p> <p>P2-02: Undertake surveys at sites that could potentially support flat-sedge to identify any other sites for the species and locations where conditions are suitable for establishing new populations.</p> <p>P2-03: Alongside Durham University and local horticulturists investigate the potential to collect seed and provide plug plants for introduction projects. A priority would be to establish metapopulation within the Great North Fen project.</p>

Northern Hawks-beard (plants)

Code	Priority	Measures
p3	Populations of Northern Hawk's-beard are secured and the distribution increased	<p>P3-01: Enhance the populations at known sites through appropriate management and introductions.</p> <p>P3-02: Undertake surveys at sites that could potentially support northern hawk's-beard to identify any other sites for the species and locations where conditions are suitable for establishing new populations.</p> <p>P3-03: Alongside Durham University and local horticulturists investigate the potential to collect seed and provide plug plants for introduction projects.</p>

Ivy-leaved Bellflower (plants)

Code	Priority	Measures
p4	Populations of Ivy-leaved Bellflower are secured and the distribution increased	<p>P4-01: Undertake a population survey at both known sites and secure the populations through appropriate management and identify opportunities to extend the species into adjacent suitable habitat.</p> <p>P4-02: Undertake surveys at sites that could potentially support ivy-leaved bellflower to identify any other sites for the species and locations where conditions are suitable for establishing new populations.</p> <p>P4-03: Alongside Durham University and local horticulturists investigate the potential to collect seed and provide plug plants for introduction projects.</p>

Water Vole

Code	Priority	Measures
M1	Populations of water voles are secured and their distribution increased.	<p>M1-01: Targeted mink control is undertaken along the main migratory routes for mink into County Durham and at other key locations in the county</p> <p>M1-04: Population monitoring and habitat condition assessments are undertaken at known water vole sites.</p> <p>M1-03: Known populations are secured through appropriate land management.</p> <p>M1-04: Build on the work of the Naturally Native Project and develop a regional water vole recovery project</p>

Red Squirrel

Code	Priority	Measures
M2	Populations of red squirrel are secured and their distribution increased.	<p>M2-01: Known populations of red squirrels are secured through appropriate habitat management and grey squirrel control in buffer zones around these populations.</p> <p>M2-02: Establish and support local red squirrel conservation groups to help protect local populations by improving monitoring of populations and facilitating conservation management and grey squirrel control.</p> <p>M2-03: Engage with landowners to encourage the local planting of new woodlands and hedgerows around known populations, in conjunction with grey squirrel control, to create habitat connectivity and encourage local dispersal.</p> <p>M2-04: Encourage formal surveys for red squirrels in areas where anecdotal records are arising for example upper <u>Teesdale</u>, <u>Knitsley</u>, <u>Shotley Bridge</u> and <u>Beamish</u>.</p>