

Appendix 1: Biodiversity Priority Pata Sheets





# Draft Worcestershire Local Nature Recovery Strategy Biodiversity Priority Data Sheets

## Data sheets show:

- Relationship between the proposed Biodiversity Priorities and suggested Potential Measures
- UKHab codes for mapped Potential Measures indicating how to achieve consistency with Biodiversity Net Gain habitat creation and enhancement
- The title of each Potential Measure is hyperlinked to an ArcOnline Storymap explaining the development of that measure

Explore the Water and Wetlands Biodiversity Priorities and Potential Measures

Explore the Trees, Scrub and Woodland Biodiversity Priorities and Potential Measures

Explore the Open Habitats Biodiversity Priorities and Potential Measures

Explore the Landscape-scale and Linear Habitat Connectivity Biodiversity Priorities and Potential Measures

Explore the Earth Heritage Biodiversity Priorities and Potential Measures

Explore the Green Infrastructure Biodiversity Priorities and Potential Measures

**Explore the Species Priorities and Potential Measures** 

#### **Rivers and Streams**

#### **Priorities for Rivers and Streams**

Biodiversity Priority 1: Improve the quality of the water within Worcestershire's rivers and streams

Biodiversity Priority 2: Improve the availability of water within Worcestershire's rivers and streams to improve condition of habitats and increase species' resilience to flood and drought events

Biodiversity Priority 3: Improve the quality and extent of in-channel and riparian habitat for key species, for example shad, brown trout, eel, white-clawed crayfish and water vole

## Potential Measures that will support delivery of these Priorities

**Potential Measure 1:** De-culvert and renaturalise watercourses

De-culvert watercourses to enable improved wildlife passage through or around man-made barriers. Re-naturalise channels and create or enhance associated wetland habitat to provide feeding, refuge and spawning/breeding habitat for freshwater fish and invertebrate species and mammals such as water vole and otter.

**Mapped** Measure











WRLNRS21\_PM1

UKHab codes for Potential Measure 1: r1~

~ = all further levels and any secondary codes

**Potential Measure 2:** Create riparian buffer zones

WRLNRS21 PM2

Create or enhance riparian buffer zones comprising of a woodland/grassland mosaic with no cultivation or input of agri-chemicals. Within this zone look for opportunities to create or enhance 1) riparian woodland habitat, including wet woodland, 2) the bankside tree resource through new planting, pollarding and coppicing, 3) areas of wet and dry reedbed, 4) areas of wet grassland or marsh.

Mapped Measure











UKHab codes for Potential Measure 2: g1~, g2~, g3a~, g3b~, g3c6, g3c7, g3c8, w1~ 30, f~, h2a, r1~, h3~, 18

~ = all further levels and any secondary codes

**Potential Measure 3:** Revert land to wet grassland and floodplain meadow

WRLNRS21\_PM3

Revert arable and horticultural land and intensive pasture to permanent wet grassland, stop agrichemical inputs and manage by grazing and hay cutting. Where possible create or enhance wet grassland habitat quality to MG4 species-rich floodplain meadow.

Mapped Measure















~ = all further levels and any secondary codes

**Potential Measure 4:** 

UKHab codes for Potential Measure 3: g1~, g2~, g3a~, g3b~, g3c~, 18, 19

Protect and improve water resources

WRLNRS21 PM4

Protect and enhance surface waters and wetlands, at-risk groundwater aquifers and groundwaterfed wetland systems by implementing changes to land management that will improve water quality and availability. Changes could include: reducing soil erosion by creating grassland buffer strips or reverting arable fields to grassland; adopting sustainable soil management practices such as minimum tillage and use of cover crops; adopting integrated pest management in place of pesticide and herbicide use; re-naturalising hydrological flows by blocking drains, reconnecting watercourses to their floodplain and creating wetland features such as ditches, ponds or scrapes to slow the flow; taking steps to eradicate invasive non-native plant species and following biosecurity protocols to prevent their spread; installing SuDS to capture soil and pollutants and aid infiltration; installing on-farm reservoirs and rainwater harvesting features to reduce the need for abstraction.

Non-Mapped Measure











#### Rivers and Streams continued

## **Priorities for Rivers and Streams**

Biodiversity Priority 1: Improve the quality of the water within Worcestershire's rivers and streams

Biodiversity Priority 2: Improve the availability of water within Worcestershire's rivers and streams to improve condition of habitats and increase species' resilience to flood and drought events

Biodiversity Priority 3: Improve the quality and extent of in-channel and riparian habitat for key species, for example shad, brown trout, eel, white-clawed crayfish and water vole

## Potential Measures that will support delivery of these Priorities

Potential Measure 5: Natural flood management

WRLNRS21\_PM5

Use ecological engineering and nature-based solutions to re-naturalise local hydrological flows, reduce flood risk, promote infiltration, support groundwater recharge, provide feeding, refuge and spawning/breeding habitat for species, reconnect watercourses to their floodplains and improve water quality and availability by creating and enhancing wetland habitats that will hold back water, such as: tree planting to encourage infiltration, creation of attenuation areas, ponds, swales, ditches or wetland habitat such as fen, wet woodland or wet grassland, installing leaky woody dams, reinstating meanders, use of keystone species to contribute to the restoration of ecosystem function.

Non-Mapped Measure











## **Groundwater-dependent Habitats**

## **Priorities for Groundwater-dependent Habitats**

Biodiversity Priority 4: Improve the hydrological functioning and condition of groundwater-fed wetland sites

## Potential Measures that will support delivery of these Priorities

Protect and improve water resources

Protect and enhance surface waters and wetlands, at-risk groundwater aquifers and groundwater-fed wetland systems by implementing changes to land management that will improve water quality and availability.

WRLNRS21\_PM4

Changes could include: reducing soil erosion by creating grassland buffer strips or reverting arable fields to grassland; adopting sustainable soil management practices such as minimum tillage and use of cover crops; adopting integrated pest management in place of pesticide and herbicide use; re-naturalising hydrological flows by blocking drains, reconnecting watercourses to their floodplain and creating wetland features such as ditches, ponds or scrapes to slow the flow; taking steps to eradicate invasive non-native plant species and following biosecurity protocols to prevent their spread; installing SuDS to capture soil and pollutants and aid infiltration; installing on-farm reservoirs and rainwater harvesting features to reduce the need for abstraction.

# Non-Mapped Measure















## Still Freshwater Habitats

## **Priorities for Still Freshwater Habitats**

Biodiversity Priority 5: Increase the number of ponds and the extent and connectivity of wetland and terrestrial habitat between ponds

Biodiversity Priority 6: Improve the condition of ponds and the number of ponds that qualify for priority pond status

## Potential Measures that will support delivery of these Priorities

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Potential Measure 4: Protect and improve water resources WRLNRS21_PM4	Protect and enhance surface waters and wetlands, at-risk groundwater aquifers and groundwater-fed wetland systems by implementing changes to land management that will improve water quality and availability.  Changes could include: reducing soil erosion by creating grassland buffer strips or reverting arable fields to grassland; adopting sustainable soil management practices such as minimum tillage and use of cover crops; adopting integrated pest management in place of pesticide and herbicide use; re-naturalising hydrological flows by blocking drains, reconnecting watercourses to their floodplain and creating wetland features such as ditches, ponds or scrapes to slow the flow; taking steps to eradicate invasive non-native plant species and following biosecurity protocols to prevent their spread; installing SuDS to capture soil and pollutants and aid infiltration; installing on-farm reservoirs and rainwater harvesting features to reduce the need for abstraction.	Non-Mapped Measure	Water quality  Water availability  Flood risk reduction  Soit health and protection sequestration  Cimate adaptation
Potential Measure 6: Create wildlife ponds in low-density pond areas WRLNRS21_PM6	Create new wildlife ponds including provision of connected terrestrial habitat around pond sites, in particular grassland, scrub and hibernacula.	Non-Mapped Measure	Water quality  Water availability  Water availability
Potential Measure 7: Create and enhance wildlife ponds and surrounding habitat in high-density and high- value pond areas WRLNRS21_PM7	Enhance existing pondscapes by improving the quality and quantity of water entering ponds (see Potential Measure 4), creating additional ponds and wetland habitat, and creating or enhancing connected terrestrial habitat around and between ponds, in particular grassland, scrub and hibernacula/refugia suitable for use by amphibians.	Mapped Measure	Water quality  Water availability
UKHab codes for Potent	tial Measure 7: r1 40, r1 41, g1~, g2~, g3a~, g3b~, g3c~, f~		~ = all further levels and any secondary codes

Still Freshwater Habitats continued...

#### Still Freshwater Habitats continued

#### **Priorities for Still Freshwater Habitats**

Biodiversity Priority 5: Increase the number of ponds and the extent and connectivity of wetland and terrestrial habitat between ponds

Biodiversity Priority 6: Improve the condition of ponds and the number of ponds that qualify for priority pond status

## Potential Measures that will support delivery of these Priorities

**Potential Measure 38:** Increase the extent, connectedness and quality of wildlife habitats within the built environment

WRLNRS21\_PM38

All built environments should allow wildlife to safely move through them and thrive within them. Decisions on the layout and design of built-up areas, at all scales, should seek to make a positive contribution to providing more, bigger and better-connected areas of natural habitats. As a minimum, decision-makers should seek to:

- Increase urban tree canopy cover, aiming for a minimum of 20%, through, for example, planting street trees, trees in green spaces, hedgerows, community orchards, or small woodland blocks, strips or corridors.
- Make individual homes, gardens and boundary features more wildlife-friendly through, for example, the installation of hedgehog highways, universal swift nest bricks and bat bricks.
- Create more wildlife ponds within public greenspaces and gardens.
- Provide green active travel corridors that function as linear wildlife habitats as well as cycleways and footways.
- Design the layout of new gardens and greenspaces so that they contribute to a cohesive network of green corridors within the built environment.
- Link urban green spaces to the local nature network in the surrounding countryside via green, wildlife-friendly corridors.

**Mapped Measure** 















UKHab codes for Potential Measure 38: u1f 80, u~86, 87, 88, 89, u~841, 842, 843, 848, 849, 850, 830, 27

Fen, Marsh, Swamp and Reedbed

## Priorities for Fen, Marsh, Swamp and Reedbed

**Biodiversity Priority 7:** Increase the extent of wetland habitats under restoration and in good condition

## Potential Measures that will support delivery of these Priorities

Potential Measure 8: Create and enhance wetland habitats Use nature-based solutions to raise and maintain water tables and re-wet land to enable the creation or enhancement of a wetland habitat mosaic and the reconnection of watercourses with their floodplain. As appropriate to the soil type, geology and hydrology seek to create and enhance a mosaic of: fen, marsh, swamp, bog, peat, wet grassland, wet woodland and reedbed habitat.

**Mapped Measure** 











WRLNRS21\_PM8

UKHab codes for Potential Measure 8: f~, g~, w1d, 19, 55, 425

~ = all further levels and any secondary codes

Potential Measure 9: Create and restore saline habitats Incorporate restoration of saline conditions when creating or enhancing wetland habitat within the Salwarpe Valley, where this is supported by the geology and hydrology, and work with stakeholders to better understand and promote the value of the unique hydrological conditions in this location.

**Mapped Measure** 











WRLNRS21\_PM9

UKHab codes for Potential Measure 9: t2g~

## Saline Habitats

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**Biodiversity Priority 8:** Increase the extent of saline habitats under restoration and in good condition

## **Potential Measures that will support delivery of these Priorities**

Potential	ieasure 9:	
Create and	restore saline	2

Incorporate restoration of saline conditions when creating or enhancing wetland habitat within the Salwarpe Valley, where this is supported by the geology and hydrology, and work with stakeholders to better understand and promote the value of the unique hydrological conditions in this location.

## Mapped Measure











WRLNRS21\_PM9

<u>habitats</u>

UKHab codes for Potential Measure 9: t2g~

Native Trees and Woodland

#### **Priorities for Native Trees and Woodland**

Biodiversity Priority 9: Increase tree cover in the form of woodland and trees outside woodland, including hedgerow trees, orchards, riparian/wet woodland and urban tree canopy cover

Biodiversity Priority 10: Improve the condition of ancient semi-natural woodlands and bring more PAWs woodlands into restorative management

Biodiversity Priority 11: Increase the functional connectivity between woodlands at a landscape scale, to allow for species movement

## Potential Measures that will support delivery of these Priorities

**Potential Measure 2:** Create riparian buffer zones

WRLNRS21\_PM2

Create or enhance riparian buffer zones comprising of a woodland/grassland mosaic with no cultivation or input of agri-chemicals. Within this zone look for opportunities to create or enhance 1) riparian woodland habitat, including wet woodland, 2) the bankside tree resource through new planting, pollarding and coppicing, 3) areas of wet and dry reedbed, 4) areas of wet grassland or marsh.

**Mapped Measure** 











UKHab codes for Potential Measure 2: g1~, g2~, g3a~, g3b~, g3c6, g3c7, g3c8, w1~ 30, f~, h2a, r1~, h3~, 18

~ = all further levels and any secondary codes

Potential Measure 10:

WRLNRS21\_PM10

Restore habitat by gradually removing non-native tree species using recognised forestry Restore PAWS woodlands | techniques such as thinning and clearfell, retaining veteran trees to act as a seed source, allowing natural regeneration where possible, creating structural and species diversity.

**Mapped Measure** 







~ = all further levels and any secondary codes

**Potential Measure 11:** Enhance condition of ancient semi-natural

Enhance condition of ancient woodlands by improving structural and species diversity using techniques such as thinning, coppicing and pollarding, and by taking a habitat mosaic approach to incorporate open space, rides and ponds.

**Mapped Measure** 





WRLNRS21\_PM11

woodlands

UKHab codes for Potential Measure 11: w1~28 30

UKHab codes for Potential Measure 10: w1~28 29

~ = all further levels and any secondary codes

Potential Measure 12:

Plant new woodlands and trees outside woodland

WRLNRS21\_PM12

Create new woodland taking a habitat mosaic approach to incorporate open space, rides and ponds; buffer and extend priority woodland sites; and increase tree-cover connectivity across the landscape.

**Mapped Measure** 











UKHab codes for Potential Measure 12: w1~ 30, 33, 200, 201, 202

~ = all further levels and any secondary codes

Native Trees and Woodland continued...

Native Trees and Woodland continued

#### **Priorities for Native Trees and Woodland**

Biodiversity Priority 9: Increase tree cover in the form of woodland and trees outside woodland, including hedgerow trees, orchards, riparian/wet woodland and urban tree canopy cover

Biodiversity Priority 10: Improve the condition of ancient semi-natural woodlands and bring more PAWs woodlands into restorative management

Biodiversity Priority 11: Increase the functional connectivity between woodlands at a landscape scale, to allow for species movement

Potential Measures	that will support delivery of these Priorities		
Potential Measure 13: Enhance condition of existing woodlands for wildlife  WRLNRS21_PM13	Increase the diversity of shrub and tree species within woodland, woodland edge and scrub habitats to provide a year-round supply of pollen, nectar, fruit and seeds for wildlife. Increase the volume of deadwood within woodland, both standing and fallen, for invertebrates, fungi, mosses, bryophytes, bat and bird spp. Increase the availability of food plants used by invertebrates found within woodland, for example Wood White, White Admiral, Grizzled Skipper and Dingy Skipper butterflies. Inoculate woodland with material from adjacent established woodlands, where appropriate, to introduce fungi and ground flora communities.	Mapped Measure	Soil health and protection  Pollination services
UKHab codes for Potential	Measure 13: w1~30		~ = all further levels and any secondary codes
Potential Measure 14: Increase tree cover in the farmed landscape  WRLNRS21_PM14	Increase tree cover in the farmed landscape (outside existing woodland) using new agroforestry schemes such as silvo-pasture or silvo-arable, as well as planting up shelterbelts, field corners, copses and hedgerow trees.	Non-Mapped Measure	Soil health and protection  Soil health and protection  Soil health and protection  Sequestration  Sequestration
Potential Measure 15: Manage deer and squirrel numbers to protect woodland	Manage deer and squirrel populations through a landscape scale approach, to allow woodlands to naturally regenerate and to protect newly planted trees, woodland shrub and ground flora layers.	Non-Mapped Measure	Co <sub>2</sub> Carbon Sequestration Services

## WRLNRS21\_PM15

WRLNRS21\_PM38

## **Potential Measure 38:** Increase the extent, connectedness and quality of wildlife habitats within the built environment

All built environments should allow wildlife to safely move through them and thrive within them. Decisions on the layout and design of built-up areas, at all scales, should seek to make a positive contribution to providing more, bigger and better-connected areas of natural habitats. As a minimum, decision-makers should seek to:

- Increase urban tree canopy cover, aiming for a minimum of 20%, through, for example, planting street trees, trees in green spaces, hedgerows, community orchards, or small woodland blocks, strips or corridors.
- Make individual homes, gardens and boundary features more wildlife-friendly through, for example, the installation of hedgehog highways, universal swift nest bricks and bat bricks.
- Create more wildlife ponds within public greenspaces and gardens.
- Provide green active travel corridors that function as linear wildlife habitats as well as cycleways and footways.
- Design the layout of new gardens and greenspaces so that they contribute to a cohesive network of green corridors within the built environment.
- Link urban green spaces to the local nature network in the surrounding countryside via green, wildlife-friendly corridors.

**Mapped Measure** 











UKHab codes for Potential Measure 38: u1f 80, u~86, 87, 88, 89, u~841, 842, 843, 848, 849, 850, 830, 27

## Hedgerows

## **Priorities for Hedgerows**

Biodiversity Priority 12: Increase the extent of hedgerow habitat to enhance their ability to function as linear corridors for wildlife

Biodiversity Priority 13: Increase the number of hedgerows in good condition for wildlife by managing them according to best practice guidelines

**Biodiversity Priority 14:** Improve shrub and ground flora diversity within hedgerows to enhance their function as a food source for wildlife

## Potential Measures that will support delivery of these Priorities

Potential Measure 16: Create new hedgerows WRLNRS21_PM16	Create new native species hedgerows, including reinstatement of 'ghost' hedgerows, to enhance habitat connectivity across the landscape between areas of priority woodland, scrub or orchard habitat. Seek to include the creation of associated linear features such as banks and ditches with the hedgerow, to widen the range of habitat niches available for species.	Non-Mapped Measure	Water quality  Flood risk reduction  Soil health and protection  Carbon sequestration  Pollination services
Potential Measure 17: Enhance condition of hedgerows WRLNRS21_PM17	Enhance condition of existing hedgerows informed by regular hedgerow condition assessments using available guidance and tools. Best practice includes planting up gaps, diversifying the native species mix, allowing flowering and fruiting, leaving wide grassy margins at the base, creating or restoring associated linear features such as banks and ditches, and rotational cutting.	Non-Mapped Measure	Water quality  Water quality  Soil health and protection  Soil health and protection  Soil health and protection  Soil health and protection  Soil health and protection
Potential Measure 18: Increase numbers of hedgerow trees WRLNRS21_PM18	Plant new native species trees in hedgerow gaps or identify existing trees to become part of the future mature and veteran hedgerow tree stock, particularly disease-resistant English elm, black poplar (in appropriate landscapes) and English oak.	Non-Mapped Measure	Soil health and protection  Carbon sequestration  Cimate adaptation  Climate adaptation
Potential Measure 28: Plant hedgerow fruit trees WRLNRS21_PM28	Plant new hedgerow fruit trees using local provenance varieties to create connecting corridors between existing orchards, which provide pollen, nectar and fruit for wildlife.	Non-Mapped Measure	Soil health and protection  Carbon sequestration  Sequestration  Sequestration  Sequestration  Sequestration  Sequestration

Wood Pasture and Parkland

<b>Priorities</b>	for	Wood	Docturo	and	Darkland
Priorities	TOT	wood	Pasture	and	Parkland

Biodiversity Priority 15: Increase the extent of wood pasture and parkland habitat, including to buffer and connect sites of existing importance for biodiversity

## Potential Measures that will support delivery of these Priorities

Potential Measure 19: Enhance wood pasture and parkland habitat

WRLNRS21\_PM19

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Enhance existing wood pasture and parkland habitat by planting / replacing trees, ensuring sensitive management of mature, veteran and ancient trees, increasing the supply of deadwood, and carrying out extensive / conservation grazing or haymaking to create or enhance species-rich grassland understorey.

**Mapped Measure** 









UKHab codes for Potential Measure 19: g~ 20

~ = all further levels and any secondary codes

Potential Measure 20: Create new wood pasture and parkland habitat Create new wood pasture and parkland habitat and manage using a conservation grazing system to buffer and link up species-rich grassland, scrub and veteran tree habitat.

**Mapped Measure** 









WRLNRS21\_PM20

UKHab codes for Potential Measure 20: g~ 20

**Existing and Future Ancient and Veteran Trees** 

#### **Priorities for Existing and Future Ancient and Veteran Trees**

**Biodiversity Priority 16:** Increase the number of ancient and veteran trees being sensitively managed to extend their lifespan

Biodiversity Priority 17: Increase the amount of standing and fallen deadwood available for wildlife within the wider countryside

## Potential Measures that will support delivery of these Priorities

Potential Measure 13:
Enhance condition of
existing woodlands for
wildlife

WRLNRS21\_PM13

Increase the diversity of shrub and tree species within woodland, woodland edge and scrub habitats to provide a year-round supply of pollen, nectar, fruit and seeds for wildlife. Increase the volume of deadwood within woodland, both standing and fallen, for invertebrates, fungi, mosses, bryophytes, bat and bird spp. Increase the availability of food plants used by invertebrates found within woodland, for example Wood White, White Admiral, Grizzled Skipper and Dingy Skipper butterflies. Inoculate woodland with material from adjacent established woodlands, where appropriate, to introduce fungi and ground flora communities.

**Mapped Measure** 





UKHab codes for Potential Measure 13: w1~30

~ = all further levels and any secondary codes

Potential Measure 21: Enhance condition of pre-veteran, veteran and ancient trees

WRLNRS21\_PM21

Enhance condition of existing veteran and ancient trees by carrying out appropriate management to prolong life and maintain habitat value for wildlife, including halo thinning within woodland or scrub, crown rebalancing or reduction, protecting root zones, and restoring soil health with a focus on fungi (mycorrhizal) communities.

**Mapped Measure** 





UKHab codes for Potential Measure 21: 204, 205

~ = all further levels and any secondary codes

Potential Measure 22:
Enhance landscape
connectivity for
species using veteran
and ancient trees

Enhance connectivity and availability of habitat for dead-wood dependent invertebrates, and other species that use veteran and ancient trees including birds and bats, by retaining dead wood, carrying out veteranisation of mature trees and planting new trees, hedgerows and hedgerow trees. Add sources of nectar and pollen into the landscape surrounding veteran and ancient trees.

**Mapped Measure** 









WRLNRS21 PM22

UKHab codes for Potential Measure 22: h2a, 200, 201, 202

Scrub

#### **Priorities for Scrub**

**Biodiversity Priority 18:** Increase the amount of well-managed scrub habitat

## Potential Measures that will support delivery of these Priorities

#### Potential Measure 23: Create and enhance a habitat mosaic

WRLNRS21\_PM23

Create and enhance a mosaic of locally appropriate habitats, including scrub, woodland, hedgerows, grassland, orchard, ponds and other wetland features. The composition of the mosaic and location of the habitats should be informed by the best ecological fit modelled by the Worcestershire Habitat Mosaic Nature Recovery Network. New and enhanced habitats should be located so as to a) maximise habitat diversity within the mosaic, b) maximise the expansion, buffering and connectivity that can be delivered for (or between) existing on-site or adjacent priority habitats or core sites (APIBs), and c) to create ecotones between habitats.

If this Potential Measure is relevant to a BNG site or BNG Habitat Bank: see **Section 3.1 Biodiversity Net Gain** in LNRS Statement of Biodiversity Priorities.

#### **Mapped Measure**



















See Section 3.1 of the Worcestershire Local Nature Recovery Strategy for guidance on creating a habitat mosaic for BNG

Potential Measure 24: Create and enhance scrub habitat

WRLNRS21\_PM24

Create and enhance scrub habitat as an ecotone, in particular at woodland edges, woodland-grassland transitions, and as a component of wood pasture and traditional orchard habitats.

Non-Mapped Measure







#### Traditional Orchard

Priorities	s for Tra	ditional	Orchard

Biodiversity Priority 19: Create more traditional orchard habitat

Biodiversity Priority 20: Bring more existing traditional orchards into a programme of life-extending, restorative management

## Potential Measures that will support delivery of these Priorities

Potential Measure 25: Enhance wildlife value of newly created and younger orchards Enhance wildlife value of newly created and younger orchards by carrying out formative pruning, managing without the use of chemicals, protecting trees from pest damage, and controlling grass and scrub at the base of trees.

**Mapped Measure** 







WRLNRS21\_PM25

UKHab codes for Potential Measure 25: g1~, g2~, g3a~, g3b~, g3c~ 27

~ = all further levels and any secondary codes

Potential Measure 26: Enhance wildlife value of older traditional orchards Enhance wildlife value of older traditional orchards through retention of dead wood, sensitive pruning and new planting, and through the creation, restoration and management of associated habitats such as hedgerows, species-rich grassland, scrub and ponds. Promote connectivity between orchards through fruit tree planting in hedgerows.

**Mapped Measure** 







WRLNRS21\_PM26

WRLNRS21\_PM27

UKHab codes for Potential Measure 26: g1~, g2~, g3a~, g3b~, g3c~ 27

~ = all further levels and any secondary codes

Potential Measure 27: Create new orchards Create new orchards as part of increasing tree-cover connectivity across the landscape, where possible incorporating a mosaic of associated habitats such as species-rich grassland, hedgerows, scrub and ponds.

Mapped Measure









UKHab codes for Potential Measure 27: g1~, g2~, g3a~, g3b~, g3c~ 27

Floodplain Meadow and Wet Grassland

## **Priorities for Floodplain Meadow and Wet Grassland**

**Biodiversity Priority 21:** Increase the extent of floodplain meadow habitat under restoration and in good condition

Biodiversity Priority 22: Reduce fragmentation and increase the functional connectivity between areas of floodplain meadow

Biodiversity Priority 23: Increase the extent of wet grassland habitat under restoration and in good condition

## Potential Measures that will support delivery of these Priorities

Potential Measure 3:
Revert land to wet
grassland and floodplain
meadow

WRLNRS21\_PM3

Revert arable and horticultural land and intensive pasture to permanent wet grassland, stop agri-chemical inputs and manage by grazing and hay cutting. Where possible create or enhance wet grassland habitat quality to MG4 species-rich floodplain meadow.

Mapped Measure











UKHab codes for Potential Measure 3: g1~, g2~, g3a~, g3b~, g3c~, 18, 19

**Lowland Meadow** 

#### **Priorities for Lowland Meadow**

Biodiversity Priority 24: Increase the extent of lowland meadow habitat under restoration and in good condition

Biodiversity Priority 25: Reduce fragmentation and increase the functional connectivity between areas of lowland meadow

## Potential Measures that will support delivery of these Priorities

Potential Measure 29: Create or enhance species-rich neutral grassland

WRLNRS21\_PM29

Create new and/or enhance existing areas of neutral grassland. Seek to buffer, extend and connect the areas of priority habitat which are under restoration and appropriate management and aim to increase botanical species-richness as appropriate to the habitat type. Take a habitat mosaic approach to incorporate scrub, orchard and ponds where appropriate. Allow for periodic disturbance to make areas of bare ground suitable for use by invertebrate species or by plant species that are intolerant of competition.

**Mapped Measure** 









UKHab codes for Potential Measure 29: g3~ 18

Acid Grassland and Lowland Heathland

## **Priorities for Acid Grassland and Lowland Heathland**

Biodiversity Priority 26: Increase the extent of acid grassland and heathland habitats under restoration and in good condition

Biodiversity Priority 27: Reduce fragmentation and increase the functional connectivity between areas of acid grassland and heathland habitats

## Potential Measures that will support delivery of these Priorities

Potential Measure 30: Create or enhance species-rich acid grassland and lowland heathland Create new and/or enhance existing areas of acid grassland and heathland. Seek to buffer, extend and connect the areas of priority habitat which are under restoration and appropriate management and aim to increase botanical species-richness as appropriate to the habitat type. Take a habitat mosaic approach to incorporate scrub, fen and ponds where appropriate. Allow for periodic disturbance to make areas of bare ground suitable for use by invertebrate species or by plant species that are intolerant of competition.

**Mapped Measure** 









WRLNRS21\_PM30

UKHab codes for Potential Measure 30: g1~ 18

## Calcareous Grassland

## **Priorities for Calcareous Grassland**

**Biodiversity Priority 28:** Increase the extent of calcareous grassland habitat under restoration and in good condition

Biodiversity Priority 29: Reduce fragmentation and increase the functional connectivity between areas of calcareous grassland

## Potential Measures that will support delivery of these Priorities

Potential Measure 31:
Create or enhance
species-rich
calcareous grassland

WRLNRS21\_PM31

Create new and/or enhance existing areas of calcareous grassland. Seek to buffer, extend and connect the areas of priority habitat which are under restoration and appropriate management and aim to increase botanical species-richness as appropriate to the habitat type. Take a habitat mosaic approach to incorporate scrub, orchard and ponds where appropriate. Allow for periodic disturbance to make areas of bare ground suitable for use by invertebrate species or by plant species that are intolerant of competition.

**Mapped Measure** 









UKHab codes for Potential Measure 31: g2~18

Habitats associated with Arable Farmland

Priorities for Habita	ats associated with Arable Farmland			
	ncrease the number of sites supporting diverse, well-managed populations of arable wildfloncrease the abundance and diversity of pollinating insect species, birds and small mamma			
Potential Measures	that will support delivery of these Priorities			
Potential Measure 32: Expand existing populations of arable wildflowers  WRLNRS21_PM32	Enhance existing arable margins and headlands to support the expansion of populations of rare arable wildflower species.	Mapped Measure	Soil health and protection  Pollination services	
	UKHab codes for Potential Measure 32: c1c9 ~= all further levels and any secondary code			
Potential Measure 33: Create new arable wildflower sites  WRLNRS21_PM33	Create new arable margins and headlands and manage these to provide conditions for rare arable wildflowers to flourish. Locate margins and headlands where these can provide buffering, stepping stones or connectivity between existing arable wildflower sites.	Mapped Measure	Soil health and protection  Pollination services	
UKHab codes for Potentia	l Measure 33: c1c9		~ = all further levels and any secondary codes	
Potential Measure 34: Create new wildlife habitats on cropped farmland WRLNRS21_PM34	Create new conservation headlands, margins, over-winter bird food plots, and areas of permanent or temporary set-aside across farmland, using a diverse grassland species mix to provide year-round foraging, commuting and shelter opportunities for a variety of wildlife, including insects, small mammals and birds. Adopt integrated pest management in place of pesticide and herbicide use. If possible, locate new habitat where it can buffer or connect to existing similar habitats, roadside verge nature reserves, or lowland meadow priority habitat.	Non-Mapped Measure	Soil health and protection  Carbon sequestration  Sequestration	

**Local Sites Network** 

#### **Priorities for Local Sites Network**

Biodiversity Priority 32: Increase the number of Local Sites that are in positive conservation management with habitats in good or recovering condition

## Potential Measures that will support delivery of these Priorities

Potential Measure 41: Enhance the biodiversity value of non-statutory nature conservation sites

WRLNRS21\_PM41

Enhance the habitats and other features for which the Local Wildlife Site, Local Geological Site, Roadside Verge Nature Reserve or Grassland Inventory Site has been designated (including new sites designated since LNRS publication), by implementing or continuing appropriate conservation management.

**Mapped Measure** 











Biodiversity Net Gain: to determine habitat creation and enhancement activity consistent with this measure refer to the Citation document for the relevant non-statutory site(s). Consistency will be achieved by delivering the Potential Measure(s) associated with the habitats for which the site has been designated. The user comments column within the Statutory Biodiversity Metric Calculation Tool should clearly articulate and justify the decision-making process, referring to the relevant LNRS Potential Measures.

Local Wildlife Sites | Worcestershire Wildlife Trust

**Local Geological Sites: H&W Earth Heritage Trust** 

Roadside Verge Nature Reserves | Worcestershire County Council

Contact Ecology Team | Worcestershire County Council

Potential Measure 42: Buffer and enhance habitat connectivity around and between non-statutory nature conservation sites Within a 50m buffer zone surrounding all Local Wildlife Sites and Grassland Inventory Sites (including new sites designated since LNRS publication), seek to create and enhance corridors or stepping stones of habitat to extend, buffer and connect the priority habitats within the nature conservation site with other adjacent or nearby priority habitat.

**Mapped Measure** 











WRLNRS21\_PM42

Biodiversity Net Gain: to determine habitat creation and enhancement activity consistent with this measure refer to the Citation document for the relevant non-statutory site(s). Consistency will be achieved by delivering the Potential Measure(s) associated with the habitats for which the site has been designated. The user comments column within the Statutory Biodiversity Metric Calculation Tool should clearly articulate and justify the decision-making process, referring to the relevant LNRS Potential Measures.

Local Wildlife Sites | Worcestershire Wildlife Trust

Contact Ecology Team | Worcestershire County Council

Habitat Connectivity within Strategic Nature Corridors

## **Priorities for Habitat Connectivity within Strategic Nature Corridors**

Biodiversity Priority 33: Increase the number of core sites within the Worcestershire Nature Recovery Network which are being effectively conserved and managed for nature

Biodiversity Priority 34: Reduce fragmentation and increase the functional connectivity between core sites within the Worcestershire Nature Recovery Network

## Potential Measures that will support delivery of these Priorities

**Potential Measure 23:** Create and enhance a habitat mosaic

WRLNRS21\_PM23

Create and enhance a mosaic of locally appropriate habitats, including scrub, woodland, hedgerows, grassland, orchard, ponds and other wetland features. The composition of the mosaic and location of the habitats should be informed by the best ecological fit modelled by the Worcestershire Habitat Mosaic Nature Recovery Network. New and enhanced habitats should be located so as to a) maximise habitat diversity within the mosaic, b) maximise the expansion, buffering and connectivity that can be delivered for (or between) existing on-site or adjacent priority habitats or core sites (APIBs), and c) to create ecotones between habitats.

If this Potential Measure is relevant to a BNG site or BNG Habitat Bank: see Section 3.1 **Biodiversity Net Gain** in LNRS Statement of Biodiversity Priorities.

Mapped Measure





















See Section 3.1 of the Worcestershire Local Nature Recovery Strategy for guidance on creating a habitat mosaic for BNG

**Potential Measure 41:** Enhance the biodiversity value of non-statutory nature conservation sites

WRLNRS21\_PM41

Enhance the habitats and other features for which the Local Wildlife Site, Local Geological Site, Roadside Verge Nature Reserve or Grassland Inventory Site has been designated (including new sites designated since LNRS publication), by implementing or continuing appropriate conservation management.

**Mapped Measure** 











See page 21 'Local Sites Network'

**Potential Measure 42:** Buffer and enhance habitat connectivity around and between non-statutory nature conservation sites

WRLNRS21\_PM42

Within a 50m buffer zone surrounding all Local Wildlife Sites and Grassland Inventory Sites (including new sites designated since LNRS publication), seek to create and enhance corridors or stepping stones of habitat to extend, buffer and connect the priority habitats within the nature conservation site with other adjacent or nearby priority habitat.

**Mapped Measure** 











See page 21 'Local Sites Network'

Habitat Connectivity within Strategic Nature Corridors continued...

Habitat Connectivity within Strategic Nature Corridors continued

## **Priorities for Habitat Connectivity within Strategic Nature Corridors**

Biodiversity Priority 33: Increase the number of core sites within the Worcestershire Nature Recovery Network which are being effectively conserved and managed for nature

Biodiversity Priority 34: Reduce fragmentation and increase the functional connectivity between core sites within the Worcestershire Nature Recovery Network

Bloarvorsity i Hority 04. It	educe fragmentation and merease the functional confidentity between core sites within the	Wordestersime Nature	noovery wetwork
Potential Measures	that will support delivery of these Priorities		
Potential Measure 43: Create wildlife crossings over existing rail lines	Incorporate a wildlife crossing/green bridge element into active travel or all-modes bridges.	Non-Mapped Measure	
WRLNRS21_PM43  Potential Measure 44: Create arboreal links between woodland blocks	Create new arboreal (hedgerow and tree) links/crossovers/hop-overs for dormice, birds, butterflies and bats through targeted tree retention and identification of future veteran trees at identified crossing points.	Non-Mapped Measure	Soil health and protection  Carbon sequestration  Climate adaptation  Climate adaptation
WRLNRS21_PM44			

Road Verge Management

## **Priorities for Road Verge Management**

**Biodiversity Priority 35:** Increase the biodiversity value of road verges across Worcestershire

## Potential Measures that will support delivery of these Priorities

Potential Measure 41: Enhance the biodiversity value of non-statutory nature conservation sites Enhance the habitats and other features for which the Local Wildlife Site, Local Geological Site, Roadside Verge Nature Reserve or Grassland Inventory Site has been designated (including new sites designated since LNRS publication), by implementing or continuing appropriate conservation management.

**Mapped Measure** 











WRLNRS21\_PM41

#### See page 21 'Local Sites Network'

Potential Measure 47: Enhance the biodiversity value of all road verges

WRLNRS21\_PM47

Enhance the biodiversity value of all road verges for pollinators, small mammals and other wildlife by managing in line with best practice guidance, including altering the timing and frequency of cutting and removing arisings. Place signage where appropriate on verges to inform and educate the public. New highway verges and works to existing verges that require turf stripping should ensure no topsoil is reintroduced, so that broadcast wildflower seeds can establish on low nutrient soils. Native, perennial species-rich seed mixes should be used within all road verge planting schemes.

Non-Mapped Measure





Artificial Light at Night

<b>Priorities</b>	for $\Delta r$	tificial I	ight a	t Night
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Biodiversity Priority 36: Reduce the harm to wildlife caused by artificial light at night

## Potential Measures that will support delivery of these Priorities

Potential Measure 45:
Reduce levels of artificial
<u>light at night in the</u>
countryside

Artificial lighting at night should be used only where and when needed. Existing dark corridors should be maintained and protected. This can be achieved by:

## • Removing harmful and excess light by replacing cold-blue and white light sources (>3000K CCT) with dimmer, more controlled and warmer-coloured LED lighting (<2700K CCT).

## Controlling light spill to avoid illuminating trees, hedgerows, waterbodies and watercourses.

· Strengthening lines of linear vegetation such as street trees and hedgerows.

**Mapped Measure** 











WRLNRS21\_PM45

UKHab codes for Potential Measure 45: w1~, h2a, 200, 201, 202

Nature-sensitive lighting and lighting schemes should be used within the built

• Use dimmer, more controlled and warmer-coloured LED lighting (<2700K CCT) in place of cold-blue and white light sources (>3000K CCT).

watercourses.









~ = all further levels and any secondary codes

**Potential Measure 46:** Reduce the impacts of artificial light at night on wildlife within the built

environment

WRLNRS21\_PM46

environment. Where new lighting is required or upgrades, modernisation or retrofits to lighting are planned:

Control light spill to avoid illuminating trees, hedgerows, waterbodies and

**Mapped Measure** 











UKHab codes for Potential Measure 46: w1~, h2a, 200, 201, 202

# **Earth Heritage theme**

Soils

## **Priorities for Soils**

**Biodiversity Priority 37:** Halt the loss of soils from agricultural land

Biodiversity Priority 38: Improve organic matter, biodiversity, water retention capacity and carbon content within agricultural soils

Potential Measures that will support delivery of these Priorities				
Potential Measure 35: Improve soil health WRLNRS21_PM35	Improve the health and resilience of agricultural soils by adopting land management techniques that will support a reduction in soil erosion and an increase in soil organic matter, biodiversity, carbon content and water retention. Share knowledge through research or demonstration.	Non-Mapped Measure	Air quality  Water quality  Water availability  Flood risk reduction  Soil health and protection  Cop Pollination services  Cilimate adaptation	
Potential Measure 36: Protect soils from erosion  WRLNRS21_PM36	Protect soils from erosion by removing cultivation in steeper areas, implementing no- or low-till arable management, planting and restoring hedgerows, and creating in-field and field edge grass buffer strips.	Non-Mapped Measure	Air quality  Water quality  Water availability  Flood risk reduction  Soil health and protection  CO2  Pollination services  Climate adaptation	

## **Earth Heritage theme**

**Rock and Scree Habitats** 

<b>Priorities</b>	for Do	ak and 9	Soroo	Habitata
Prinrities	TOT KO	ck and :	Scree	Hanitate

**Biodiversity Priority 39:** Increase the number of well managed geological exposures to provide early successional habitats important for a range of plant and invertebrate assemblages and nesting birds, as well as research and educational opportunities

## Potential Measures that will support delivery of these Priorities

Potential Measure 37:
Create and enhance
niche biological habitats
within geological
exposures

WRLNRS21\_PM37

Create new or enhance existing permanent geological exposures and maintain these to provide niches for unique biological habitats to thrive and to provide research and educational opportunities.

Non-Mapped Measure





Green Spaces in the Built Environment

Biodiversity Priority 40: Cities, towns and villages to be places richer in nature with a greater extent of connected, accessible greenspace within them

Biodiversity Priority 41: All built development to maximise the provision of wildlife-friendly features and corridors within their design

## Potential Measures that will support delivery of these Priorities

**Potential Measure 38:** Increase the extent. connectedness and quality of wildlife habitats within the built environment

WRLNRS21\_PM38

All built environments should allow wildlife to safely move through them and thrive within them. Decisions on the layout and design of built-up areas, at all scales, should seek to make a positive contribution to providing more, bigger and better-connected areas of natural habitats. As a minimum, decision-makers should seek to:

- Increase urban tree canopy cover, aiming for a minimum of 20%, through, for example, planting street trees, trees in green spaces, hedgerows, community orchards, or small woodland blocks, strips or corridors.
- Make individual homes, gardens and boundary features more wildlife-friendly through, for example, the installation of hedgehog highways, universal swift nest bricks and bat bricks.
- Create more wildlife ponds within public greenspaces and gardens.

UKHab codes for Potential Measure 38: u1f 80, u~ 86, 87, 88, 89, u~ 841, 842, 843, 848, 849, 850, 830, 27

- · Provide green active travel corridors that function as linear wildlife habitats as well as cycleways and footways.
- cohesive network of green corridors within the built environment.
- Link urban green spaces to the local nature network in the surrounding countryside

**Mapped Measure** 











- Design the layout of new gardens and greenspaces so that they contribute to a
- via green, wildlife-friendly corridors.





~ = all further levels and any secondary codes

**Potential Measure 39: Enhance community** green spaces for wildlife

WRLNRS21\_PM39

Enhance existing community green spaces for wildlife by creating and managing areas of natural habitat appropriate to the location, for example mini-meadows, tussocky grassland, ponds, fruit trees and hedgerows and providing features such as nest boxes and hibernacula for birds, bats, hedgehogs and insects. Encourage the adoption of wildlife-friendly food production methods within growing spaces e.g. the use of natural pest control.

**Mapped Measure** 











UKHab codes for Potential Measure 39: r1~, g1~, g2~, g3a~, g3b~, g3c~, w1~, h2a, h3

~ = all further levels and any secondary codes

**Potential Measure 40:** Install gully-pot escape ladders

WRLNRS21\_PM40

Include gully-pot escape ladders within the design of drainage systems for all new roads and retrofit ladders to existing gully pots within landscapes mapped by Potential Measure 7.

Non-Mapped Measure

Green Spaces in the Built Environment continued...

Green Spaces in the Built Environment continued

## **Priorities for Green Spaces in the Built Environment**

Biodiversity Priority 40: Cities, towns and villages to be places richer in nature with a greater extent of connected, accessible greenspace within them

Biodiversity Priority 41: All built development to maximise the provision of wildlife-friendly features and corridors within their design

## Potential Measures that will support delivery of these Priorities

Potential Measure 46:
Reduce the impacts of artificial light at night on wildlife within the built environment

Nature-sensitive lighting and lighting schemes should be used within the built environment. Where new lighting is required or upgrades, modernisation or retrofits to lighting are planned:

- Use dimmer, more controlled and warmer-coloured LED lighting (<2700K CCT) in place of cold-blue and white light sources (>3000K CCT).
- Control light spill to avoid illuminating trees, hedgerows, waterbodies and watercourses.

**Mapped Measure** 











WRLNRS21\_PM46

UKHab codes for Potential Measure 46: w1~, h2a, 200, 201, 202

Prioritisation of Nature Recovery

## **Priorities for Prioritisation of Nature Recovery**

Biodiversity Priority 42: The delivery of nature recovery is integral to both the strategic planning and design of new development and the development management process

## Potential Measures that will support delivery of these Priorities

**Potential Measure 41:** Enhance the biodiversity value of non-statutory nature conservation

Enhance the habitats and other features for which the Local Wildlife Site, Local Geological Site, Roadside Verge Nature Reserve or Grassland Inventory Site has been designated (including new sites designated since LNRS publication), by implementing or continuing appropriate conservation management.

**Mapped Measure** 











WRLNRS21\_PM41

sites

See page 21 'Local Sites Network'

**Potential Measure 42:** Buffer and enhance habitat connectivity around and between non-statutory nature conservation sites

Within a 50m buffer zone surrounding all Local Wildlife Sites and Grassland Inventory Sites (including new sites designated since LNRS publication), seek to create and enhance corridors or stepping stones of habitat to extend, buffer and connect the priority habitats within the nature conservation site with other adjacent or nearby priority habitat.

**Mapped Measure** 











WRLNRS21\_PM42

See page 21 'Local Sites Network'

**Potential Measure 45:** Reduce levels of artificial light at night in the countryside

WRLNRS21\_PM45

Artificial lighting at night should be used only where and when needed. Existing dark corridors should be maintained and protected. This can be achieved by:

- · Removing harmful and excess light by replacing cold-blue and white light sources (>3000K CCT) with dimmer, more controlled and warmer-coloured LED lighting (<2700K CCT).
- · Controlling light spill to avoid illuminating trees, hedgerows, waterbodies and watercourses.
- Strengthening lines of linear vegetation such as street trees and hedgerows.

**Mapped Measure** 











UKHab codes for Potential Measure 45: w1~, h2a, 200, 201, 202

~ = all further levels and any secondary codes

**Potential Measure 46:** Reduce the impacts of artificial light at night on wildlife within the built environment

WRLNRS21\_PM46

Nature-sensitive lighting and lighting schemes should be used within the built environment. Where new lighting is required or upgrades, modernisation or retrofits to lighting are planned:

- Use dimmer, more controlled and warmer-coloured LED lighting (<2700K CCT) in</li> place of cold-blue and white light sources (>3000K CCT).
- · Control light spill to avoid illuminating trees, hedgerows, waterbodies and watercourses.

**Mapped Measure** 











UKHab codes for Potential Measure 46: w1~, h2a, 200, 201, 202

Prioritisation of Nature Recovery continued

## **Priorities for Prioritisation of Nature Recovery**

Biodiversity Priority 42: The delivery of nature recovery is integral to both the strategic planning and design of new development and the development management process

## Potential Measures that will support delivery of these Priorities

# Potential Measure 48: Maximise the biodiversity value of energy infrastructure development sites

WRLNRS21\_PM48

Energy infrastructure developments should contribute to restoring and enhancing local ecological networks. Actions could include:

- Creation/retention of hedgerows, ditches, stone walls, rough grassland and scrub within boundary margins.
- Creation of pollen and nectar strips and the use of climbing plants on security fencing.
- Leaving a 20-30mm gap between the base of fences and the ground.
- Creating areas of wildflower meadow and tussocky grassland.
- Using a wildflower-friendly grazing regime to manage grassland beneath/between PV panels.
- Installing artificial structures such as nest boxes, hibernacula and log piles.

#### Non-Mapped Measure







Water Vole		Priority: Recovery of Water Vole population
Potential Measure 49: Mink control / eradication	WRLNRS21_SPECIES_PM49	Mapped Measure

Adder		<b>Priority:</b> Expand the range of the two core Adder populations
Potential Measure 50:	WRLNRS21_SPECIES_PM50	Mapped Measure
<ul> <li>Maintain and expand range via natural colonisation and habi includes a mosaic of scrub cover, heathland, hibernation are corridors (hedges, raised banks, set aside, buffer strips)</li> <li>Ensure open areas maintained within broadleaved woodland</li> <li>Restore damper areas, e.g. wet flushes and ephemeral pond alternative habitat areas to increasingly drier habitats (due to Restore areas of PAWS back to broadleaved woodland</li> <li>Sympathetic grazing regimes (stocking density and timings)</li> <li>Manage predator threats (pheasants, dogs and cats) and red vehicles, where adders are present (with buffer)</li> <li>Reducing risk of fires</li> <li>Genetic rescue of populations if appropriate</li> </ul>	eas (including artificial hibernacula) and wildlife d (ideally away from footpaths) s, and maintain humid environments as c climate change)	

Dormouse		<b>Priority:</b> Habitat creation and enhancement for Dormouse
Domouse		Priority: Carry out Dormouse reintroductions
Potential Measure 51:	WRLNRS21_SPECIES_PM51	Mapped Measure
<ul> <li>Landscape scale habitat restoration/enhancement and connectivity</li> <li>Retain (veteran) trees with cracks/crevices and deadwood</li> <li>Rotational coppicing/removal of woodland to maintain a well-lit understorey</li> <li>Ensure arboreal connections across woodland rides every 50-100m and erec</li> <li>Do not clear understory in winter and do not clear fell in dormouse locations</li> </ul>	t dormouse boxes and/or tubes	
Potential Measure 52:	WRLNRS21_SPECIES_PM52	Non-Mapped Measure
Reintroduction to suitable release sites in northeast Worcestershire.		32

Pied Flycatcher		<b>Priority:</b> Increase nesting habitat and food sources for Pied Flycatcher
Potential Measure 53:	WRLNRS21_SPECIES_PM53	Mapped Measure
<ul> <li>Landscape scale woodland (especially oak) habitat regeneration</li> <li>Provision of nestboxes in suitable woodland (install in sets of 3 values)</li> <li>Manage habitat to increase chick food supply (predominantly calues)</li> <li>Manage understorey to keep below 1.5m (to improve visibility of</li> </ul>	within a 10m radius to mitigate against aterpillars)	

Hedgehog		Priority: Increase Hedgehog population
Potential Measure 54:	WRLNRS21_SPECIES_PM54	Non-Mapped Measure
<ul> <li>In urban areas install hedgehog highways (in fences and walls) and hedgehoghed.</li> <li>Increased planting of diverse native plant species (structure and diversity) in private gardens.</li> <li>Create permanent leave stores and a mosaic of grass heights and bare soil.</li> <li>Working with land managers to create wide, grassy field margins (increase prince hedgehog friendly habitat.</li> <li>Increasing habitat complexity - more and denser hedgerows - also increases friendly farms.</li> <li>Reduction in use of rodenticides, pesticides, molluscicides and insecticides Integrated Pest Management.</li> </ul>	public greenspaces and in ey availability) and other connectivity between wildlife	

Nightingale	Prio	iority: Habitat creation and enhancement for Nightingale
Potential Measure 55:	VRLNRS21_SPECIES_PM55 Ma	apped Measure
<ul> <li>Coppicing and deer management to promote heterogeneous vegetation structure the area of shrub at vigorous thicket stage, typically a 10–15-year rotational cutting blocks to create a coarse mosaic of larger patches. Focus efforts on creating new existing sites (as males migrating individuals attracted to signing males).</li> <li>Monitor grazing pressure and take preventative measures (i.e. rabbit/deer fencing Re-wet woodlands with thicket to improve invertebrate food supply)</li> </ul>	ng, using reasonable sized w habitats adjacent to	

Brown Hairstreak		<b>Priority:</b> Habitat creation and enhancement for Brown Hairstreak
Potential Measure 56:	WRLNRS21_SPECIES_PM56	Non-Mapped Measure
<ul> <li>Retain and cut all hedges on a rotation so that each stretch of every 3-4 years.</li> <li>Create new habitat by planting hedges using a good proportion suckers to grow into field margins</li> <li>Increase the connectivity of suitable habitats by creating and containing blackthorn which connect existing areas. Create w around woodlands.</li> </ul>	or of Blackthorn. Where possible, allow small extending stands, trees, and hedgerows	

White-clawed Crayfish		Priority: Recovery of White-clawed Crayfish population
Potential Measure 57:	WRLNRS21_SPECIES_PM57	Mapped Measure
<ul> <li>Increased biosecurity</li> <li>If successful methodology created, removal of signal crayfish</li> </ul>		

Toad	Priority: Increase the numbers and distribution of Toad
<ul> <li>Potential Measure 58: WRLNRS21_SPECIES_PM58</li> <li>Deliver specific habitat interventions to support safe crossing of roads by migrating toads such as adjustments to timing of verge cutting and installation of natural barriers to direct toads to safer crossing points</li> <li>Support the operation of amphibian road-crossing patrols where these are required including signage</li> </ul>	Non-Mapped Measure

Turtle Dove	Priority: Recovery of Turtle Dove population
Potential Measure 64: WRLNRS21_SPECIES_PM64	Mapped Measure
Provide uncropped margins/plots, rotational set-aside, conservation headlands and buffer strips	
<ul> <li>Reduce use of pesticides and herbicides, i.e. increased uptake of Integrated Pest Management.</li> </ul>	
<ul> <li>Provide suitable feeding habitat, e.g. plant a bespoke seed mix, adjacent to nesting habitat and water body</li> </ul>	
• Provide scrub or dense hedgerow at a minimum, 3m tall and 4m wide. Cut on a long-term (15+ year) rotation.	
Encourage and keep native thorny species and climbing plants	
Restore/create semi-natural grassland with bare ground	
<ul> <li>Provide good quality, buffered freshwater sources, e.g. ponds and streams.</li> </ul>	
<ul> <li>Supply supplementary food (see Agri-environment Species Supplement)</li> </ul>	
Implement the national Turtle Dove action plan	
Re-establish foraging and nesting habitat on historic Turtle Dove sites	

	Kentish Glory	Priority: Reintroduction of Kentish Glory moth to Wyre Forest
	Potential Measure 67: WRLNRS21_SPECIES_PM67	Mapped Measure
- 1	<ul> <li>Rotational coppicing and strategic thinning/clear-felling of birch coupes (maintain tree height below 3m)</li> <li>Captive breeding and reintroduction to suitable release sites</li> </ul>	

Tr	ue Service Tree		<b>Priority:</b> Increase the numbers and distribution of True Service Tree
Pot	ential Measure 68:	WRLNRS21_SPECIES_PM68	Mapped Measure
•	Propagate trees from local seeds Reintroduce to targeted locations		

Black Poplar		<b>Priority:</b> Increase the numbers and distribution of Black Poplar
Potential Measure 69:	WRLNRS21_SPECIES_PM69	Non-Mapped Measure
<ul> <li>Reintroduce male and female trees in pairs in targeted locations (fl.)</li> <li>Protect existing Black Poplars, particularly ancient/veteran specime.</li> <li>Protect planted Black Poplars from deer, livestock, garden machine.</li> <li>Maintain some male and female trees as maiden trees (i.e. do not described by the content of the content o</li></ul>	ens ery and herbicides	

Six-spotted Pot Beetle		<b>Priority:</b> Increase the numbers and distribution of Six-spotted Pot Beetle
Potential Measure 70:	WRLNRS21_SPECIES_PM70	Mapped Measure
<ul> <li>Regular rotational coppicing of hazel, aspen, birch and crack willow</li> <li>Connect stands of hazel, aspen, birch and crack willow where appropriate</li> </ul>		

Longhorn Lime Beetle	<b>Priority:</b> Increase the numbers and distribution of Longhorn Lime Beetle
Potential Measure 71: WRLNRS21_SPECIES_PM71	Mapped Measure
<ul> <li>Regular rotational coppicing of small-leaved lime</li> <li>Connecting stands of small-leaved lime</li> </ul>	

Poplar Leaf-rolling Weevil	<b>Priority:</b> Increase the numbers and distribution of Poplar Leaf-rolling Weevil
Potential Measure 72: WRLNRS21_SPECIES_PM72	Mapped Measure
Successional planting of aspen ( <i>Populus tremula</i> ) in woodland at known population sites and expansion areas	
Protect emerging aspen against predation (deer) and trampling	
Cut regenerating aspen on a 4-year rotation	
Increase/appropriately manage woodland glades	
Captive breeding and reintroduction if appropriate	36

House Martin and	Swift	<b>Priority:</b> Increase nesting habitat and food sources for House Martin and Swift
Potential Measure 59:	WRLNRS21_SPECIES_	PM59 Mapped Measure
<ul><li>Install universal s</li><li>Implement susta</li></ul>	es or limit/block nest sites ift nest bricks and play swift calls during breeding season able farming practices to increase invertebrate (prey) populations breegreen spaces in urban areas to increase invertebrate populations	

V	Voodland Bats	<b>Priority:</b> Habitat creation and enhancement for Barbastelle and Bechstein's bats
F	otential Measure 60: WRLNRS21_SPECIES_PM60	Non-Mapped Measure
•	hese bat species require multiple different habitat-based and environmental interventions to be delivered vithin the same location to support feeding and breeding success:  Restoration, planting and gap-planting of hedgerows (i.e. tall and bushy), particularly those linking broadleaved and ancient woodlands  Creation and maintenance of standing deadwood within broadleaved woodlands (and potential veteranisation of trees)  Improved management of broadleaved woodland and establish dense understorey in woodland (especially around woodland ponds etc.) used by these species  Restoration and improved management of riparian habitat  Maintain and improve quality and quantity of wetland habitats  Dark skies initiative/create and maintain ecologically functioning dark corridors  Arable: promote organic/regenerative farming, field margin habitat for moths and beetles, reduction	
	in/cessation of anti-parasitic treatments in grazing animals, and reduction in pesticide use, promote organic/regen farming particularly within 3km of maternity roosts	

I ( '9VA and Killiding Rate		<b>Priority:</b> Habitat creation and enhancement for Greater Horseshoe, Lesser Horseshoe, Brandt's and Serotine Bats
Potential Measure 61:	WRLNRS21_SPECIES_PM61	Non-Mapped Measure
<ul> <li>These bat species require multiple different habitat-based and environs within the same location to support feeding and breeding success:</li> <li>Restoration, planting and gap-planting of hedgerows (i.e. tall and bus broadleaved woodland used by these species</li> <li>Improved management of broadleaved woodland and establish dens around woodland ponds etc.) used by these species</li> <li>Dark skies initiative/create and maintain ecologically functioning dar</li> <li>Arable: reduction in/cessation of anti-parasitic treatments in grazing particularly within 3km of maternity roosts, promote organic/regeneral</li> </ul>	shy), particularly those linking se understorey in woodland (especially k corridors animals, and reduction in pesticide use	

Migratory Fish		<b>Priority:</b> Remove barriers to migratory fish passage [Eel, Sea Lamprey, River Lamprey, Brown Trout, Atlantic Salmon, Allis Shad, Twaite Shad, Barbel]
Potential Measure 62:	WRLNRS21_SPECIES_PM62	Mapped Measure
Remove or modify in-channel barriers to allow passage		

Wetland and Wader Birds		<b>Priority:</b> Create and enhance habitat for wetland and wader birds [Curlew, Redshank, Lapwing]
Potential Measure 63:	WRLNRS21_SPECIES_PM63	Non-Mapped Measure
<ul> <li>Create and enhance habitat (including adjacent fields) to support birds. Pasture and wetland features should include areas of flood, water, and rushy damp pasture. Field margins, bare ground and st fields or rotations.</li> <li>Locations away from Public Rights of Way or permissive access sh and/or minimise recreational disturbance at sites (including dogs)</li> <li>Legal control/reduction of predator disturbance where possible at Sensitive management of grassland and pasture must include late period of several months to minimise accidental nest destruction.</li> </ul>	polain meadow, scrapes and ditches, open ubbles should be available within arable nould be prioritised for habitat provision and appropriate a hay cuts or strip-cutting over an extended	

Farmland Birds	Priority: Recovery of Farmland bird populations [Corn Bunting, Grey Partridge, Yellow Wagtail]
Potential Measure 65: WRLNRS21_SPECIES_PM65	Non-Mapped Measure
<ul> <li>Provide uncropped margins/plots, rotational set-aside, conservation headlands, buffer strips and beetle banks</li> </ul>	
Reduce use of pesticides and herbicides, i.e. increased uptake of Integrated Pest Management. Avoid use of	
<ul> <li>broad-spectrum insecticides after 15<sup>th</sup> March and avoid spraying outer 6m of cereal fields.</li> <li>Restore/create semi-natural grassland</li> </ul>	
Provide suitable foraging and nesting habitats, i.e. manage hedgerows on a 3-year rotation	
<ul> <li>Plant wild bird seed mixes/cereal-rich wild bird cover crops</li> <li>Provide spring sown crops in nesting arable fields to help improve productivity by extending the breeding</li> </ul>	
season, or a mosaic of autumn sown crops for later broods (Corn Bunting)	
<ul> <li>Supply supplementary food</li> <li>Provide good quality, buffered freshwater sources, e.g. ponds, streams, wet ditches.</li> </ul>	
<ul> <li>Skylark plots within winter cereals.</li> <li>Delay cutting of silage and hay crops</li> </ul>	
Delay culting of situage and hay crops	

Fritillary Butterflies	<b>Priority:</b> Recovery of Fritillary butterfly populations [Pearl-bordered Fritillary, Small Pearl-bordered Fritillary]
Potential Measure 66: WRLNRS21_SPECIES_PM66	Mapped Measure
<ul> <li>Open habitat measures:</li> <li>Specific bracken management to establish optimum density of bracken and dog violet. Use of machinery e.g. robo-cutter and/or livestock at suitable stocking density</li> <li>Breeding programme and reintroduction to suitable release sites</li> </ul>	
<ul> <li>Woodland measures:</li> <li>Rotational coppicing</li> <li>PAWS restoration</li> <li>Rotational management of open areas (glades, rides, etc.) which are not grazed to ensure a succession of habitats</li> <li>Create/maintain woodland flushes in a mix of shaded and unshaded areas</li> </ul>	

F	are Plants	Priority: Increase the numbers and distribution of rare plants [Tower Mustard, Deptford Pink, Sand Catchfly, Round-leaved Wintergreen, Round-leaved Sundew]
<u>P</u>	otential Measure 73: WRLNRS21_SPECIES_PM73	Non-Mapped Measure
•	Collect seed, propagate and reintroduce to targeted locations Appropriate habitat management where present/reintroduced (e.g. scrub clearance, periodic disturbance)	

Helleborines	<b>Priority:</b> Increase the numbers and distribution of helleborine species [Narrow-leaved Helleborine, White Helleborine]
Potential Measure 74: WRLNRS21_SPECIES_PM74	Non-Mapped Measure
<ul> <li>Habitat management to maintain correct light levels (dappled shade). This includes managing understorey vegetation to prevent overshading</li> <li>Create adjacent areas of exposed soil for seeds to settle on and germinate in</li> </ul>	

W	Wet Woodland Plants		<b>Priority:</b> Increase the numbers and distribution of rare wet woodland species [Elongated Sedge, Alder Bolete, <i>Pholiota lucifera</i> (Scalycap fungus), <i>Laccaria purpureobadia</i> (fungus)]
Po	tential Measure 75:	WRLNRS21_SPECIES_PM75	Non-Mapped Measure
•	Replant alder to reconnect habitat Long-term rotational coppicing of alder and willow Retain dead wood (especially alder)		

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