North Yorkshire & York LNRS

Draft Priorities for Recovering or Enhancing Biodiversity with associated Measures (Actions), November 2024

This document is the outcome of a series of thematic workshops held between 24th April and 9th May with contributions from 120 stakeholders from a range of organisations with expertise in biodiversity and wider environmental benefits across North Yorkshire and York. Stakeholders contributed to 107 opportunities and these were considered by a prioritisation panel on 22nd May. The 12 Panellists (representatives from the LNRS steering group) assessed each opportunity against 12 criteria (seven ecological and five co-benefits) and the scoring system devised a ranking list.

The top 25 priorities from the scoring process are listed below, with an additional 14 priorities completing the priority shortlist. The additional 14 priorities were included to provide broader representation across the themes and habitats for increased nature recovery in North Yorkshire and York. Additional priorities, along with a number of 'overarching' priorities, were added by recommendations from the validation workshop (on 11th June), or other workshop delegates via email.

This document presents the overarching priorities first, followed by the priorities for different habitat types (the habitat priorities) with associated Measures (Actions).

Contents

Overarching Priorities

Priority OVR_P01: Enhance habitat connectivity

Enhance the connectivity between areas of good-quality existing habitat across North Yorkshire and York through the creation of appropriate new habitat between existing sites, to improve connectivity for key species.

Objectives:

1. Identify areas of good-quality existing habitat that would benefit from being connected
2. Enhance the connecting sites between areas of existing good-quality habitat to provide greater connectivity between them.
3. Create new areas of habitat to act as stepping stones between areas of existing good-quality habitat to provide greater connectivity between them.
4. Use existing road, rail, river and footpath corridors (including national trails) as opportunities to increase habitat connectivity and to provide greater connectivity between urban and rural areas.

Priority OVR_P02: Undertake actions to benefit key species

Undertake actions to benefit key species within North Yorkshire and York, particularly those requiring specific interventions.

Objectives:

1. Introduce species into areas of suitable habitat, where appropriate, and implement bespoke management for them to establish.
2. Support the propagation of relevant plant species, particularly those that are rare or have poor dispersal capabilities, through growing seeds and plug plants.
3. Undertake actions to support migratory species such as fish.

Priority OVR_P03: Control invasive non-native species

Control and seek to eradicate invasive non-native species (INNS) throughout North Yorkshire and York.

Objectives:

1. Implement a coordinated approach to the control of INNS across North Yorkshire and York, including the development of a regional biosecurity plan.
2. Work with regional partners, organisations, and projects to improve INNS monitoring and reporting across North Yorkshire and York.
3. Implement measures to mitigate the spread of INNS when undertaking any works (e.g. the removal of barriers from watercourses).

Priority OVR_P04: Enhance nature-related engagement, outreach and collaboration

Work collaboratively with all sectors across North Yorkshire and York to enhance coordinated regional action to benefit nature and seek to increase public knowledge, awareness and understanding of nature and its wider benefits.

Objectives:

1. Promote collaborative partnership working between regional partners, organisations and other stakeholders to enhance coordinated, strategic action for nature.
2. Work with statutory bodies (e.g. Internal Drainage Boards), local authorities, including the Mayoral Combined Authority (MCA), and other agencies to increase collaborative action that will benefit nature, and seek to incorporate nature into other regional plans and policies.
3. Work with the land management and farming sector through engagement and outreach to increase collaborative action that will benefit nature.
4. Engage and collaborate with communities and local groups, including through Parish Councils and parish meetings to encourage local initiatives and other local actions that will benefit nature.
5. Increase public knowledge, awareness and understanding of nature and its wider benefits and suggest actions that individuals can take to benefit nature, including volunteering or becoming a member of (or donating to) a nature conservation organisation.

Priority OVR_P05: Enhance the data and evidence base and share knowledge

Enhance the ecological data and evidence base across North Yorkshire and York and share knowledge between all organisations and individuals undertaking actions to benefit nature.

Objectives:

1. Identify and map important areas of existing habitat to understand its current distribution and help target efforts to enhance, expand, restore and connect it.
2. Use historic mapping, records and traditional knowledge to inform evidence gaps and identify former areas of habitat that could be recreated or restored.
3. Share knowledge and case studies of existing good practice and projects that have achieved successful nature enhancement outcomes.
4. Ensure that actions intended to benefit nature are evidence-based and scientifically proven (e.g. based on the Oxford Conservation Evidence database).
5. Undertake monitoring, maintain records and provide reporting where actions to benefit nature have been implemented, to understand their outcomes and effectiveness and help build a regional evidence base.

Habitat Priorities

Farmland (FRM)

Priority FRM_P01: Enhance and expand arable field margins

Enhance and expand the floristic value of arable field margins to increase total biodiversity, reduce the need for inputs and support pollinator and farmland bird populations.

Co-benefits:

• Pollination • Soil health • Reduced chemical use • Water quality

Measures

FRM_M01.1: Expand field margins, including promoting the rationalising of field margins ('squaring-up') of existing arable fields.

FRM_M01.2: Increase the floristic value of field margins through promotion of relevant actions under current Environmental Land Management schemes (ELMs) e.g. Sustainable Farming Incentive (SFI).

FRM_M01.3: Identify the species associated with specific land-management types (e.g. Bryophytes associated with winter stubble).

Priority FRM_P02: Expand trees outside woodlands

Expand the use of trees outside woodlands (e.g. agroforestry), to increase connectivity in the farmed environment and support farm productivity.

Co-benefits:

• Pollination • Carbon storage • Climate change adaptation
• Climate change mitigation • Soil health • Animal welfare

Measures

FRM_M02.1: Increase tree and scrub cover by identifying existing less sensitive pasture that would be suitable for infield agroforestry and farm conservation advisors to promote the associated SFI/ELMS options that would benefit animal welfare (shelter against adverse weather), protection of crops (windbreak), soil health, adaptation to climate change (extreme weather), carbon reduction, connectivity in the farmed environment, and wildlife as a source of food (for foraging bats, pollinators, farmland birds etc.)

FRM_M02.2: Promote the benefit of Trees Outside Woodlands, including future proofing for loss of mature trees e.g. through Ash dieback. Raise awreness with land managers through workshops and site visits of the opportunities and benefits of agroforestry where closed canopy woodland tree-planting is not required or desired.

Priority FRM_P03: Promote high nature value farming practices

Promote farming practices that create greater business resilience and improvements for biodiversity.

Co-benefits:

• Reduced chemical use • Pollination

Measures

FRM_M03.1 Promote established and innovative farming techniques, (e.g. precision farming, drones) to farmers, NGOs and non-governmental advisors, along with machinery-sharing schemes to enable smaller farmers to be able to adopt some innovative farming techniques.

FRM_M03.2 Reduce or remove the use of artificial fertilisers and chemical application through alternative farming techniques. Promote farming practices that create greater resilience and improvements for biodiversity, including natural pest predators, such as bats, owls, swallows.

FRM_M03.3 Support land management collaboration with appropriate guidance to facilitate the targetting of interventions to the most appropriate locations. Work with farm advisory services to support existing and encourage new farmer cluster groups. Respond to ELMS options for species-rich grassland through training/advice/support.

FRM_M03.4 Provide case studies of existing good-practice and complementary options (e.g. ELMs), e.g. ditch management for wildlife and water quality

FRM_M03.5 Raise awareness of Natural Capital benefits of these measures; business resilience inc farm visits & access to nature; sustainable tourism

FRM_M03.6 Improve soil health through sharing knowledge and best practice. Promote baseline soil health measurements (earthworms) and regular monitoring to measure change. Encourage take-up of relevant funding option(s).

Priority FRM_P04: Promote changes in grassland management

Promote changes in land use practices, including increasing the diversity of grass sward and improving soil health, to increase the resilience of farmland for livestock and wildlife.

Co-benefits:

• Pollination • Soil health • Reduced chemical use • Water storage • Water quality
• Flood alleviation • Carbon storage • Climate change adaptation • Climate change mitigation

Measures

FRM_M04.1 Raise awareness of alternative land management approaches with land managers that will lead to improvements in biodiversity, livestock health and efficiencies (quicker throughputs), reduction in chemical reliance, improve water-retention properties of land to store carbon. Make use of case studies and good communication between stakeholders and advisors.

FRM_M04.2 Encourage uptake of more diverse and sympathetic grazing pratices e.g. rotation of stock, new technologies, different livestock breeds: smaller, native, hardy.

FRM_M04.3 Improve soil health through sharing knowledge and best practice. Promote baseline soil health measurements (e.g. earthworm monitoring) and regular monitoring to measure change. Encourage take-up of relevant funding option(s).

FRM_M04.4 Increase sward diversity which will give a range of rooting depths, and will then require different stock at different times of the year.

FRM_M04.5 Reduce soil compaction to improve soil stucture and increased water infiltration by ensuring the right machinery types are used and its usage is appropriate, and by ensuring approriate stocking rates.

Priority FRM_P05: Expand the hedgerow network

Enhance existing hedgerow structure and diversity through encouragement of traditional management practices and hedgerow tree establishment. Expand the network of hedgerows as wildlife corridors and connecting other habitats.

Co-benefits:

• Pollination • Sense of place • Climate change adaptation • Climate change mitigation
• Carbon storage • Water storage • Animal welfare

Measures

FRM_M05.1 Identify and map fragmented patches of woodland that would benefit from being connected with hedgerows to ensure diversity and ease movement of species, e.g. birds, mammals, pollinators.

FRM_M05.2 Enhance and restore existing hedgerows, by planting up gaps with a diversity of native species, carrying out hedge laying and responsible coppicing where required, and tree establishment within hedgerows.

FRM_M05.3 Promote the variety of age and height structures of hedgerow networks by transitioning from annual to sequential hedgerow cutting (e.g. every 2-3 years).

FRM_M05.4 Manage tree-health issues in hedgerows (e.g Ash), including managing at-risk trees to retain wildlife benefits e.g. monolith and ecopole creation.

FRM_M05.5 Create buffers alongside hedgerows that exceed 2m width where possible. Maximise diversity of these by including woodland flora and ancient woodland indicator species (via seeding and/or plug plants of local provenance).

FRM_M05.6 Plant new hedgerows with a mix of native shrub and tree species. Increase awareness and uptake of existing hedgerow creation schemes.

Upland (UPL)

Priority UPL_P01: Management and connection of limestone pavement habitats

Identify ideal management for different types of Limestone Pavement and associated habitats, to promote a diversity of the habitat and management approaches. Expand species-rich connecting habitat (species-rich upland calcareous grassland or scrub) between isolated parcels of Limestone Pavement to connect this fragmented habitat.

Co-benefits:

• Pollination • Soil health • Sense of place • Access to nature

Measures

UPL_M01.1 Identify and map Limestone Pavement coverage (and associated scree and scar rocky habitats where relevant) to understand its current state and potential location for calcareous grassland to be restored as a buffer, building on Lancaster University's re-survey of the UK's limestone pavement resource.

UPL_M01.2 Reduce grazing to create a diversity of Limestone Pavement habitats, including limestone grassland, limestone outcrops, base-rich flushes, and scrub.

UPL_M01.3 Modify the management of the connecting sites (e.g. limestone grassland, limestone outcrops, base-rich flushes, scrub), introduce locally collected seeds appropriate to Limestone Pavement habitats.

Priority UPL_P02: Enhance and restore upland calcareous grassland

Enhance the species richness of existing upland calcareous grassland sites and adjacent land. Increase the quality of calcareous grassland sites between these species-rich sites, to provide connectivity for upland specialist species.

Co-benefits:

• Pollination • Climate change adaptation

Measures

UPL_M02.1 Identify appropriate shallow soil grassland sites where an increase in plant species diversity can be achieved through changing grazing regimes. This will lead to an increase in pollinators. e.g. butterflies, moths & other invertebrates. Undertake surveys to identify the extent of carbon stored by grassland fungi and the area they cover. Research if and how this soil ecosystem can be restored.

UPL_M02.2 Develop and support the propagation of calcareous plant species, particularly those that are rare or with poor dispersal capabilities, to augment creation and restoration sites (growing of seeds and planting out plugs)

UPL_M02.3 Enhance lowland calcareous grassland through optimal grazing management (reduce stock numbers, alter stock type to include more cattle), and manage scrub to an appropriate percentage.

UPL_M02.4 Revert improved calcareous grassland sites back to semi-improved calcareous grassland to increase the connectivity between sites of unimproved calcareous grassland. Undertake soil surveys to establish the local requirements. Modify inputs to try and return the soil to the calcareous state.

Priority UPL_P03: Enhance upland hay meadows

Enhance the species richness of existing upland hay meadow sites adjacent land. Restore and create species-rich grasslands between these fragmented sites to provide connectivity for specialist species.

Co-benefits:

• Pollination • Access to nature • Sense of place

Measures

UPL_M03.1 Enhance and maintain existing upland hay meadows through traditional management e.g. cut and collect with aftermath grazing. Increase the wetness of sites, where appropriate, by improving the management and blocking drains, to improve their condition and provide more appropriate conditions for specialist species.

UPL_M03.2 Increase grassland diversity in neighbouring fields to buffer known upland hay meadow sites, including conversion of pasture, through the use of green hay from local donor sites, leading to an increase in invertebrates and birds, specifically twite.

UPL_M03.3 Increase the diversity of nearby neutral grasslands (including former hay meadows) to expand this habitat and act as stepping stones between upland hay meadow sites, via green hay spreading and introducing plug plants. Use appropriate seed mix where green hay is limited. Implement appropriate management.

UPL_M03.4 Undertake mapping of green hay donor and receptor sites and locations identified where material is to be grown on to produce plug plants and seed AT SCALE.

Priority UPL_P04: Enhance acid grassland

Enhance the wetness and diversity of sward structure of upland acid grassland sites to increase connectivity for wading birds.

Co-benefits:

• Pollination • Soil health • Water storage

Measures

UPL_M04.1 Carry out surveys to identify upland acid grassland locations and understand where this habitat is more appropriate than upland dry heath creation/restoration.

UPL_M04.2 Enhance existing upland acid grassland through appropriate grazing, no mechanical operations in breeding season, and re-wetting or adding scrapes where required.

Priority UPL_P05: Enhance upland dry heath

Enhance the diversity, height and structure of existing upland dry heathland sites. Restore and create new upland dry heathland using existing poor acid grassland and increased scrub to provide greater connectivity for specialist species.

Co-benefits:

• Pollination • Soil health • Reduced fire risk

Measures

UPL_M05.1 Engage with local land owners, farmers, Yorkshire Peat Partnership and Protected Landscape teams to identify best possible actions to improve the health of our heather/peat moorlands, increasing native moorland species, supporting climate change adaptation, and increasing opportunities for people to engage with moorlands.

UPL_M05.2 Enhance and restore existing upland dry heathland by amending grassland grazing regimes and grazing species to encourage the development of heath, where this will not impact negatively on the upland acid grassland network (OPP015). Introduce species where necessary.

UPL_M05.3 Undertake appropriate burning or cutting regimes once heath develops, with predator control where appropriate to support the success of ground-nesting birds. Implement wildlfire management plans once heath is suitably developed, including the creation of firebreaks.

UPL_M05.4 Carry out scrub management as heath develops to maintain a level of scrub that provides connectivity between patches of heath to benefit key bird species e.g. Merlin, ring ouzel, black grouse

UPL_M05.5 Collect seeds/cuttings of Petty Whin from plants on the North York Moors and grow on to support the recovery of this species.

UPL_M05.6 Create upland dry heathland on species-poor acid grasslad where appropriate, by reducing grazing pressure and reseeding to increase heather component.

Priority UPL_P06: Enhance wet heath

Enhance and expand wet heath adjacent to existing blanket bog to prevent drying out. Where appropriate rewet dry heath sites to reverse the decline of this increasingly rare habitat.

Co-benefits:

• Carbon storage • Water storage • Water quality • Flood alleviation
• Climate change adaptation • Climate change mitigation • Reduced fire risk

Measures

UPL_M06.1 Identify opportunities for buffering along recreation routes through blanket bog

UPL_M06.2 Explore with historic environment teams opportunities to restore former and current peat cutting sites

UPL_M06.3 Enhance existing wet heath by amending grazing regime and type where required (e.g reduction in sheep, increase in cattle) and introduce species (e.g. sphagnum and cottongrass) where required.

UPL_M06.4 Carry out grip and gully blocking to increase wetness where this will not impact negatively on the maintenance of important dry heath sites (OPP050), this will also help to reduce fire risk. Amend the grazing regime and grazing species, and introduce species (e.g. sphagnum and cottongrass plug plants) better suited to wet habitat. Avoid burning as this increases the drying out of sites.

Priority UPL_P07: Enhance blanket bog

Enhance the wetness and diversity of existing blanket bog sites and adjacent land to prevent drying out. Identify areas of deep peat and historic bog habitat and work with landowners to restore these to functioning peatland habitats.

Co-benefits:

• Carbon storage • Water storage • Water quality • Flood alleviation
• Climate change adaptation • Climate change mitigation • Reduced fire risk

Measures

UPL_M07.1 Identify areas of shallow peat that can be expanded, or peat formation re-started.

UPL_M07.2 Use peat maps to identify former extent of peat resource and understand ability to restore active hydrological processes to identify areas where blanket bog has been lost, and where peat formation could be re-started. Explore with historic environment teams opportunities to restore former and current peat cutting sites through re-wetting and sphagnum inoculation.

UPL_M07.3 Buffer, improve, and better connect all blanket bog and prioritise restoration of peat on open habitats in North Yorkshire and York. Use hydrological mapping systems to better understand how blanket bogs are connected and interact, and implement measures to rewet and enhance degraded blanket bogs, e.g. grip and gully blocking. This will also help to reduce fire risk.

UPL_M07.4 Amend the grazing regime and grazing species as required, and introduce species (e.g. sphagnum and cottongrass plug plants) better suited to wet habitat. Avoid burning as this increases the drying out of sites.

UPL_M07.5 Explore creation of a North Yorkshire based plant nursery specialising in growing of sphagnum plug plants and other specialist upland plant species (current stock comes from Loughborough)

UPL_M07.6 Enlarge areas of blanket bog by removal of trees on peat in carefully targeted and highly restorable locations supported by the: "Decision Support Framework for Peatland Protection". Identify areas with landowners that are suitable and feasible for peatland restoration or wooded peatland mosaics. These areas will be functionally connected to existing peatland bodies that haven't been heavily modified by land use operations. The characteristics of these areas can be seen on the Forest to Bog tool.

Priority UPL_P08: Expand moorland fringe habitats

Expand the range of habitats present along the moorland fringe, including woodland, scrub and rough grassland, to reduce fire risk and increase numbers of key species.

Co-benefits:

• Carbon storage • Climate change adaptation • Climate change mitigation • Reduced fire risk

Measures

UPL_M08.1 Use aerial imagery to identify areas where existing sites could be connected

UPL_M08.2 Create a suitable mix of habitats adjacent to existing sites via different mechanisms, e.g. natural regeneration, deer control, livestock exclusion, vegetation management to mitigate against wildfires

UPL_M08.3 Increase habitat for breeding waders, including rough pasture, by promoting suitable agri-environment options, working with local communities, continued monitoring, "right tree, right place" approach (replace coniferous plantation with native species rich), and predator control where appropriate.

UPL_M08.4 Increase tree and woodland cover in areas of moorland edge that will not compromise the presence of existing priority species (e.g. black grouse, ring ouzel, breeding waders, hazel dormouse, red squirrel, butterflies)

UPL_M08.5 Create new, buffer and connect existing woodland with appropriate species specifications, encouraging natural regeneration where possible.

Grassland (GRA)

Priority GRA_P01: Enhance species-rich grassland

Expand or buffer existing species-rich grassland sites through changes to management regimes.

Co-benefits:

• Pollination • Soil health • Carbon storage • Flood alleviation

Measures

GRA_M01.1 Use historic mapping (eg. tithe maps) and species records (eg. waxcaps) to identify historic species-rich grasslands and focus specific versus general habitat management/development efforts. Identify sites where species-rich grassland could be created and ways to achieve this (e.g. purchase via local councils, BNG offsetting process, NYY LINC Programme)

GRA_M01.2 Implement alternative management practices to maximise biodiversity eg. work with land managers and local authority teams to explore cutting regimes, pesticide and herbicide use, and mapping of 'no mow' areas.

Priority GRA_P02: Enhance and connect strategically important grasslands

Enhance and connect strategically important grasslands, to provide benefits for a range of bird species and pollinators.

Co-benefits:

• Pollination • Soil health • Water storage

Measures

GRA_M02.1 Identify sites that provide opportunites to enhance and connect strategically important grasslands, particularly where species have connectivity challenges eg. curlew & other waders & pollinators

GRA_M02.2 Make use of the Strategically Significant Networks mapping produced by NEYEDC to help inform the connection of existing habitats.

GRA_M02.3 Enhance strategically important grassland sites by utilising existing funding schemes, thus increasing the diversity of structure and species.

GRA_M02.4 Create new and expand existing rush pasture on upland fringes and lowland floodplains to increase abundances of wading birds and specialist plant species. Re-wet adjacent areas by removal/blocking of drains and addition of scrapes.

Priority GRA_P03: Enhance lowland calcareous grassland

Enhance the species richness of existing lowland calcareous grassland sites and adjacent land. Increase the quality of calcareous grassland sites between these species-rich sites, to provide connectivity for specialist species.

Co-benefits:

• Pollination • Soil health

Measures

GRA_M03.1 Identify location of existing lowland calcareous grassland and opportunities to expand and restore neighbouring sites. Will also lead to an increase in pollinators.

GRA_M03.2 Enhance existing lowland calcareous grassland sites through appropriate grazing/mowing regimes and scrub management as required e.g. where it can be shown this would benefit key species (such as Duke of Burgundy, Northern Brown Argus butterflies)

GRA_M03.3 Create lowland calcareous grassland at suitable sites through green hay spreading/ reseeding and suitable ongoing management.

GRA_M03.4 Develop and support the propagation of calcareous plant species, particularly those that are rare or with poor dispersal capabilities, to augment creation and restoration sites (growing of seeds and planting out plugs)

Priority GRA_P04: Enhance and expand magnesian limestone grassland

Enhance the species richness of existing magnesian limestone grassland sites and adjacent land. Increase the quality of magnesian limestone grassland sites between these species-rich sites, to provide connectivity for specialist species.

Co-benefits:

• Pollination • Soil health

Measures

GRA_M04.1 Identify key connecting road verges on Magnesian Limestone and modify the management to increase floristic diversity (e.g. remove arisings).

GRA_M04.2 Manage the existing species-rich Magnesian Limestone grassland resource through sympathetic management. Increase grassland diversity on adjacent land through the use of green hay from local donor sites, leading to an increase in pollinators.

GRA_M04.3 Create species-rich grassland at suitable sites across the Magnesian Limestone. Use arable reversion methods, seeding/green hay spreading, plug planting of specific key species e.g. pasque flower.

Priority GRA_P05: Expand acid grassland

Expand acid grassland to buffer existing lowland heath sites.

Co-benefits:

• Pollination • Soil health

Measures

GRA_M05.1 Buffer lowland heath by managing adjacent grassland sites, using appropriate grazing and other management measures.

GRA_M05.2 Create acid grassland at suitable sites. Use arable reversion methods, seeding/green hay spreading, plug planting of specific key species.

Priority GRA_P06: Restore and re-create lowland heath

Restore degraded lowland heathland sites and re-create this habitat at suitable locations.

Co-benefits:

• Pollination • Soil health

Measures

GRA_M06.1 Identify historic and potential lowland heath sites to enable the targetting of restoration/creation. Identify existing fragments of lowland heath to identify opportunities to reconnect existing sites.

GRA_M06.2 Undertake creation/restoration of lowland heath utilizing seed-rich brash, green hay and other material from appropriate local donor sites, and ongoing sensitive management.

GRA_M06.3 Create and keep open sandy areas and banks on lowland heath (through disturbance by cattle and large herbivores) to provide habitat for their associated unique flora and fauna, which have been lost. Remove top soil on pre-existing banks or create ponds and use the spoil to create sandy banks. Regular removal of vegetation is needed to keep these areas open.

Priority GRA_P07: Enhance road verges

Enhance species-richness of road verges through better management to increase their biodiversity.

Co-benefits:

• Pollination • Soil health • Reduced chemical use • Educational resource

Measures

GRA_M07.1 Review NYC and CYC policies around verge management (including within settlements) to improve management for biodiversity, including purchase of necessary equipment where required e.g. cut and collect machinery.

GRA_M07.2 Expand the cut and collect of verge arisings, learning from the 2024 North Yorkshire Highways pilot, including Anaerobic Digestion where appropriate.

GRA_M07.3 Encourage Parish Councils and local land managers to adopt nature-friendly cutting regimes.

GRA_M07.4 Encourage local groups to monitor local verges.

GRA_M07.5 Establish a strategic approach with co-operation between local authorities, drainage authorities and adjoining landowners to prevent drainage ditches being cleared onto common land or roadside verges (this creates problems of nettles and rank grasses, undoing the benefits of cut vegetation removal).

Woodland (WLD)

Priority WLD_P01: Protect and expand veteran tree resource.

Protect individual veteran trees and plant trees to become future veterans to provide habitat and facilitate the movement of specialist species.

Co-benefits:

• Carbon storage • Sense of place • Educational resource • Access to nature

Measures

WLD_M01.1 Promote the Woodland Trust Ancient Tree Inventory to locate and record ancient, veteran and notable trees.

WLD_M01.2 Plant new resilient trees to be veterans of the future using mapping of high-value veteran trees (e.g. Veteran Tree Inventory) to identify new planting areas for future veterans and to identify areas to trial 'veteranisation' to increase their value to key species.

WLD_M01.3 Protect existing veteran trees and newly-planted future veterans with suitable fenced enclosures to protect from livestock and other herbivores. Create and promote a best practice standard for fencing /enclosures around veteran trees to address impacts of grazing & intensive arable practices. Implement best practice management of no cultivation and no inputs.

WLD_M01.4 Expand veteran tree work into existing woodland, parkland and farmland to ensure veteran trees of the future are developed within existing landscapes, increasing biodiverse planting without losing historic significance.

WLD_M01.5 Sustainably manage parkland pasture associated with veteran trees, including use of herbal ley mixes, planting of replacement parkland trees and retaining dead wood on site to benefit insects and other wildlife.

Priority WLD_P02: Enhance and expand wood pasture, wood meadows and open mosaic habitats

Enhance and expand species-rich wood pasture, wood meadows and open mosaic habitats as an appropriate buffer and connecting habitat between woodland and grassland sites.

Co-benefits:

• Pollination • Carbon storage • Climate change adaptation • Climate change mitigation

Measures

WLD_M02.1 Identify fragmented patches of woodland that would benefit from being connected.

WLD_M02.2 Promote the benefits of trees in landscapes to farmers and encourage those habitats where close-canopy woodland is not viable. Identify funding mechanisms (e.g. SFI, private green finance) to facilitate the diversification of the grassland element of woodland/grassland mosaic habitats.

WLD_M02.3 Create and expand wood pasture habitat as an appropriate buffer and connecting habitat between woodland and grassland sites. Undertake appropriate tree planting or natural colonisation to create this habitat, use SFI / EWCO options to support. Implement sustainable grazing management of this habitat, including stock rotation and reseed to improve grassland where required.

WLD_M02.4 Encourage standing dead wood and fallen trees to be left on site as habitat for specialist species.

WLD_M02.5 Increase the size of transitional habitat between grassland, wood pasture and isolated veteran trees to include more scrub, and therefore removing hard lines. Recognise the value of scrub in advice to landowners, e.g. through One Team, including amending grazing regimes, specific planting, and natural regeneration.

WLD_M02.6 Improve the management of wood pasture, potentially through reduced grazing intensity where required, to allow natural regeneration to take place. Explore 'veteranisation' techniques to promote future veteran trees and associated habitat.

WLD_M02.7 Replant cleared wood pasture with appropriate resilient tree and scrub species.

WLD_M02.8 Introduce key grassland indicator species, where appropriate, and promote the creation of wood meadows to land managers.

Priority WLD_P03: Enhance and connect ancient woodland

Buffer, enhance, restore and better connect fragmented patches of Ancient Woodland (including Plantations on Ancient Woodland Sites) by creating linkages with, and improving the management of, long-established woodland to increase the resilience of these sites and allow for species movement, including more specialist woodland species.

Co-benefits:

- Carbon storage
- Climate change adaptation
- Climate change mitigation
- Sense of place
- Access to nature

Measures

WLD_M03.1 Use the mapping of ASNW, long established woodland (LEW) sites and the revised ancient woodland inventory to identify priority corridors and prioritise woodland creation and natural colonisation in these areas. Share information with appropriate partners e.g. One Team and DEFRA ALB's (FC and NE). Co-ordinate advisors with land managers to ensure the best advice is available to those managing ASNW sites.

WLD_M03.2 Map and identify sites dominated by bracken to explore opportunities for woodland or heathland creation, with consideration of other priorities (e.g. breeding waders).

WLD_M03.3 Identify Ghost Woodlands through existing ground flora that could be an appropriate site for re-establishment of woodland (but not at the expense of species-rich grassland)

WLD_M03.4 Increase the variety of woodland structure and species diversity in accordance with the UK Forestry Standard, e.g. mix of tree and shrub species, coppice management, glade and woodland ride management, retention of deadwood.

WLD_M03.5 Restructure existing conifer plantations to buffer and connect patches of ancient woodland to maximise biodiversity, in accordance with the UK Forestry Standard and landowner aspirations.

WLD_M03.6 Restore Plantation on Ancient Woodland sites (PAWS) from conifer to ancient semi-natural woodland over appropriate timescales. Restock where appropriate in accordance with Government's Keepers of Time: ancient and native woodland and trees policy in England GOV.UK (www.gov.uk)

WLD_M03.7 Buffer ancient woodland sites using agroforestry options, e.g. silvopasture to increase the size of small woodland sites (in particular ancient semi-natural woodland (ASNW) sites).

WLD_M03.8 Re-visit previously agreed agri-environment schemes to see if additional cover (scrub, natural colonisation or tree planting) could be an option

WLD_M03.9 Coordinate a deer and grey squirrel control strategy across North Yorkshire and York to allow natural colonisation of wooded corridors between existing woodland sites.

WLD_M03.10 Remove and prevent the spread of invasive non-native species (e.g. Rhododendron) from woodlands, where identified. Work with existing projects to improve INNS monitoring and reporting, coordinating action at a landscape scale, and leading to the development of a regional biosecurity plan to reduce and monitor spread in the long-term.

Priority WLD_P04: Enhance, expand and connect new and existing woodland

Increase tree and woodland cover by enhancing all types of existing woodland and creating new species-diverse woodlands, which promotes good woodland structure, increases resilience, and produces sustainable woodland products and timber.

Co-benefits:

• Carbon storage • Climate change adaptation • Climate change mitigation
• Water quality • Soil health • Access to nature

Measures

WLD_M04.1 Create new species-diverse woodlands. Ensure all woodland creation through planting or natural colonisation is planted and managed according to the UK Forestry Standard to ensure ongoing sustainable browsing levels, in particular for deer.

WLD_M04.2 Ensure a diverse range of species are included in planting mixes, including species that are likely to still be viable to enhance resilience and seek to mitigate the risks from climate change and also consider pests and diseases by selecting species appropriate to the site using Ecological Site Classification or a similar tool.

WLD_M04.3 Include native ground flora in woodland creation funded by local and national funding schemes, including incorporating appropriate structures, such as creating woodland clearings and canopy gaps, as per UK Forestry Standard. Raise awareness and encourage the provision of advice on introducing ground flora and shrub layer into new tree-planting schemes in rural and urban environments.

WLD_M04.4 Enhance, restore, and/or reintroduce soil fungi communities to improve woodland biodiversity, function, and resilience as per UK Forestry Standard. Promote suitable practices to landowners as part of woodland management and creation advice.

WLD_M04.5 Restructure existing conifer plantations and broadleaf/mixed woodlands to maximise biodiversity, in accordance with the UK Forestry Standard and landowner aspirations. Targeted removal of dominant species (where appropriate). Reduce proportion of single species to allow other species to respond and develop within canopy so that no more than 65% of the forest management unit is allocated to a single species.

WLD_M04.6 Encourage the retention of standing and fallen deadwood in all types of woodland and forest to increase structural diversity and encourage specialist species, e.g. planting sacrificial trees, retaining deadwood and felling debris

WLD_M04.7 Buffer, improve and protect existing woodland and create new woodland with resilient tree species in areas where red squirrels are expanding. Monitor red squirrel population in partnership with groups such as the Red Squirrel North England and UK Squirrel Accord partnerships. Working collaboratively with land managers and controlling grey squirrel population.

WLD_M04.8 Create woodland in areas that would benefit flood alleviation, using Natural Flood Management opportunities mapping to identify suitable sites.

Water and Wetlands (WET)

Priority WET_P01: Enhance and expand river habitats

Enhance and expand river and in-channel habitats to improve their quality and connectivity.

Co-benefits:

• Pollination • Water storage • Water quality • Flood alleviation • Access to nature

Measures

WET_M01.1 Implement in-channel mitigation measures for heavily-modified water bodies and improve in-channel habitat diversity (e.g. de-culverting, removal of barriers to fish migration, flow deflectors, soft engineering). Include mitigation measures for potential migration of INNS upstream following removal of barriers.

WET_M01.2 Implement softening of hard infrastructure along water courses where it must be retained.

WET_M01.3 Expand and maintain species-rich buffer strips along watercourses to improve connectivity and alter management of streams to reduce pollution and improve riparian habitat diversity, e.g. introduce tansy to support tansy beetle expansion, exclude or limit livestock access into rivers.

WET_M01.4 Expand suitable riparian habitat for water vole, alongside mink control where required and install ongoing management practices

WET_M01.5 Develop an INNS management plan, in partular for Himalayan Balsam to prevent domination of watercourse banksides.

WET_M01.6 Collate and analyse all available data on coastal migratory fish species, including pressures, migration pathways and known / potential barriers, and identify gaps in knowledge.

Priority WET_P02: Restore natural river processes

Restore natural river processes to reconnect rivers and floodplains, and create space for nature, water and people.

Co-benefits:

• Water storage • Water quality • Flood alleviation • Access to nature

Measures

WET_M02.1 Remove or realign artificial and engineered barriers and modifications where feasible to allow re-establishment of natural river processes e.g. levees, flood banks (include mitigation measures for potential migration of INNS following removal of barriers). Where Flood embankments can be breached or set back, deliver connectivity to restore natural hydrology and hydro-geomorphological processes, including sediment and nutrient deposition, to help slow the flow.

WET_M02.2 Reinstate meanders, oxbows and natural in-channel features where possible to support migratory fish, freshwater pearl mussels and migrating birds, and help slow the flow.

WET_M02.3 Undertake wetland habitat and floodplain restoration works (including buffer strips and water storage) to connect wildlife-rich habitat and support key species.

WET_M02.4 Implement natural flood management methods that support river restoration e.g. installing woody material and leaky dams, by working with land owners, farmers and partner organisations.

WET_M02.5 Explore opportunities for beaver re-introduction to create natural barriers, and create NFM opportunities.

WET_M02.6 Enhance chalk streams and associated floodplain habitats to increase biodiversity and help slow the flow, e.g. re-meandering.

WET_M02.7 Improve coastal habitats for migratory fish and connect with in-land habitat restoration activities. Work with partners to fill gaps in knowledge, focussing on the impacts of climate change and how existing migration routes of key species may be affected by the predicted changes.

WET_M02.8 Work with the Esk and Coastal Streams Catchment (CaBA) Partnership, the Yorkshire Derwent CaBA Partnership and the Hull and East Riding CaBA Partnership to connect in-land and coastal communities, enabling people to share traditional knowledge and oral histories, and providing opportunities for active citizen science to record habitat condition.

Priority WET_P03: Expand and restore pond networks

Restore, enhance, and expand pond networks at different successional stages in rural and urban landscapes, to increase resilience and support the population dynamics of wetland species.

Co-benefits:

• Water storage • Water quality • Flood alleviation • Climate change adaptation
• Climate change mitigation • Access to nature

Measures

WET_M03.1 Identify and map important pond areas where the number of nearby ponds can be increased to create clusters of successional ponds. Map existing or defunct Dew Ponds, to lead to their restoration, or identification of suitable new pond sites.

WET_M03.2 Identify and map ponds that are at risk of being lost and re-introduce positive management, e.g. remove excessive tree shading, removal of invasive non-native species, introduction of native aquatic plants where appropriate .

WET_M03.3 Develop a Pond Creation Strategy for urban and rural landscapes that will create new or restore existing ponds to form clusters and/or networks at different successional stages. Target areas of good semi-natural habitat for pond creation or plan terrestrial habitat restoration and pond restoration together, considering 'right pond, right place' approach.

WET_M03.4 Buffer existing ponds by increasing and improving the quality of marginal habitat and encourage creation/restoration of surrounding terrestrial habitat to provide better feeding habitat for amphibians and improved pond water quality, e.g. Great Crested Newt meta populations. However, consider 'right pond, right place'.

WET_M03.5 Create a programme connecting amenable landowners and nature volunteer groups for the creation and ongoing management of buffered ponds, with template agreements for the set aside of marginal areas for pond creation, and guidelines for site selection, pond creation, and any maintenance considerations.

WET_M03.6 Create successional networks of ponds to improve species diversity, and re-introduce species (e.g. Freshwater Habitats Trust introducing medicinal leeches in Bedale and their work in re-establishing pillwort). Raise awareness of importance of having multiple ponds at different successional stages to land managers and advisors.

WET_M03.7 Create new ponds for native crayfish arc sites.

WET_M03.8 Influence local planning policy (e.g. Supplementary Planning Guidance in Local Plans, Flood Risk Management Plans) to promote creation of nature-rich SUDS as part of development (c.f. Policy in Tees Catchment)

WET_M03.9 Create SUDS and other constructed wetlands to 'slow the flow', create new habitats (ponds, wetlands, reedbeds), increase greenspace and improve mental health. Promote nature-based solutions for urban households in water company business plans to capture and treat sewage discharges to reduce nutrient losses to water courses (e.g. River Wiske with relation to nutrient balancing).

Priority WET_P04: Enhance, expand and connect fen habitats

Enhance, expand and connect areas of fragmentary fen by improving management of existing sites and using species-rich ditches to connect sites.

Co-benefits:

• Pollination • Water storage • Flood alleviation • Carbon storage
• Climate change adaptation • Climate change mitigation

Measures

WET_M04.1 Use maps to create a Lowland Fen Inventory and identify former extent of resource (e.g. relic fen sites) and understand ability to restore active hydrological processes to identify areas where fens have been lost, and where re-creation could occur. Map lowland fen and carr woodland habitat, identifying suitable water courses and ditches as connecting habitat. Improve understanding of the hydrology and water chemistry of existing fens, to enable their restoration and expansion. This will increase carbon sequestration and resilience to climate change.

WET_M04.2 Manage lowland fen sustainably, including advising land managers on grazing stock levels to maximise biodiversity.

WET_M04.3 Re-introduce suitable plant species into fen habitat where necessary to increase diversity. Propagate plant species from local sources for re-introduction.

WET_M04.4 Create fen habitat where feasible, e.g. by expanding fen species into neighbouring ditches, working with the IDB and other land managers.

Priority WET_P05: Restore, enhance and expand existing flushes

Restore and enhance existing flushes to support the needs of specialist plant species and make sites more resilient. Expand flush habitat and wet grassland areas to better accommodate wintering and breeding wetland bird populations.

Co-benefits:

• Pollination • Water storage • Flood alleviation

Measures

WET_M05.1 Manage flushes sustainably, including advising land managers on stock levels to maximise biodiversity.

WET_M05.2 Propagate plant species from local sources for re-introduction into flushes and wet grassland where appropriate. Raise awareness of the importance of local provenance seed to support the recovery of rare and declining wetland plant species.

WET_M05.3 Revert degraded flush by removing drainage and artificial constraints (may include water abstraction).

WET_M05.4 Enlarge wetlands at known key areas for breeding and wintering bird populations (e.g. curlew, snipe), including floodplain meadows, wet grassland, moorland edge, and mineral extraction sites.

Priority WET_P06: Restore floodplain meadow

Buffer and restore poor-quality existing floodplain meadow sites to help protect and expand specialist species. Expand floodplain meadow habitat to increase resilience whilst remaining as a productive agricultural land use.

Co-benefits:

• Pollination • Water storage • Water quality • Flood alleviation • Climate change adaptation
• Climate change mitigation • Soil health • Carbon storage • Access to nature

Measures

WET_M06.1 Identify the location of existing floodplain meadows and opportunities to expand into neighbouring sites (National target is to increase to 74,000ha). Will also lead to an increase in pollinators. Work with key agencies such as IDBs to understand where and how this is feasible.

WET_M06.2 Identify historic floodplain meadow sites to enable the targeting of restoration/creation, using historic floodplain maps and existing species records. Identify sites for creation that have the right underlying conditions (hydrological, soil fertility, soil type) for being a floodplain meadow.

WET_M06.3 Identify a network of sites as sources of green hay and plug plants and help to facilitate the cutting and grazing of meadows e.g. shared grazing flocks.

WET_M06.4 Restore floodplain meadows by implementing restoration management (no inputs and annual cut with arisings removed) and re-seed where required to maximise the species diversity.

WET_M06.5 Promote the consistent annual management of existing, restoration and recreated floodplain meadows including annual hay cut in June / v.early July with either an aftermath grazing or another hay cut in the autumn. No inputs required.

WET_M06.6 Increase the area of floodplain meadow habitat, where appropriate, by allowing flooding to take place on appropriate grassland sites through reengineering flood protection embankments and water control structures. This will allow the river to reconnect with its floodplain and flood the land seasonally, to increase the resilience of the natural habitats against climate change, improve water quality, soil health, carbon storage and natural flood management,

WET_M06.7 Create new floodplain meadows from poor quality grassland sites to improve the connectivity of this very rare and fragmented habitat. Use techniques such as green hay spreading and plug planting.

Priority WET_P07: Expand riparian woodland

Expand the amount of riparian woodland along all watercourses and at all elevations, including filling in gaps and increasing age structure, to increase the resilience of the natural habitats (both terrestrial and water).

Co-benefits:

• Water quality • Water cooling/shading • Carbon storage • Flood alleviation
• Climate change adaptation • Climate change mitigation • Access to nature

Measures

WET_M07.1 Increase the age structure of riparian woodland through tree planting (subject to consideration of tree planting in areas used by ground nesting birds) and coppicing, so that trees are not all lost at once, and provide future in-channel habitat.

WET_M07.2 Implement sensitive bank management (e.g. wooded buffer strips) and alternatives to tree removal, working with risk management authorities, land managers and river users to provide advice and sources of available funding, to create diverse vegetation in riparian zones, help improve water quality, natural flood management (roughening water pathways) and water cooling/shading.

WET_M07.3 Increase the amount of riparian tree and hedgerow species along watercourses by implementing catchment sensitive farming, as informed by river basin management plans, to help improve water quality, natural flood management and water cooling/shading.

WET_M07.4 Create new riparian woodland (within a minimum of 15-20m of planting both sides of watercourse), including wet woodland and join up wooded habitats where they would benefit flood alleviation, using natural flood management opportunity maps to identify suitable locations (subject to consideration of tree planting in areas used by ground nesting birds).

WET_M07.5 Increase riparian woodland, scrub and mosaic habitats in suitable gills of upper catchments (steep enough, not on peatland, no breeding waders) in accordance with current NE / FC guidance for peat and wading birds, to increase biodiversity, natural flood management and water cooling/shading and quality. Agencies to work together to form a method of working with large-scale land managers to facilitate the planting of woody species in designated upland edge habitats.

Priority WET_P08: Restore, enhance and expand wet woodland

Restore and enhance existing wet woodland, and where possible expand the resource to increase resilience and support specialist species.

Co-benefits:

• Carbon storage • Climate change adaptation • Climate change mitigation
• Water storage • Water quality • Flood alleviation

Measures

WET_M08.1 Identify wet areas of land around existing wet woodland that has scope to become new habitat, and create wet woodland using appropriate resilient species in relation to climate change (not at the expense of existing fen habitat).

WET_M08.2 Enhance the diversity of wet woodland and create new wet woodland where it will support the presence of key species e.g. succession of standing deadwood for willow tit.

WET_M08.3 Create wet woodland as a flood alleviation option through blocking up of ditches to retain water on site.

Urban (URB)

Priority URB_P01: Incorporate nature into the built environment

Incorporate green infrastructure into the built environment, to provide more habitat for nature.

Co-benefits:

• Pollination • Access to nature • Health and wellbeing • Carbon storage
• Climate change adaptation • Climate change mitigation • Water storage
• Water quality • Flood alleviation • Educational resource

Measures

URB_M01.1 Develop demonstrative projects on public and private sites that are scientifically proven to support nature eg. green roofs/green walls and bat/bird boxes that are successfully used. (See Natural England GI Framework)

URB_M01.2 Work with the planning authorities when they are developing their Green/Blue Infrastructure Strategies to maximise natural features within new developments, using Natural England GI Framework and learning from best practice in other urban authorities. These should promote scientifically proven options (e.g. bird boxes, bat boxes, insect hotels that are successfully used). Define best design for better nature and health.

URB_M01.3 Deliver nature enhancement initiatives / features within the building stock and land holdings of public and private sector partners (e.g. infrastructure providers, businesses, town and parish councils, etc.) e.g. green roofs on bus stops, rain gardens, green bridges.

URB_M01.4 Work with planning authorities when they are developing their Green/Blue Infrastructure Strategies to map urban heat island effect and air quality to identify areas for natural interventions that help urban cooling and air pollution, e.g. appropriate tree and shrub planting.

URB_M01.5 Work with the SuDS approval boards to improve the promotion and uptake of wildlife sensitive SuDS. Refer to a 'gold standard', that can be developed as part of local Green/Blue Infrastructure Strategies.

URB_M01.6 Create a SuDS manual for councils that covers the benefits and how to install on properties (within local council regulations), e.g. as a nature-based solution to urban waste-water management.

URB_M01.7 Incorporate suitable 'crevices' into new build developments e.g. swift bricks, bat bricks (NYC/CYC to lead through adoption of appropriate planning control measures)

URB_M01.8 Protect / provide substitute nesting and roosting sites when property developments threaten existing sites (NYC/CYC to lead through adoption of appropriate planning control measures)

Priority URB_P02: Enhance urban nature-rich spaces

Buffer and enhance existing urban nature-rich spaces (e.g. Local Nature Reserves and churchyards) to maximise opportunities for nature, whilst reducing the impact of recreational pressure.

Co-benefits:

• Pollination • Access to nature • Health and wellbeing • Flood alleviation
• Reduced chemical use • Educational resource

Measures

URB_M02.1 Buffer and connect urban nature-rich spaces by identifying neighbouring land with partners to restore or create suitable habitat, e.g. hedgerow connectivity within urban areas into into surrounding rural landscapes.

URB_M02.2 Work with planning authorities when they are developing their Green/Blue Infrastructure Strategies to introduce recreational zoning in existing sites and adjacent to existing sites (eg. designated dog zones)

URB_M02.3 Enhance habitat in churchyards and cemeteries by working with local authorities, churches and associated community groups to establish and maintain management plans.

Priority URB_P03: Modify the management of urban grassland

Modify the management of semi-natural urban grassland to improve biodiversity and connectivity.

Co-benefits:

• Pollination • Access to nature • Health and wellbeing • Flood alleviation
• Reduced chemical use

Measures

URB_M03.1 Engage with communities (e.g. parish councils, local community groups) to identify locations for enhancement for nature, co-design, interpretation, publicity and future management.

URB_M03.2 Enhance existing urban grasslands (e.g. parks, urban verges, urban landscaping around offices) where appropriate with introduction of native species, e.g. bulbs, meadow plug plants, seed sowing

URB_M03.3 Use green hay spreading to increase species diversity

URB_M03.4 Plant native tree or shrub species where appropriate on urban grassland sites to create a mosaic of habitats suitable for the location, and provide connectivity to other wooded habitats where beneficial.

URB_M03.5 Reduce the size of amenity grassland through changes to mowing regimes (set aside a % for modified management). Where grassy areas are allowed to grow long over the spring and summer, implement appropriate management prescription of annual “hay” cut (late July - early September) and removal of arisings, with aftermath grazing/cutting as required.

Priority URB_P04: Promote public action for better nature connectivity

Encourage and promote action from the public to create habitats for wildlife in public and private gardens, schools and other urban areas, to make more spaces for nature and enhance connectivity.

Co-benefits:

• Pollination • Access to nature • Health and wellbeing • Climate change adaptation
• Climate change mitigation • Educational resource

Measures

URB_M04.1 Promote nature and climate change adaptive options for residential properties, e.g. variety of native plants/flowers grown, water harvesting for sustainable garden irrigation, permeable boundaries (including species-rich native hedgerows) to create hedgehog gaps in garden fencing, the use of appropriate surface water management solutions (permeable surfaces) within private front gardens and driveways.

URB_M04.2 Promote initiatives such as 'Place for Nature' at Parish meetings and encourage the development of Parish Green Initiatives.

URB_M04.3 Deliver nature projects with children and staff in schools to encourage their use at home in the garden.

URB_M04.4 Create suitable crevices (e.g. swift boxes, bat boxes) within existing buildings close to existing colonies to provide additional nest sites as sites are lost to roof renovations.

Coast (CST)

Priority CST_P01: Enhance rocky shore habitat

Enhance rocky shore habitat to support specialist species, improve its connectivity with other ecosystems and the services it provides to society.

Co-benefits:

• Flood alleviation • Carbon storage • Climate change adaptation • Climate change mitigation
• Sense of place • Access to nature • Educational resource

Measures

CST_M01.1 Actively seek traditional knowledge and oral histories about the rocky shore environment to inform evidence gaps and record how the coastline has changed.

CST_M01.2 Complete a natural capital assessment of the rocky shore to inform decision-makers of the integral 'value' of the habitat and communicate this effectively with the general public.

CST_M01.3 Restore habitat to allow recolonisation of blue mussels. Collate and analyse all available rocky shore habitat and species data, to identify evidence gaps around blue mussels. Target resources to fill these gaps and identify new recovery opportunities for this species.

CST_M01.4 Work with the Concrete Coast programme to install ecological enhancements on 'hard' infrastructure, where ecologically and structurally appropriate, to create new habitat.

CST_M01.5 Prevent the spread and eradicate invasive non-native species, where identified. Work with existing projects to improve INNS monitoring and reporting, leading to the development of a regional biosecurity plan to reduce and monitor spread in the long-term.

Priority CST_P02: Enhance habitats for seabirds

Enhance habitats for seabirds on the North Yorkshire coast, both on our cliffs and in our urban spaces, to help resolve pressures from human activities and the impacts of climate change.

Co-benefits:

• Sense of place • Access to nature • Climate change adaptation • Climate change mitigation
• Educational resource

Measures

CST_M02.1 Conduct regular population and productivity monitoring of seabirds nesting in urban spaces and on non-designated cliffs.

CST_M02.2 Broaden recreational disturbance monitoring and management to incorporate key locations and activities outside of designated areas.

CST_M02.3 Provide advice and support to communities in coastal urban spaces to encourage connectivity with nesting seabirds, utilise legal deterrents safely, and reduce access to litter and human food products.

CST_M02.4 Work with local authorities and businesses to identify suitable nesting locations (or creation of artificial habitat such as towers) and raising awareness of their plight with the local community.

CST_M02.5 Create and enhance suitable habitat for seabirds on the North Yorkshire coast, both on our cliffs and in our urban settlements.

Priority CST_P03: Enhance and expand existing saltmarsh

Enhance, expand and connect existing saltmarsh to increase resilience of this fragile and fragmented habitat.

Co-benefits:

• Pollination • Water quality • Carbon storage • Educational resource

Measures

CST_M03.1 Enhance existing saltmarsh through sympathetic management and identify opportunities to expand this resource.