



**Forest of  
Bowland  
National  
Landscape**

# Nature Recovery Plan



December 2023



## 1.1 Contents

<b>Executive Summary</b> .....	<b>3</b>
<b>1 Introduction</b> .....	<b>6</b>
<b>2 Vision for nature</b> .....	<b>7</b>
<b>3 The nature we have</b> .....	<b>9</b>
3.1 Designated Sites.....	10
3.2 Habitat types.....	11
3.3 Species.....	13
<b>4 Drivers for change</b> .....	<b>15</b>
4.1 Climate change, resilience and adaptation.....	15
4.2 Farming, forestry and land management.....	16
4.3 Pollution, pests, disease and invasive species.....	17
4.4 People and development .....	17
4.5 Policy and finance.....	18
4.6 Skills, data and monitoring .....	19
<b>5 Priorities for nature recovery</b> .....	<b>20</b>
5.1 Key outcomes .....	20
5.2 Habitat types.....	21
5.2.1 Peatland .....	22
5.2.2 Woodland, Trees and Hedgerows .....	28
5.2.3 Grassland.....	33
5.2.4 Wetlands.....	40
5.2.5 Rivers & Water .....	42
5.2.6 Built Environment .....	47
5.2.7 Transitional areas.....	49
5.3 Species.....	51
5.3.1 Champion species.....	51
<b>6 Connecting people and nature</b> .....	<b>55</b>
<b>7 Targets and monitoring</b> .....	<b>58</b>
7.1 Targets .....	58
7.2 Monitoring .....	59
<b>8 Delivering the Plan</b> .....	<b>61</b>
8.1 Principles for delivery .....	61
8.2 Land management approaches.....	62
8.3 Funding for delivery .....	66
<b>9 Next steps</b> .....	<b>69</b>

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Image credits

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- Hen harrier – Richard Saunders, Natural England
- Black grouse – Phil Warren, Game & Wildlife Conservation Trust
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## Executive Summary

The Forest of Bowland National Landscape is one of England's finest landscapes and is internationally and nationally important for its peatland, heather moorland, and rare birds. As a protected landscape it is a key component in the national Nature Recovery Network.

Farmers, land managers, businesses, communities and organisations are committed to looking after the area's landscapes to support more nature rich places across peatland, grasslands, woodland, wetlands, and rivers. Despite this, nature in the National Landscape is at risk and habitats and species continue to decline, including the enigmatic curlew. The reasons for decline are often complex but some of the reasons could relate to habitat isolation and fragmentation, climate change, invasive non-native species, pollution, changing land management practices and disturbance from people.

The Forest of Bowland National Landscape Nature Recovery Plan is part of the National Landscape Partnership's response to the biodiversity crisis and commitment to the Colchester Declaration<sup>1</sup>. The plan builds on and reviews current nature recovery objectives in the Forest of Bowland National Landscape Management Plan. It sets a vision for nature recovery over the next 20 years and provides a positive and proactive framework for delivery by organisations, landowners, farmers, land managers, businesses, communities, and individuals living and working within and around the National Landscape. It will help deliver the Government's target for 30% of land and sea to be managed for nature by 2030.

### Nature Priorities

There are 6 broad interconnected habitat types and 14 'Champion' species at the heart of the Forest of Bowland National Landscape Nature Recovery Plan.

#### Habitats

- Peatland<sup>2</sup>
- Woodland, Trees and Hedgerows
- Grasslands
- Wetlands
- Rivers & Water
- Built Environment

#### Champion species

- Eurasian curlew<sup>3</sup> (*Numenius arquata*)
- Hen harrier<sup>3</sup> (*Circus cyaneus*)
- Black grouse<sup>3</sup> (*Lyrurus tetrix*)
- Swift<sup>4</sup> (*Apus apus*)
- Pied flycatcher (*Ficedula hypoleuca*)
- Juniper<sup>3</sup> (*Juniperus*)
- Globeflower<sup>5</sup> (*Trollius europaeus*)
- Hard-fern (*Blechnum spicant*)
- Ballerina waxcap (*Porpolomopsis calyptriformis*)
- Brown long-eared bat (*Plecotus auratu*)
- Brown trout (*Salmo trutta*)
- Yellow May dun (*Heptagenia sulphurea*)
- Bilberry bumblebee (*Bombus monticola*)
- Green hairstreak butterfly (*Callophrys rubi*)

### Key Outcomes

- The National Landscape is an exemplar for nature recovery in the English uplands.
- Core Nature Areas are well managed and in better condition. Core Nature Areas are international, national, and local nature designations that include areas of blanket bog,

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<sup>1</sup> The Colchester Declaration sets out a collective declaration to do more for nature in England's National Landscapes. It was signed by all English National Landscapes in 2019.

<sup>2</sup> Peatland includes blanket bog, upland heath, lowland heath and raised bog habitats.

<sup>3</sup> S41 species on IUCN red list

<sup>4</sup> UK Birds of Conservation Concern Red List

<sup>5</sup> and associated *Chiastocheta* flies

peatland, heathland, species-rich grassland, rivers, wetlands and ancient woodland habitats.

- Priority Habitats are better managed, in better condition and are better connected to Core Nature Areas and each other. They buffer Core Nature Areas across the area.
- Connecting Farmland supports wildlife rich habitat and farms are integrating nature friendly farming into their business models, supporting sustainable farm businesses and providing stepping stones and corridors between Core Nature Areas and Priority Habitats.
- Habitats are supporting each other, creating a mosaic of functioning ecosystems with diverse and thriving populations of species.
- Local authorities, organisations and local communities are integrating nature friendly techniques in managing and protecting open spaces in and around the National Landscape.
- The baseline condition of key habitats and baseline condition and abundance of key species is better understood.
- A monitoring framework is established, and data is being gathered regularly and consistently.
- People are better connected to nature and more people are caring for it.
- Partners are working together to implement the Plan, contributing to the delivery of the national Nature Recovery Network and Local Nature Recovery Strategies for Lancashire and North Yorkshire & York.

### **Principles for Delivery**

The following principles will support nature recovery networks and a more nature rich National Landscape:

#### **Bigger**

- Working at a landscape scale and going beyond the National Landscape's boundaries.
- Increasing the size of and creating nature rich buffers around Core Nature Areas.
- Allowing natural processes to recover and restoring functioning ecosystems.

#### **Better**

- Ensuring Core Nature Areas are in the best condition.
- Reducing pressure on the Core Nature Areas by improving habitats in buffering Priority Habitats and across Connecting Farmland with its wildlife rich habitats.

#### **More joined up**

- Improving connections between habitats and ecosystems across the Connecting Farmland, through new or enhanced wildlife corridors and stepping stones, transitional areas between habitats, and more farms using 'high nature value' farming or regenerative farming techniques to deliver nature friendly farming.
- Working together. Everyone has a part to play, from landowners, farmers, land managers, organisations, businesses, residents, recreational users, visitors, local authorities, government, and its advisors.
- Supporting greater connectivity with habitats beyond the boundary of the National Landscape and using the plan to inform the Lancashire and North Yorkshire & York Local Nature Recovery Strategies.

### **Delivering the Plan**

Nature recovery takes time. It involves a lot of people, significant funding and working beyond the National Landscape boundary.

Partnership working is at the heart of the Nature Recovery Plan. Resources will be used effectively by working together, building on existing partnerships and relationships and forging new ones, by expanding and pooling staff resources, by developing knowledge and skills, and by tapping into more public and private funding and new data sources. The plan's vision and objectives are ambitious, and the Partnership does not yet have sufficient funding to implement all of them. The plan aims to maintain current momentum and make a commitment to collectively seek out and secure the necessary funding for delivery. Significant continued support will be required from Government, especially through the developing Environmental Land Management schemes.

## 1. Introduction

The Forest of Bowland National Landscape is one of England's finest landscapes and is internationally important for its peatland, heather moorland, meadows, Atlantic oak woodlands and rare birds. The National Landscape is managed by a partnership of local councils, government agencies, landowners, farmers, local businesses and wildlife and recreation interest groups, who work to conserve and enhance the natural beauty of this special landscape.

In 2019, all National Landscapes in England made a collective declaration to encourage action to significantly increase the scale and pace of nature conservation activity in and around these landscapes. The Forest of Bowland National Landscape, along with other protected landscapes, is at the heart of a national Nature Recovery Network. The Forest of Bowland National Landscape aims to be an exemplar for nature recovery in the English uplands.

This plan has been developed to guide the changes needed to address declines in habitats and species in and around the National Landscape. It forms part of the National Landscape Management Plan and informs the county wide Local Nature Recovery Strategies (LNRS) for Lancashire and North Yorkshire & York.

Much of the land in the Forest of Bowland National Landscape is privately owned and primarily used for farming, game shooting and drinking water supply. Farmers, landowners and land managers are critical to nature's recovery. For example, half of all plant and animal species in the UK depend on agricultural habitats, and many habitats were created by and need to be maintained by farming. This plan seeks to provide information on the ways that farmers and land managers can adopt nature friendly farming and land management approaches to support more nature recovery.

It recognises that for several decades many farmers, land managers, businesses, communities and organisations have been working hard to look after the area's landscapes to support more nature rich places across grasslands, peatland, woodlands, wetlands, rivers and water bodies. Some farm and estate businesses have entered into and operate within agri-environment support schemes to conserve and enhance habitats for wildlife and manage important landscape features on their land. Other farmers have also adopted more sustainable and efficient farming practices, whilst remaining sympathetic to the environment; for example, through initiatives such as Natural England's Catchment Sensitive Farming (CSF), or through 'high nature value' farming and regenerative farming approaches. Several large estates, including that owned by a major water company, have also adopted nature friendly approaches to land management.

Despite this commitment and hard work, nature is still at risk in the National Landscape, and some species continue to decline. Reasons for decline are often complex, but some of the reasons relate to isolation and fragmentation of habitat, changing land management policies and practices, climate change, invasive non-native species, and disturbance from people.

This plan sets a vision for nature recovery and provides a positive and proactive framework for delivery by the National Landscape Partnership, landowners, farmers, land managers, businesses, and communities within and around the National Landscape. It has been developed with the input of a range of stakeholders from these sectors. As a next step, a more detailed delivery action plan will be developed with partners, which will be integrated into the National Landscape Management Plan 2025 - 2030.

It can be used to help identify priorities for future agri-environmental schemes that aim to deliver public benefits and greater biodiversity. It provides a finer grain of detail to inform the LNRS for Lancashire and North Yorkshire & York that will be produced by each Council by early 2025. It can also help Local Planning Authorities deliver Biodiversity Net Gain (BNG), identifying priorities for

habitat restoration for off-site developer contributions where biodiversity gains can't be provided within a development site.

## 2. Vision for nature

The Forest of Bowland National Landscape is one of a series of protected landscape exemplars for nature recovery in the English uplands, helping to restore the balance between nature and people.

By 2040, the Bowland landscape is even richer in nature, its mosaic of diverse habitats and ecological networks are being restored to support a greater abundance of wildlife and are more resilient to climate change.

Core Nature Areas, sites designated for nature conservation, are in better ecological condition, their edges fuzzier and less defined. They are more joined up across more wildlife-rich connecting farmland.

The National Landscape is valued for the range of benefits it provides for society, including carbon storage, water storage and flood management, clean drinking water, access to nature, and health and wellbeing. The local rural economy is thriving, with investment into land management that supports natural processes to be restored and nature to flourish alongside farming and game management.

Landowners, farmers, conservation organisations, public bodies, businesses and communities are working together to deliver more nature. Local craftspeople skilled in traditional techniques maintain hedges, walls and vernacular buildings, while people from all backgrounds are connecting to nature, exploring nature rich places responsibly, and caring for the area's wildlife and their own wellbeing.

The vision will be delivered by creating nature recovery networks incorporating a mosaic of habitats and ecosystems. These networks will spread out from the area's Core Nature Areas – these are sites and habitats that are designated for their nature interest, such as Sites of Special Scientific Interest and Local Wildlife Sites (including Biological Heritage Sites, Sites of Importance for Nature Conservation and Local Nature Reserves) – enabling these areas to become 'bigger, better and more joined up' across the wider countryside and farmland. Transitional areas will buffer Core Nature Areas and Priority Habitats and other habitats, providing essential components of a wildlife rich landscape across the Connecting Farmland. Rivers, woodlands, trees, hedges, walls and grasslands across the Connecting Farmland will form stronger corridors and linkages between habitats and ecosystems.

Nature recovery isn't about turning back the clock 80 years or more, to a time when the landscape was richer in nature, it's about managing our dynamic landscapes in a way that supports a sustainable rural economy that is thriving and restoring, creating and improving the landscape for nature and for people. It's also about recognising that there could be tensions between some nature recovery activities and aspirations, and that in some cases 'trade-offs' may be required. It's about working together to find the best solution for nature on any given area of land.

Work has already commenced to deliver this vision, and the following sections of the plan set out the steps that can be taken, and the land management approaches that can be adopted to deliver more for nature. The vision timeline of 2040 recognises that some habitats and species will take time to improve, establish and expand.

The illustrations below seek to show the difference between the landscape now and the vision for the future.



Now



2040



- KEY
- |                                        |                                                       |
|----------------------------------------|-------------------------------------------------------|
| [1] Heather cutting                    | [7] Riparian tree planting                            |
| [2] Wood pasture with cattle grazing   | [8] Wooded moorland clough                            |
| [3] Woodland planting & in field trees | [9] Network of hedgerows reinstated                   |
| [4] Herbal leys and cattle grazing     | [10] Species rich grasslands                          |
| [5] Bird hide for nature connections   | [11] Naturalised river                                |
| [6] Wet grassland and scrapes          | [12] Peat hags reprofiled and revegetated             |
|                                        | [13] Mosaic of upland heath plant species established |

Illustrative only. Not all plants will flower at the same time.

### 3. The nature we have

The Forest of Bowland National Landscape is an expansive upland area rich in peatland, heather moorland, meadows, Atlantic oak woodlands and rare birds. Steep scarp slopes are incised with streams, wooded clough and valleys that give way to lower-lying pastoral farmland, hedgerows, trees, woodlands, forestry, parkland, reservoirs, broad river valleys and floodplains. Together these combine to form a mosaic of habitats that support a rich variety of wildlife. The National Landscape covers 803 km<sup>2</sup>. This is around 4% of all land designated as a National Landscape in England.

Over one third of the National Landscape is designated or mapped as being important for nature conservation. Sites with international and national designations for nature conservation and Priority Habitats<sup>6</sup> account for 277km<sup>2</sup> or 34.4% of the National Landscape.

There are three internationally designated areas. The largest is Bowland Fells Special Protection Area (SPA) which is important for its expanse of peatland and heather moorland; these are important habitats for breeding birds such as hen harrier, merlin, peregrine and lesser black-backed gull. This area is also designated as Bowland Fells Site of Special Scientific Interest (SSSI). Two other internationally designated sites are Special Areas of Conservation (SAC), one for Atlantic oak woodland, and one for a suite of species-rich upland meadows.

There are 21 SSSIs of national importance, covering 16,382ha or 20.4% of the National Landscape's area. The largest is Bowland Fells SSSI. The rest are rivers, bog, mosses and heathland, species-rich grasslands, ancient woodlands and geological sites.

Additionally, there are over 450 non statutory designated Local Wildlife Sites (LWS) and Local Nature Reserves (LNR) that are important at a county level. These comprise woodlands, rivers, wetlands, grasslands, peatland habitats and geological sites.

Collectively, the international, national and local designations form Core Nature Areas, and can provide valuable refuges to wildlife. They form parts of, and link with, the farmed and moorland landscapes. Some have public access providing spaces for people to connect with and enjoy nature. Not all of the designated sites are in a good condition for nature. Steps are being taken to better understand their condition to support decisions for future management, enhancement and restoration.

The landscape, including its Core Nature Areas, have been managed by generations of farmers and landowners. Sheep and beef farming dominates the upland areas, while dairy farming remains a significant land use in the valleys. Extensive areas of moorland are managed specifically for grouse shooting.

The area is rich in 'natural capital' – natural elements within the landscape that provide essential services to people elsewhere in Lancashire, North Yorkshire and Greater Manchester. The natural capital of its peatland, woodlands and forests, rivers and reservoirs, grasslands and soils provide services including carbon storage, clean drinking water, managing downstream flooding, health and wellbeing, recreational opportunities, and the enjoyment of the landscape's heritage for people living in, and outside, the National Landscape. There is substantial scope within the National Landscape to manage the natural capital to enable habitats to be restored, extended or created whilst providing multiple benefits for people and climate change mitigation<sup>7</sup>.

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<sup>6</sup> Habitats of principal importance under Section 41 of the Natural Environment and Rural Communities Act (2006) that are a focus for conservation action in England.

<sup>7</sup> Mapping Natural Capital and Ecosystem Services in the Forest of Bowland AONB', 2021

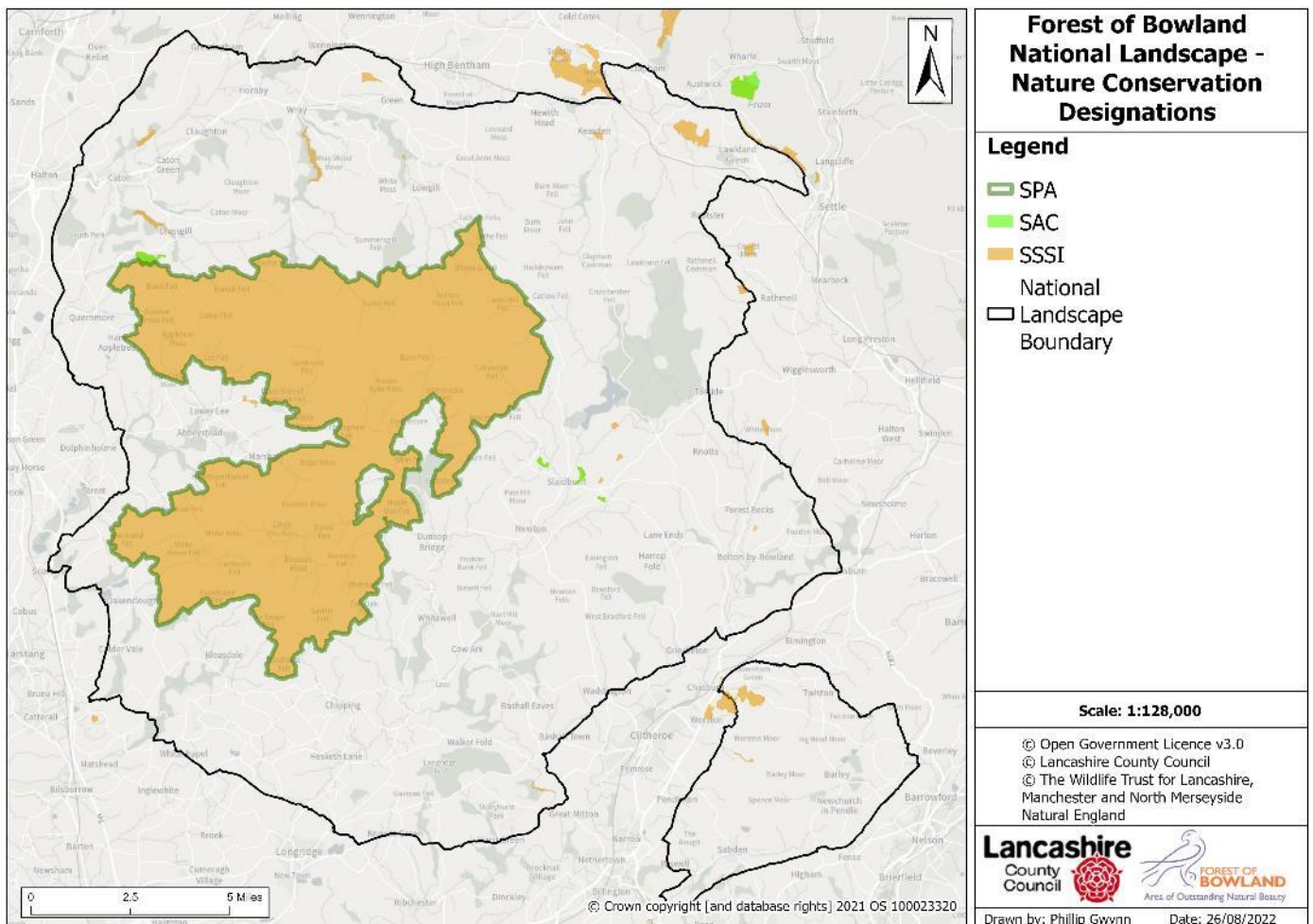
### 3.1 Designated Sites

Almost one third, 32.5%, of the National Landscape is designated for nature conservation, internationally, nationally and locally. These form part of the Core Nature Areas.

International and national statutory designations are listed below and shown on Map 1.

International Designations	Site of Special Scientific Interest (SSSI)	
<b>Special Area of Conservation (SAC)</b>	Artle Dale	Hesley Moss
Calf Hill and Cragg Woods	Austwick and Lawkland Mosses	Hodder River Section
North Pennine Dales Meadows	Barn Gill Meadow	Keasden Moor
<b>Special Protection Area (SPA)</b>	Bell Sykes Meadows	Langcliff Cross Meadow
Bowland Fells	Bowland Fells	Little Mearley Clough
	Burton Wood	Myttons Meadows
	Calf Hill and Cragg Woods	New Ing Meadow
	Clear Beck Meadow	Robert Hall Moor
	Clitheroe Knoll Reefs	Roeburndale Woods
	Far Holme Meadow	Standridge Farm Pasture
	Field Head Meadow	Tarnbrook Meadows

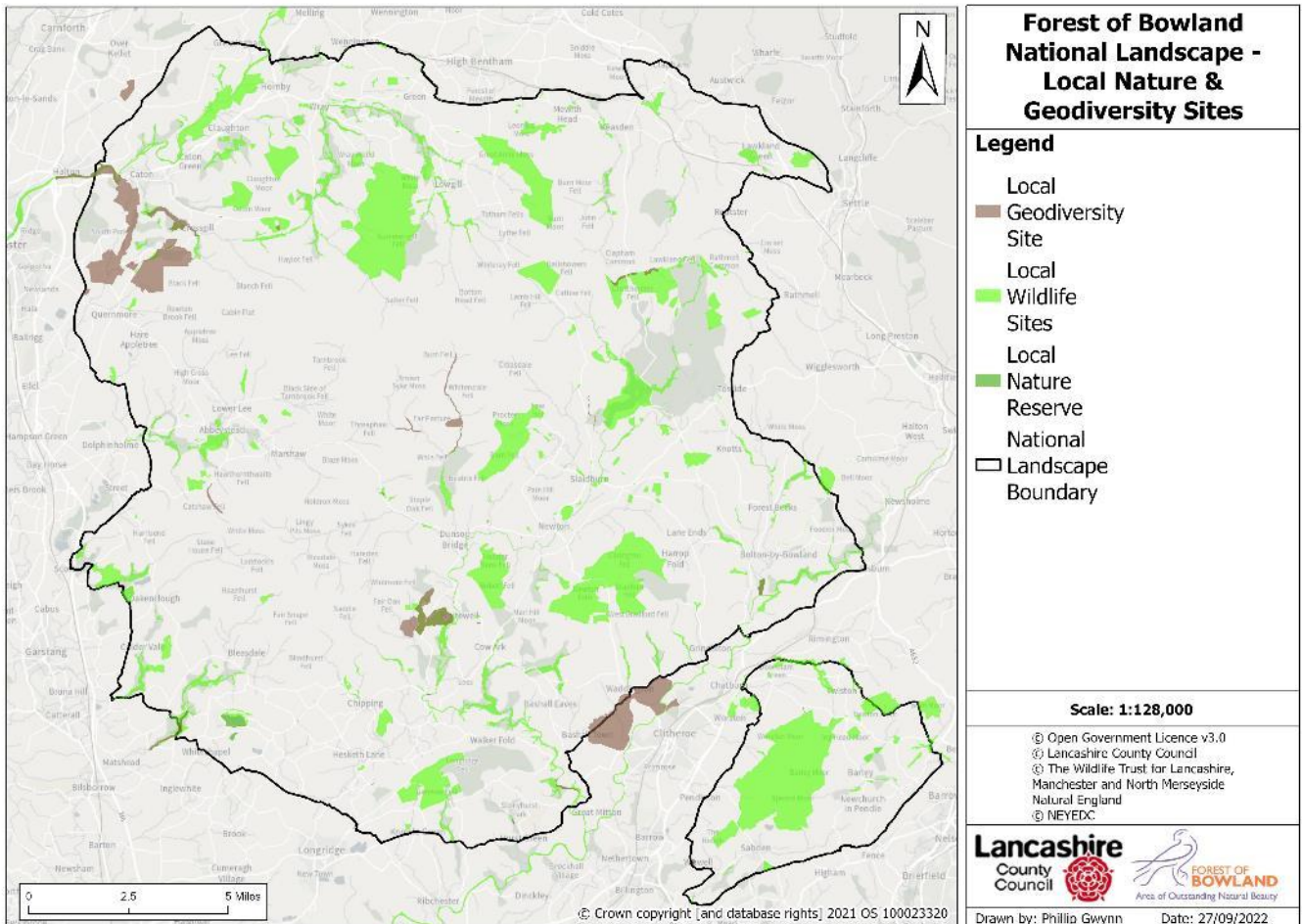
**MAP 1**



*Note: maps are generated using NE derived data from 2022. These are estimates and likely to change as baseline surveying continues by NE and others.*

There are 456 LWS covering just over 10% of the area. These form part of a national network of non-statutory designated sites that are recognised for their ecological value. LWS include Biological Heritage Sites (BHS) in Lancashire and Sites of Importance for Nature Conservation (SINC) in North Yorkshire, Local (County) Geodiversity Sites and LNR. These are shown on Map 2. Stocks Reservoir is classified an 'Important Plant Area' by Plantlife for its rare mosses and liverworts. It is not identified on the map below.

## MAP 2



### 3.2 Habitat types

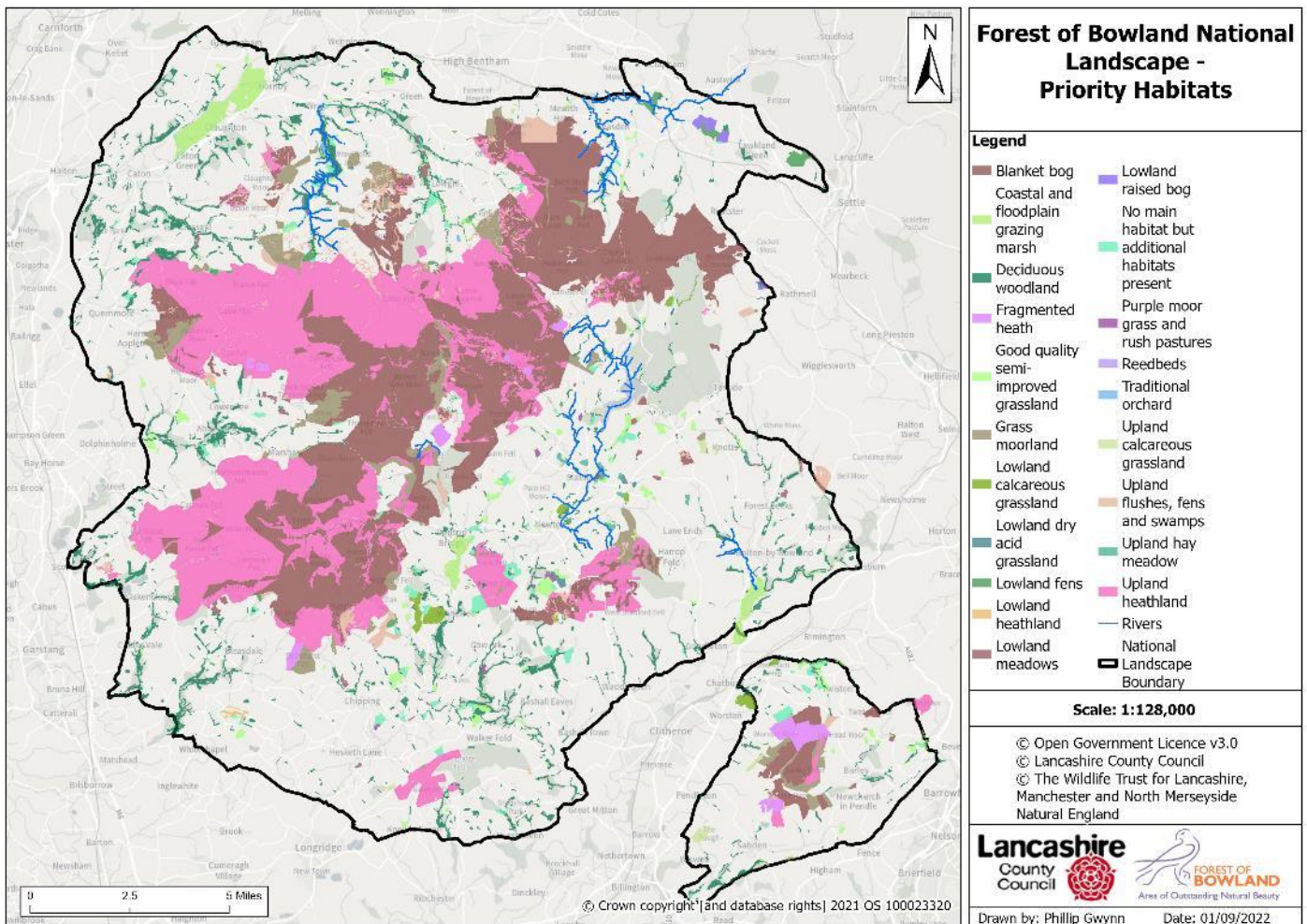
In addition to the statutory and non-statutory designated sites, the National Landscape has a mosaic of habitats identified on the national Priority Habitats Inventory (PHI). These represent the Natural Environment and Rural Communities Act (2006) Section 41 habitats of principal importance. Many of these are found in designated sites, but some areas extend beyond the designations. The PHI includes most, but not all of the habitat areas that meet this standard of importance. There are more areas of importance than shown on Map 3 below as some habitats (in particular Atlantic oak woodland and upland wood pasture) do not yet have a published mapped layer. There is currently no data recorded regarding the condition of most of the PHI.

There are 21 main Priority Habitats in the National Landscape listed on the PHI. These are grouped into 5 broad habitat types in the table below. Over half of them are identified as key habitats in this plan. Most of the PHI habitats are indicated on Map 3. Hedgerows and ponds are excluded from the map.

	Ha	% of National Landscape
Peatland	21,100	26
Grassland	500	0.6
Woodland	2,762	3.4
Wetland	1,671	2.1
Rivers	411km	N/A

	Priority Habitat	Ha	Km
<b>Peatland</b>	Blanket bog	11,012	
	Upland heathland	10,045	
	Lowland raised bog	65	
<b>Grassland</b>	Lowland calcareous grassland	141	
	Lowland dry acid grassland	56	
	Lowland meadows	143	
	Upland calcareous grassland	823	
	Upland hay meadows	77	
	Purple moor-grass and rush pastures	43	
	<b>Woodland, Trees &amp; Hedgerows</b>	Deciduous woodland	2,746
	Ancient woodlands	108	
	Traditional orchards	16	
	Hedgerows	N/A	N/A
<b>Wetland</b>	Lowland fens	305	
	Reedbeds	1	
	Upland flushes, fens and swamps	809	
	Coastal and floodplain grazing marsh	557	
<b>Rivers</b>	Rivers		411
	Ponds	N/A	
<b>Other</b>	Low heathland	55	
	No main habitat but additional habitats present	566	

**MAP 3**



The six broad habitat types below represent the mosaic of habitats that are most important for developing a resilient network of functioning ecosystems. These have been selected following stakeholder engagement. They form the basis for section 5.2 in the plan.

- Peatland
- Woodland, Trees & Hedgerows
- Grasslands
- Wetlands
- Rivers & Water
- Built Environment

### 3.3 Species

The National Landscape is rich in hundreds of plant and animal species, some of which are listed below. The full species list is too long to include here. Those in bold have been identified as Champion Species in section 5.3 of the plan. Although only 14 Champion Species have been identified, any work that seeks to sustain a resilient, healthy and better-connected mosaic of habitats and ecosystems is very likely to provide more space for the full range of species found throughout the National Landscape, supporting them to expand and thrive.

#### Birds

**Black grouse, Eurasian curlew, hen harrier, pied flycatcher, swift**, lesser black-backed gull, merlin, peregrine, short eared owl, ring ouzel, grey partridge, red grouse, golden plover, redstart, crossbill, tree pipit, wood warbler, tawny owl, barn owl, great spotted woodpecker, woodcock, tree sparrow, sparrowhawk, snipe, northern lapwing, oystercatcher, kingfisher, dipper, grey wagtail, and common sandpiper.

#### Mammals

**Brown long-eared bat**, otter, brown hare, badger, fox, field vole, stoat, weasel, shrew, and whiskered, Brandt's, Natterer's, Daubenton's, noctule and common and soprano pipistrelle bats. There is the potential for red squirrel in the northern reaches of the area.

#### Fish

**Brown trout**, Atlantic salmon, sea trout, grayling, European eel, brook lamprey and sea lamprey.

#### Insects

Bees – **Bilberry bumblebee**, white-tailed bumblebee, buff-tailed bumblebee, red-tailed bumblebee, tree bumblebee, garden bumblebee, early bumblebee, heath bumblebee, common carder bee, gypsy cuckoo bumblebee, field cuckoo bumble bee and a range of honeybees, solitary bees, and wasps.

Butterflies and moths – **Green hairstreak**, large heath, small pearl-bordered fritillary, emperor moth, Manchester treble-bar, northern spinach, red twin spot carpet moth.

Invertebrates – **Chiastocheta flies, Yellow May dun**, mayflies, stoneflies, blackflies, caddis flies, dung beetles.

#### Plants

**Globeflower, juniper, hard-fern**, club mosses, round-leaved sundew, bog-rosemary, cloudberry, cotton-grasses, heath milkwort, tormentil, lousewort, bluebell, pignut, dog's mercury, primrose, ramsons, beard lichen, Wilson's filmy-fern, broad buckler-fern, lesser butterfly-orchid, eyebrights, melancholy thistle, meadow cranes-bill, yellow-rattle, quaking-grass, bird's-eye primrose, saw-wort, butterwort, common fragrant orchid, cuckooflower, marsh-marigold, ragged-Robin, wild

angelica, common spotted-orchid and northern marsh-orchid, beaked beardless-moss, dwarf bladder-moss, and violet crystalwort.

### **Fungi**

**Ballerina waxcap** (also known as pink waxcap), crimson waxcap, parrot waxcap, honey waxcap, spangled waxcap, scarlet waxcap, and scarlet elfcup.

### **Reptiles/amphibians**

Adder, common lizard and slow worm, great crested newt, palmate newt, common frog and common toad.

## 4. Drivers for change

The National Landscape has been shaped by millennia of natural processes and human activity which has helped form the biodiversity of the past and today. From the geology laid down millions of years ago influencing the soils and vegetation, to the matrix of boundaries that have demarked land ownership over the last 500 hundred years, to industrialisation and changes in land use, and more recently, in the last 80 years or so agricultural policy and changes in farming intensity and effects from climate change. All have left a mark on the area's biodiversity leading to changes in habitats and species, and in some cases, their decline.

The area's biodiversity continues to be influenced by human activity both directly such as changes in land management, and indirectly such as from changes in climate. This section sets out some of the key drivers for change, both threats and opportunities, identified in relation to nature recovery in the National Landscape. Subsequent sections set out actions that can help to address the threats and build on the opportunities.

### 4.1 Climate change, resilience and adaptation

The Forest of Bowland AONB Climate Change Adaptation Plan (2009<sup>8</sup>) sets out the range of issues facing the area's habitats and species and suggested actions to mitigate them. This plan aligns with these. Climate change can affect habitats and species in several ways. These are summarised below.

- The climate conditions of an area change with habitats and species moving to a new area where suitable conditions exist. As temperatures rise it is likely that this will be northwards and/or to higher altitudes. This could impact on species that occur at their most southern range in the National Landscape.
- Seasonal changes, where the timing of natural events such as spring blossoming changes which can lead to a lack of synchronicity between species emergence and availability of food sources.
- Changing weather patterns with warmer drier summers and warmer wetter winters likely to become the norm with more frequent extreme weather events. Heavy rainfall can cause flooding to downstream communities. Long periods of dry weather can cause droughts, leading to soil erosion, degraded peatland, wetlands and wet woodland, and reduced flows in rivers and streams and water levels in ponds. This can impact on species breeding, migration and food resources and lead to an increase in wildfires. Warmer winters can affect flower seeds that rely on sub-zero winter temperatures to germinate in spring, affecting upland hay meadows. Changes in river water temperatures can adversely affect river species.

Climate change issues affecting nature can have a negative impact on human health as healthy communities rely on well-functioning ecosystems that provide clean air, fresh water and food, can help stabilise climate and provide economic and leisure opportunities. By mitigating climate change effects on nature, human health can be better supported too.

There are an increasing number of 'nature-based solutions' that seek to mitigate some of the impacts of climate change that can also support nature recovery. These include:

- Peatland restoration and natural river restoration to slow the flow of water and downstream flooding in extreme rainfall events, improve water quality and biodiversity.
- Woodland, tree and hedge planting to lock in carbon and slow the flow of water and reduce downstream flooding in extreme rainfall events, improve water quality, biodiversity and provide shelter and shade for livestock.

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<sup>8</sup> Undergoing revision during 2023/24.



- Peatland restoration to 're-wet' peat soils and areas of deep peat to reduce the impact of extreme drought events and reduce the risk/severity of wildfires.
- Species-rich and wet grasslands with healthy soils can help store water in times of drought or heavy rainfall, filter and clean water and increases carbon capture in the soils.
- Regenerative farming techniques can increase soil health, carbon storage and rainwater infiltration.
- Restoring and creating wetlands, and floodplain restoration is a form of 'Natural Flood Management' (NFM) with habitats storing more water in times of drought or heavy rainfall, filtering and cleaning water and increasing carbon capture in the soils.

## 4.2 Farming, forestry and land management

Some Government incentives have led to land management practices that have contributed to habitat loss and species decline over the last 80 years or so. Practices include drainage of peatland and grasslands, intense burning of heather on deep peat, intensive grazing and cutting regimes, inappropriate use of slurry, inorganic fertiliser and pesticide, and plantation forestry. In the last 30 years or so, agri-environment payments have been made to a significant number of farmers and land managers across the area to help change some of these practices to enable improvement in the condition of habitats and ecosystems. Despite this, declines continue.

The support for farming is changing. A new system of farm payments is being implemented – Environmental Land Management schemes (ELM). The future farm payment schemes are seen by some to be the biggest threat to nature, and by others as the biggest opportunity for nature recovery. Until the schemes are finalised and fully rolled out it is difficult for farmers, landowners, and land managers to decide what will be best for their business model.

On one hand, people are concerned that the schemes won't support productive farms to be profitable, that schemes might be too bureaucratic with farmers poorly rewarded for environmental improvements to be attractive, and there is a lack of good quality, impartial advisors to help farmers determine what is best for the future of their business. On the other hand, people consider that ELM could incentivise more nature friendly farming that is less intensive, with farmers receiving payments for delivering a range of public goods whilst still producing food. This could help to keep farms financially viable. A significant number of farmers in the Forest of Bowland have been in agri-environment schemes for between 10-30 years, so are used to including nature in their business model.

The Government has set a target for increased tree cover in England. It provides guidance and funding to support sustainable forestry that can contribute to the delivery of wildlife rich nature recovery networks in and around the National Landscape, following the 'right tree, the right place' approach. This also provides the opportunity to soften the edges of coniferous plantations, better integrating them into the landscape.

Support for agroforestry, including wood pasture and hedgerows with trees, in the farmed landscape could be an important way to increase tree cover and carbon storage, as well as providing benefits to the farm business.

Wider economic changes could also provide opportunities for 'high nature value' (HNV) farming and regenerative farming techniques. For example, the recent energy crisis led to rising costs of inorganic fertilisers with more farmers using herbal leys to improve soil condition and vegetation growth. More people are aware of the importance of pollinators for food security and biodiversity and there is an increased interest and knowledge in soil health and biology amongst farmers.

Taking a natural capital approach can unlock opportunities to secure funding for schemes that provide multiple benefits to people as well as delivering for nature. The biggest opportunities are

linked to carbon storage (peatland and woodlands), water storage (NFM) and water quality (CSF and water companies).

There is a growing enthusiasm for farmers, landowners, and other interested organisations to work much more closely together to help recover nature. Greater cooperation between landowners, managers and conservation bodies could lead to positive management of a mosaic of climate resilient habitats and diversity of species. Various organisations work across the National Landscape and provide advice to landowners, farmers and land managers to aid with nature recovery. There is an opportunity to coordinate and streamline advisory services to simplify the offer.

There is broad recognition that farms need to reduce their carbon footprint to contribute towards Government and industry targets for net zero. In some cases, whole farm carbon audits are being carried out to identify where these carbon savings could be made, whether through regenerative farming for improved soil carbon, reduced use of inorganic fertiliser, renewable energy sources or the adoption of electric vehicles. A project is being led by the National Landscape team to try to quantify the contribution regenerative farming and improved soil management could make in this journey towards net zero.

#### **4.3 Pollution, pests, disease and invasive species**

Nature is at risk from a range of pollution, pests, disease and invasive species.

Pollution from urban areas and land management practices can lead to a loss of in river habitats and water eutrophication from pollution from nutrients/fertilisers, pesticides, novel pollutants, pet flea treatments, road and land run off. Phosphate and other pollution can cause harmful algal blooms, reducing oxygen levels in the water which can harm animals living in the water.

Bracken is increasing across the area and can be difficult to manage due to the rough and steep nature of the land it colonises. Rhododendron is an invasive species in some woodlands, and there could be an increase in non-native tree species in response to climate change adaptation and disease. Both can lead to native species being out competed. Invasive riverside species are increasing, including Himalayan balsam, Japanese knotweed, giant hogweed, mink and signal crayfish.

The heather beetle is a native species that breeds and feeds on heather. Increased populations of heather beetle in concentrated areas have led to significant heather damage in parts of the area. There are concerns that an increase in wetter areas could lead to an increase in liver fluke and threats to livestock.

Ash die-back, *Phytophthora austrocedri* (juniper) and *Phytophthora ramorum* (larch) are fungal diseases which can leading to a loss of trees and, in some locations, significant areas of woodland. Highly pathogenic avian influenza (avian flu) can impact on wild bird populations.

Deer browsing of woodland damages new growth and regeneration. Grey squirrel has outcompeted the native red squirrel in the northern reaches of the area, but populations of red squirrel remain just outside the National Landscape boundary in Clapham and the Yorkshire Dales National Park.

#### **4.4 People and development**

The National Landscape has an estimated resident population of approximately 16,000, but has over one million people living within a 30-minute journey of the area. The extensive rights of way network, open access land and river network across the area offers access to nature, provides excellent recreational opportunities, and supports the health and wellbeing of both residents and visitors. Leisure, wellbeing, and social prescribing activities can all support the rural economy, but

this needs to be carefully managed to prevent harm to nature and landscape. Issues of concern include:

- Recreational disturbance from walkers, cyclists, horse riders, motorcyclists and 4x4 vehicles. All can damage habitats and disturb species from feeding, roosting, and breeding. This is particularly the case for peatland and species-rich grassland habitats.
- Litter affects livestock and wildlife on land and in rivers.
- Development pressure to build more homes and businesses continues around key towns and villages, often on improved and semi-improved grassland.
- Historic and new in river physical barriers fragment habitats and are a barrier to trout, salmon, and eel migration. In some cases, hydro power schemes can negatively affect river ecology and species.

With so many people living close to the National Landscape and with more people aware of the importance of pollinators for food security and biodiversity, and a strong angling community, there is an excellent opportunity to raise awareness with people on the elements that make the area special, including its nature. By supporting people of all ages to actively engage with nature, more people will care for nature in the long term. Opportunities include:

- Providing information about what's special in the area, and guides to help people explore and understand the area.
- Actively engaging with people at events to raise awareness of nature and the farmed landscape.
- Volunteering, which can come in many forms, from leading guided walks, carrying out practical conservation tasks, surveys and monitoring, and developing land management skills,
- Educational activities on farms, nature reserves and other nature rich places with people of all ages.
- Supporting businesses through the Sustainable Tourism Network to share the nature on their doorstep with locals and visitors.

#### **4.5 Policy and finance**

The Government is committed to reversing the ongoing decline of biodiversity and nature and set out its vision for this in the 25 Year Environment Plan (YEP) (2018). The Environmental Improvement Plan (EIP) (2023) reviewed the YEP and sets out the plan to deliver it, with an overarching goal of improving nature. Some of the key approaches to delivery include:

30x30 - the Government is seeking to ensure that at least 30% of land, inland water, and coastal/marine areas that are particularly important for biodiversity and ecosystem functions and services are conserved and managed for biodiversity by 2030. This is often referred to as the 30x30 target. The targets in this plan will contribute towards these national targets.

Local Nature Recovery Strategies (LNRS) – these were established by England's Environment Act 2021 and are being prepared across England. They will provide a strategic tool for nature recovery, identifying opportunities to improve or create habitat at a landscape scale. LNRS will be prepared by the two County Council's that the National Landscape lies within. These will apply to Lancashire, and North Yorkshire & York. The information in this plan will feed into, and inform, the county wide strategies, ensuring the National Landscape contributes to a bigger, better and a more joined up Nature Recovery Network across the north of England.

Agri-environment schemes – as set out in the farming, forestry and land management section above, the funding for farming is changing. Between 2022 and 2027 ELM - a new system of agri-environment farm payments - is being implemented. All three levels of ELM will support more areas

for nature, with the highest level, Landscape Recovery, providing the greatest opportunity for landscape scale recovery of all habitat types.

Increased tree cover – as set out in the farming, forestry and land management section above, the Government has set targets for an increase in tree cover in England. There are concerns that the targets to plant many more trees could lead to pressure for tree planting and commercial forestry in inappropriate habitats such as species-rich grasslands, ancient grasslands, wetlands, and blanket bog. This has led to the 'right tree, right place' approach as set out in the Forest of Bowland AONB Woodland Strategy, 2021. The government's policy Keepers of Time, together with the UK Forestry Standard (and associated policy and guidance) set out the decision-making framework designed to deliver the 'right tree, right place' approach.

New sources of public and private finance could support the restoration and management of peatland and woodland creation for increased carbon storage (via Carbon markets, Woodland Carbon Code, Peatland Carbon Code) and water storage (via insurance markets and NFM) and water quality (via water utility companies). Public and private finance isn't supporting wetland creation and management at the same scale as there is a lack of data and evidence on the benefits they offer. It is anticipated that the Government's ELM schemes (particularly Countryside Stewardship Plus and Landscape Recovery) will provide greater opportunities for the creation, restoration and recovery of these habitats.

The government is keen to see more agro-forestry and woodland management and creation. Funding to achieve this is available through a range of funding options including the England Woodland Creation Offer and Grow Back Greener.

#### **4.6 Skills, data and monitoring**

There is a lack of a clear condition baseline for international, national and county wide designations and Priority Habitats on the PHI. Natural England (NE) and Lancashire County Council (LCC) are reviewing the condition of SSSIs (NE) and BHS (LCC) and encourage the development of management plans for these sites. This will help to develop the baseline and a management actions. It will take several years to complete due to the number of designated sites in the area.

There is currently a lack of survey data for species-rich grasslands that could be supporting rare fungus populations. The PHI is incomplete for wood pasture, species-rich grassland, Atlantic oak woodlands and other habitats where locally derived good quality data exists. There is a lack of understanding in the ecological network potential of rivers and data can be lacking to support the best restoration priorities.

Science and evidence could be developed to support nature focused management. There is no current biodiversity monitoring framework in place for the National Landscape. Partners currently monitor different elements, in different ways and data is held in different places. However, the Lancashire Environment Record Network and North & East Yorkshire Ecological Data Centre could both provide a central place to store records with appropriate financial support.

As farmers and land managers retire there is a need to pass on traditional management techniques, such as managing hay meadows, laying hedges and building dry stone walls, as they all contribute to farmland that is richer in nature. Equally, farmers are not foresters, and support is needed to upskill people to manage and care for trees and woodlands. More support needs to be made available following tree planting for long term maintenance and care through capital grants/agri-environment schemes.

## 5. Priorities for nature recovery

### 5.1 Key outcomes

The key outcomes the plan seeks to deliver are:

- The National Landscape is an exemplar for nature recovery in the English uplands.
- Core Nature Areas are well managed and in better condition. Core Nature Areas are international, national and local nature designations that include areas of peatland, heathland, species-rich grassland, rivers, wetlands and ancient woodland habitats.
- Priority Habitats are better managed, in better condition and are better connected to Core Nature Areas and each other. They buffer Core Nature Areas across the area.
- Connecting Farmland supports wildlife rich habitat and farms are integrating nature friendly farming into their business models, supporting sustainable farm businesses and providing stepping-stones and corridors between Core Nature Areas and Priority Habitats.
- Habitats are supporting each other, creating a mosaic of functioning ecosystems with diverse and thriving populations of species.
- Local authorities, organisations and local communities are integrating nature friendly techniques in managing and protecting open spaces in and around the National Landscape.
- The baseline condition of key habitats and baseline condition and abundance of key species is better understood.
- A monitoring framework is established, and data is being gathered regularly and consistently.
- People are better connected to nature and more people are caring for it.
- Partners are working together to implement the Plan, contributing to the delivery of the national Nature Recovery Network and Local Nature Recovery Strategies for Lancashire and North Yorkshire & York.

## 5.2 Habitat types

The six broad habitat types below represent the mosaic of habitats that are most important for developing a resilient network of functioning ecosystems. These have been selected following stakeholder engagement.

- Peatland<sup>9</sup>
- Woodland, Trees & Hedgerows
- Grasslands
- Wetlands
- Rivers & Water
- Built Environment

These broad habitats occur in the following areas. All are important to developing nature recovery networks across the mosaic of habitats.

### Core Nature Areas

The following designations form the Core Nature Areas of the nature recovery network:

- Internationally and nationally designated sites have the highest priority for nature recovery. These are Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Sites of Special Scientific Interest (SSSI).
- Locally designated wildlife sites have a high priority for nature and its recovery. These are Local Wildlife Sites (LWS) and Local Nature Reserves (LNR).

Many of these need to be in better management to enhance their condition and resilience to support greater species diversity and abundance.

### Priority Habitats

Priority Habitats outside designations are critical to expanding, restoring, buffering and connecting Core Nature Areas. These need to be in better management to enhance their condition and enable movement of species across the landscape.

### Connecting Farmland

A mosaic of all the broad habitat types, Core Nature Areas and Priority Habitats occurs across the area's farmland. More productive farmland with its improved permanent pasture (semi-improved and improved grassland) is critical in supporting ecological networks. It can do this through the provision of transitional habitats, buffers, corridors and stepping-stones between Core Nature Areas and Priority Habitats, improving grassland species mixes, and introducing more trees and hedgerows to improve biodiversity and environmental resilience more widely across the area. Transitions between habitats (known as 'ecotones') are an essential component of a wildlife rich landscape and the Connecting Farmland will be critical in providing more of these. They could include scrubby edges to woodlands, gravel beds at the edges of rivers, wood pasture leading to clough woodlands, or scrub at the edges of grassland areas.

The following sections sets out a vision, actions and management approaches for each of the six main habitat types that could help to support more resilient and functioning habitats and ecosystems across the National Landscape and beyond its boundaries.

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<sup>9</sup> Peatland includes blanket bog, upland heath, lowland heath and raised bog habitats.

### 5.2.1 Peatland

Over a quarter of the National Landscape is peatland, making up the wild open spaces and remoteness that are core to the area's identity. The Bowland Fells are the most extensive area of peatlands in the National Landscape. These support rare and endangered species associated with a very rare mosaic of upland habitats comprising some of England's best blanket bog, upland heath and raised bog. They are of international importance for biodiversity, carbon storage capacity, NFM and water quality benefits. Blanket bog and upland heath continue to be priority habitats for nature recovery, along with areas of lowland peat and peat soils that are found across the National Landscape.

Blanket Bog covers 11,012ha, almost 14% of the National Landscape. Over half of this is designated as SSSI and SPA (6,462ha). Between 2010 and 2025 1090 ha of blanket bog is under restoration. Upland Heath covers 10,000ha, 12% of the National Landscape; with over 80% protected as SSSI and SPA (8,489ha). Peatland habitats are not always easily distinguishable and vary greatly based on peat depth and vegetation from blanket bog to upland heath (both wet and dry), with *Sphagnum* rich bog with pools, to mosaics of dwarf shrubs, cotton-grass and mosses to heather dominated moorland. Together they form a mosaic across the Bowland Fells. This mosaic of habitats supports important bird populations including merlin, peregrine, short-eared owl and ring ouzel; what is thought likely to be the largest breeding colony of less black-backed gulls in the world<sup>10</sup>; and is a stronghold for hen harrier in England. The Bowland Fells upland areas are used for sheep and beef farming enterprises, alongside the management of moorland for grouse shooting.

### VISION

By 2040, the wide-open moorland character of the Bowland Fells and other moorland areas is retained with a mosaic of well-connected peatland habitats. Areas of blanket bog rich in bog mosses (*Sphagnum* species), cotton-grasses, sundews and cranberry are under restoration and providing intense seasonal colour and feeding and breeding places for the bilberry bumblebee and green hairstreak butterfly. There is a healthy and resilient population of hen harriers, providing mating 'skydancing' spectacles each spring. Ring ouzel and merlin frequent the moorland and black grouse has returned to the area. Peatland, both on the moors and in lowland areas, is managed to capture carbon, slow the flow of water and be resilient to climate change. The moorland is managed to reduce fire risk and continues to support the rural economy. Old and new clough woodlands extend across the moorland fringe, connecting with lower-level woodlands and farmland. Juniper is recovering and beginning to expand in northern parts of the National Landscape.

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<sup>10</sup> Lock, L., Donato, B., Jones, R., Macleod-Nolan, C. (2022) England's breeding seabirds: A review of the status of their breeding sites and suggested measures for their recovery. RSPB and Natural England report.



Now





2040

KEY

- [1] Heather cutting
- [2] Wooded moorland cloughs
- [3] Tours and cycling for recreation

- [4] Bare peat rewet and revegetated
- [5] Peat hags reprofiled and revegetated
- [6] Mosaic of upland heath and blanket bog species established

Illustrative only. Not all plants will flower at the same time.

Outcomes	Steps to recovery	Restoration and management approaches
<ul style="list-style-type: none"> <li>Blanket bog is under restoration to improve its hydrological integrity and allow peat to form, hold more water, support more characteristic species such as <i>Sphagnum</i> species, cotton-grasses, sundews and cranberry, vegetation growth, greater biodiversity and provide habitat for the plan's key peatland species. Carbon is being sequestered, drinking water is filtered and water flows are better managed.</li> </ul>	<ul style="list-style-type: none"> <li>Within the Bowland Fells SSSI long term management plans are in place that focus on SSSI blanket bog features being on a path to favourable condition.</li> <li>Outside the SSSI management plans are in place to support better quality blanket bog.</li> <li>The National Landscape team facilitate more surveys of peatland to understand depth and condition of blanket bog and peaty soils across the National Landscape and to help develop restoration plans in liaison with landowners.</li> <li>Agri-environment scheme grants are accessed to support the management and restoration of blanket bog.</li> <li>The National Landscape team and Lancashire Peat Partnership work with landowners to help secure large scale funding for restoration via public and private sources. This could include carbon finance as markets and schemes develop.</li> <li>The Great North Bog initiative supports training to increase contractor capacity to develop plans and deliver restoration projects on the ground.</li> </ul>	<ul style="list-style-type: none"> <li>Peat, stone and timber dams are built to restore eroding gullies and block grips.</li> <li>Grips, gullies and hags are reprofiled and revegetated.</li> <li>Bog mosses (<i>Sphagnum</i> species), cotton-grass plugs are planted and heather brash spread to help revegetate bare peat.</li> <li>No burning on blanket bog<sup>11</sup>.</li> <li>Joint training events are held with the Great North Bog initiative and local peatland restoration contractors.</li> </ul>
<ul style="list-style-type: none"> <li>A clearer understanding is reached regarding the interactions between Lesser Black-backed Gulls and blanket bog, and the practical ways in which these can be considered.</li> </ul>	<ul style="list-style-type: none"> <li>Natural England will bring key stakeholders together to discuss issues and evidence gaps, and develop a way forward.</li> </ul>	<ul style="list-style-type: none"> <li>A transparent approach to gulls and peatland is established.</li> </ul>
<ul style="list-style-type: none"> <li>Upland heath is better managed, enhanced and restored to support more characteristic species such as heather, bilberry, crowberry</li> </ul>	<ul style="list-style-type: none"> <li>Within the Bowland Fells SSSI long term management plans are in place that focus on</li> </ul>	<ul style="list-style-type: none"> <li>Managed burning on small strips of (30m x 10m) of dry heath on shallow peat.</li> </ul>

<sup>11</sup> Blanket bog is peat over 40cm deep, in accordance with burning as a tool for the restoration of upland blanket bog: Position Statement by Natural England 2020.  
Forest of Bowland Nature Recovery Plan December 2023

<p>and other dwarf shrubs, and greater diversity in the age of heather.</p>	<p>SSSI upland heath features being on a path to favourable condition.</p> <ul style="list-style-type: none"> <li>• Outside the SSSI management plans are in place to support better diversity of species and age of heather across upland heath.</li> <li>• Agri-environment scheme grants are accessed to support the management and restoration of upland heath.</li> <li>• Traditional moorland management for grouse shooting supports a more diverse age and species range of upland heath plants.</li> </ul>	<ul style="list-style-type: none"> <li>• Cutting on upland habitats to create firebreaks which should be informed by wildfire risk management plans and utilise existing features such as tracks.</li> <li>• Grazing regimes are tailored to restore species-rich areas on heathland and blanket bog. This may include reductions in sheep number and/or the introduction of cattle or pony grazing.</li> </ul>
<ul style="list-style-type: none"> <li>• Hen harrier nesting sites are protected, new nest sites are created and the population is thriving across the Bowland Fells (along with a suite of heather moorland birds, butterflies and bees).</li> </ul>	<ul style="list-style-type: none"> <li>• Information is shared on upland heath management approaches that effectively supports hen harrier breeding sites.</li> <li>• Existing management approaches to combatting illegal persecution continue.</li> </ul>	<ul style="list-style-type: none"> <li>• Upland heath is allowed to mature in more places to support the expansion of nesting sites.</li> <li>• A local management approach is established to combat and eradicate illegal persecution of hen harriers (and other raptors), including survey work, satellite tagging and monitoring, co-ordinated hen harrier nest protection and winter roost site monitoring.</li> </ul>
<ul style="list-style-type: none"> <li>• Peatland mosaic habitats are more mature, larger in extent, have more diverse species and are better connected with a mosaic of scrub to support the reintroduction of black grouse.</li> </ul>	<ul style="list-style-type: none"> <li>• Agri-environment scheme grants are accessed to support the management and restoration of mosaic habitats.</li> </ul>	<ul style="list-style-type: none"> <li>• More juniper is planted in cloughs from an appropriate northern seed source.</li> <li>• Areas in and around cloughs are fenced out to remove grazing and allow natural regeneration.</li> <li>• Grazing regimes are tailored to restore species-rich areas on upland heath and blanket bog. This may include reductions in sheep number and/or the introduction of cattle or pony grazing, and in some cases balancing seasonal grazing to reduce pressure from winter grazing.</li> </ul>

		<ul style="list-style-type: none"> <li>• Black grouse are re-introduced to help re-establish functioning leks.</li> </ul>
<ul style="list-style-type: none"> <li>• People are learning about and are safely exploring the expansive Bowland Fells.</li> </ul>	<ul style="list-style-type: none"> <li>• Partners seek opportunities to improve existing paths in areas of where the restoration of blanket bog is taking place.</li> <li>• Information on peatlands continues to be shared through walks, talks and events.</li> <li>• Agri-environment scheme grants are offered to support on-farm educational access.</li> </ul>	<ul style="list-style-type: none"> <li>• Where possible footpath alignment and surfacing is integrated in peat restoration projects to help restore blanket bog and provide improved access for people to enjoy the area.</li> <li>• Discover Bowland continues to include events linked to peatland.</li> <li>• A network of farm businesses provides educational facilities and activities.</li> </ul>
<b>Champion species</b>	hen harrier   black grouse   bilberry bumblebee	green hairstreak butterfly   juniper

### 5.2.2 Woodland, Trees and Hedgerows

Dense broadleaved woodlands radiate out from the central most part of the Bowland Fells like green ribbons. They cling to the steep sides of deeply incised cloughs and river valleys and provide a rich and diverse habitat for a considerable variety of wild plants, invertebrates birds and mammals. Wood pasture often connects with woodlands. Conifer plantations dominate Gisburn Forest, Grindleton Fell and Longridge Fell and smaller plantations are peppered across the landscape elsewhere. There is over 6,700ha of woodland in the National Landscape, covering 8% of the landscape. Of this 2,746ha is Priority Habitat deciduous woodland, with 145ha designated SSSI.

**Ancient Semi-natural Woodland (ASNW)** - accounts for 199ha (1.2% of the National Landscape). These are over 400 years old and are of considerable conservation importance. They include the National Landscape's Atlantic oak woodlands. Calf and Cragg Woods SSSI is one of the best examples of Atlantic oak woodland in the British Isles and across the world. It is also a good example of Atlantic rainforest. Ancient woodlands are dominated by oak, ash, birch and rowan, alongside wych elm and wild cherry, holly and hard fern. They are often found in cloughs on the moorland fringe. They support a rich ground flora and provide food, shelter and breeding places for birds, mammals and invertebrates. Networks of fungal mycorrhizae are integral to woodland health.

**Plantations on Ancient Woodland Sites (PAWS)** - during the 20<sup>th</sup> century, many ancient woodlands were planted with non-native species, such as conifer, to provide timber. Many PAWS may have retained some characteristic or remnant features of native woodlands and provide valuable opportunities for restoration. Around 8% of woodland in the National Landscape are PAWS<sup>12</sup>. PAWS are important for the species listed in the ASNW paragraph above and are a potential habitat for red squirrel.

**Coniferous plantations** – many of these were planted in the 20<sup>th</sup> century for timber and can be found across the National Landscape. Large scale plantations include Gisburn Forest, Longridge Fell, Knots Wood, Calder Moor and Beatrix Fell. Although not a Priority Habitat, these can be important habitats for nightjar (especially in felled areas) and crossbill.

**Wood pasture and parkland** – these can trace their roots from before the Norman conquest. The estates dating from that time are home to great examples of wood pasture and parkland with outstanding examples of open grown, ancient or veteran trees. The combination of trees and grazed pasture form a unique open habitat with high invertebrate and fungal diversity. Combined with scrub they can provide rich 'edge' habitats.

**Trees** - Individual, veteran and 'Landmark' trees can be found across the National Landscape and contribute to the unique character of the area. Information on the number and distribution of veteran trees is sparse. Most are found in parkland and along roadsides. The micro-habitats in hollowing trees, other decaying wood and rot holes support a wide range of specialised invertebrates, lichen and fungi. 'Landmark' trees are important to the landscape's character. They can be found in parkland, farmland or on a village green and may be native and non-native species.

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<sup>12</sup> Forest of Bowland AONB Woodland Strategy 2020  
Forest of Bowland Nature Recovery Plan December 2023

**Hedgerows** – native hedgerows form traditional boundaries and cultural features across the landscape. They are also important for birds, mammals and invertebrates. Although all hedgerows are not mapped, a survey covering almost 40% of the National Landscape (2001- 2007) identified over 470km of traditional boundaries required restoration work. These included significant lengths of hedgerows.

## VISION

By 2040 old and new mixed and native broadleaved woodlands flank valleys, dales and moorland fringes, forming a mosaic with other important habitats and species. Our very special Atlantic oak woodlands are well managed and are slowly expanding across the northern cloughs and steep valleys of the National Landscape. Riparian woodlands snake alongside rivers providing shade, habitat and leaf litter for fish and aquatic species. Coniferous plantations are restructured with a mix of coniferous/deciduous species with softer edges integrating them better into the landscape. Pied flycatcher, crossbill and redstart are more abundant and red squirrels are returning to the northern dales. More woodlands and plantations are managed for wood products, with timber used in local businesses and buildings. Woodlands connect with a strong matrix of in field, veteran and 'Landmark' trees and good quality hedgerows and traditional dry stone walls. These wildlife corridors criss-cross the landscape, providing shelter for wildlife and livestock, and in some cases slowing the flow of water. Our woodlands are valued for the full range of benefits they provide society including carbon storage, flood management and biodiversity.

Outcomes	Steps to recovery	Restoration and management approaches
<ul style="list-style-type: none"> <li>Existing and newly created woodlands, hedgerows, scrub and trees are sequestering carbon and are acting as sponges in the landscape holding more water in the soils and slowing the flow of water.</li> </ul>		
<ul style="list-style-type: none"> <li>More broadleaved woodlands are in better management, restored and expanded. They are better connected with greater resilience to climate change.</li> </ul>	<ul style="list-style-type: none"> <li>More woodland is managed to achieve better species mix and age diversity, and to support greater ground flora.</li> <li>Woodland and other grants are accessed to support the management and restoration of broadleaved woodland.</li> </ul>	<ul style="list-style-type: none"> <li>Broadleaved woodland: maintain a range of stand structures and silvicultural approaches. This could include veteran trees, open crown trees, occasional windthrow, understory layers, dead wood, open space and areas of natural regeneration.</li> <li>Atlantic oak woodland: better management, including appropriate levels of seasonal grazing and expansion through natural regeneration and new planting.</li> <li>Clough woodland: juniper and native broadleaved species are planted from appropriate northern seed source in cloughs. Areas in and around cloughs are fenced out to remove grazing to allow natural regeneration.</li> </ul>
<ul style="list-style-type: none"> <li>New woodlands are created to help buffer, expand and connect existing woodlands, reinforcing clough woodlands along the moorland fringes, creating riparian wooded strips and field copses and farm woodland.</li> </ul>	<ul style="list-style-type: none"> <li>Opportunities mapping is completed as part of Local Nature Recovery Strategies to help identify woodland creation opportunities.</li> <li>Woodland grants and the Woodland Carbon Code are accessed to support woodland creation, including broadleaved woodland, wood pasture and hedgerow planting.</li> </ul>	<ul style="list-style-type: none"> <li>Well-designed woodland creation will follow the 'right tree, right place' approach. Suitable mix of species using the UK Forest Standard and will not be to the detriment of other habitats.</li> <li>Bat boxes and bird boxes are installed in woodlands without old trees to provide</li> </ul>

	<ul style="list-style-type: none"> <li>• Strategic placement of new woodlands and hedgerows along and close to rivers to reduce diffuse pollution, improve water quality, provide shading for fish, and provide nature-based solutions including NFM.</li> <li>• New mechanisms are found to fund long term fencing maintenance costs which are not currently covered by existing schemes.</li> </ul>	places for bats, pied flycatcher and redstart.
<ul style="list-style-type: none"> <li>• PAWS are restored to a richer and more diverse woodland.</li> </ul>	<ul style="list-style-type: none"> <li>• Residual ancient woodland features are protected, and species composition is gradually shifted to a more semi natural composition.</li> <li>• Agri-environment scheme grants are accessed to support the management, restoration and creation of PAWS.</li> </ul>	<ul style="list-style-type: none"> <li>• PAWS are managed through thinning, retaining dead wood and by opening up patches of flora along water courses.</li> <li>• Clear felling is avoided as it may destroy important ground flora and lower plants.</li> </ul>
<ul style="list-style-type: none"> <li>• More coniferous plantation management plans include broadleaved species mixes along plantation edges, watercourses and other features of nature interest and support continuous cover forestry. They are better integrated into the landscape and are better connected to broadleaved woodlands.</li> </ul>	<ul style="list-style-type: none"> <li>• Advice is available on: <ul style="list-style-type: none"> <li>○ the restoration of PAWS to increase species diversity.</li> <li>○ diversifying species mix, the creation of open spaces, rides, transitional edges and open watercourses in plantations.</li> <li>○ ‘additional contributions’ funding available for woodland creation to maximise nature recovery, water quality and flood management, riparian buffer and people/access options.</li> </ul> </li> <li>• Woodland grants are accessed to support the management, restoration and creation of diversified plantations.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain a range of stand structures and silvicultural approaches.</li> <li>• Ensure wetland features, such as springs, flushes and bogs are protected, and opportunities are taken to restore degraded features.</li> <li>• Develop graded edge habitats and manage edges to create diverse, convoluted structure and a transitional zone between habitats.</li> <li>• Manage plantations on a continuous cover forestry approach where appropriate as an alternative to clear felling.</li> </ul>
<ul style="list-style-type: none"> <li>• Existing native hedgerows are better managed and restored to support flowering and fruiting shrubs. Gaps are filled and new native hedgerows are created to provide stronger wildlife</li> </ul>	<ul style="list-style-type: none"> <li>• The extent and opportunity for hedge management, enhancement and expansion is assessed.</li> <li>• Agri-environment scheme grants are accessed to support the management and</li> </ul>	<ul style="list-style-type: none"> <li>• Native hedgerows are left to grow up. Side cutting helps maintain them. Hedgerows are periodically laid. Flailing of hedgerows is minimised to roadside hedgerows and public rights of way.</li> </ul>



<p>corridors and better connection between hedgerows, woodlands, wood pasture and trees.</p>	<p>laying, restoration and creation of hedgerows.</p>	<ul style="list-style-type: none"> <li>• New hedgerows are left to grow for 10-15 years to allow the hedge to establish. Interim side cuts may be needed but flailing should not be used.</li> <li>• New hedges are laid after 10- 15 years. Care is taken to ensure that new hedges are not planted in key wader habitats as waders like an open habitat.</li> <li>• New 'kested' native hedgerows are planted on banks, or across the landscape to physically slow the flow of water.</li> </ul>
<ul style="list-style-type: none"> <li>• More people are trained and in hedge laying and traditional boundary skills.</li> </ul>	<ul style="list-style-type: none"> <li>• A training programme is in place that trains farmers, hedge layers, and wallers, maintains traditional skills and trains up new trainers.</li> </ul>	<ul style="list-style-type: none"> <li>• Joint training, competitions and taster events are held with Lancashire and Westmorland Hedge Laying Society and the Dry Stone Walling Association.</li> </ul>
<ul style="list-style-type: none"> <li>• More in field, hedgerow, ancient, veteran and 'Landmark' trees are found across the landscape, providing stepping stones for nature and connecting with scrub, wood pasture, hedgerows and woodland.</li> </ul>	<ul style="list-style-type: none"> <li>• Veteran, ancient and 'Landmark' trees are surveyed and mapped.</li> <li>• Information is available on managing veteran, old and 'Landmark' trees.</li> <li>• A new planting and replacement programme is running. This is particularly important in areas of parkland.</li> <li>• Agri-environment scheme grants are accessed to support the management, restoration and planting of trees outside woodlands.</li> </ul>	<ul style="list-style-type: none"> <li>• Existing veteran trees are retained and managed with suitable individuals managed to eventually take their place.</li> <li>• Appropriate native species are planted along the edges of fields and in fields. These are protected from grazing to enable their establishment.</li> </ul>
<ul style="list-style-type: none"> <li>• Wood pasture and scrubby areas are increased to provide more diverse transitions between habitats and to link woodland areas.</li> </ul>	<ul style="list-style-type: none"> <li>• Agri-environment scheme grants are accessed to support the management, restoration and creation of wood pasture and scrub planting.</li> </ul>	<ul style="list-style-type: none"> <li>• Appropriate native species mixes of scrub and wood pasture plants are planted and protected to enable their establishment.</li> <li>• Hardy cattle grazing supports wood pasture and scrub regeneration, expansion or creation schemes.</li> <li>• Alongside parkland landscapes, transitional areas between habitats, such as bracken</li> </ul>

		beds, and the edges of grassland and woodland may be appropriate areas for planting.
<b>Champion species</b>	black grouse    pied flycatcher    hard-fern	brown long-eared bat

For more detailed information on restoration and management approaches view [The Forest of Bowland AONB Woodland Strategy, 2021 and Forestry England Guidance on woodland and waders and woodland and peatland](#).

### 5.2.3 Grassland

Large areas of the National Landscape are dominated by grassland. Most of the grassland is improved or semi-improved permanent pasture, but there are critically important remnants of upland hay meadows and species-rich grassland.

**Species-rich grassland** - this vulnerable habitat is one of the area's rarest and a priority for conservation and enhancement. Species-rich grassland can include traditionally managed northern upland hay meadows and limestone grasslands used for pasture. Both are an oasis for wildflowers, rare fungi, bumblebees and other insects. Biodiversity and roadside verges, church yards, village greens and some gardens are also refuges for species-rich grassland and can provide stepping stones across the landscape. There are 220ha of species-rich grassland recorded on the PHI in the area. This comprises 143 ha of lowland meadows and 77 ha of upland meadow, a significant number of the UK's remaining upland hay meadows. The number of species rich pastures is not known. More species rich meadows and pastures exist but are not yet recorded on the PHI.

**Ancient grassland** – like species rich grassland, ancient grassland is also in decline across England and the National Landscape. Ancient grasslands are old, undisturbed and unimproved areas of grassland. These are usually natural and semi natural pastures and meadows, but occasionally they form parts of churchyards and lawns of historic buildings. They often contain fungi from the CHEGD group, these are indicators that the area has been a grassland for decades, centuries or even millennia. Once lost these grasslands are irreplaceable – they cannot be restored as the mycelium in the ground can take centuries to reestablish in newly created species rich grassland. The extent of these grasslands in the National Landscape is unknown as they are often unrecorded.

**Purple moor-grass and rush pastures** – these areas of marshy grassland are dominated by purple moor grass and are widespread on thin peaty soils of the lower moorland slopes around the Bowland Fells. 43ha is identified on the PHI. This habitat provides part of the mosaic of habitats required for successful black grouse introduction and supports wading birds such as snipe.

**Semi-improved and improved grassland** – permanent pasture covers 43,271 ha of the National Landscape. This accounts for 67% of the total farmed area.<sup>13</sup> The majority of this area is improved grassland, with a smaller amount of semi-improved grassland. These grasslands support sheep,

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<sup>13</sup> Analysis of the Economic Profile of the Forest of Bowland AONB, Rural Futures and Rural Solutions, July 2013.  
Forest of Bowland Nature Recovery Plan December 2023

cattle and dairy farming. They form part of the area's open grassland mosaic with woodlands, hedgerows, trees, dry stone walls, streams, rivers, floodplains and ponds. They are very important in supporting landscape scale habitat restoration, healthy and resilient soils and greater habitat resilience. Agri-environment schemes are a key tool in continuing to support the management and restoration of semi-improved and improved grassland for nature recovery. In the National Landscape, since 2011, over 50ha of wet grassland has been restored on semi-improved and improved grassland to support breeding waders. A further 108ha has been restored on land between the National Landscape and Yorkshire Dales National Park.

The greatest opportunities for change across semi-improved and improved grasslands, and associated farmland, are:

- Improving soil health and plant species diversity which increases biodiversity.
- Reducing fertiliser and pesticide use, reducing reliance on costly and carbon rich fuel and fertilisers.
- Creation of new habitat, especially on land that is marginal for farming, such as planting wood pasture and scrub on bracken dominated slopes.
- Restoration and creation of habitats, features and corridors, such as native hedgerows, riparian woodlands and species-rich grasslands.
- Creation of scrubby and/or woody areas, often along field margins and in less productive corners.
- Creation of wet grassland for breeding and over wintering waders in areas of semi-improved and improved grassland.
- Cattle targeted to the right places can support habitat restoration – for example their grazing habits can help remove coarse grasses and create a greater variety of structure in habitats.

## VISION

By 2040 the undulating lowland farmland provides a mosaic of hay meadows, species-rich pasture, semi-improved and improved pasture, with scrubby and mixed species margins and field boundaries of native hedgerows and dry stone walls. Fields are grazed by a range of livestock including native sheep and hardy cattle. There are more hay meadows and species-rich pastures providing breeding and feeding grounds for wading birds like curlew, lapwing, snipe and oystercatcher in spring. In summer they are filled with a multitude of flowers, including the rare globeflower, and are alive with the buzz of bees, butterflies and other insects. In autumn ancient grasslands are dotted with fungi, including the ballerina waxcap. Throughout the year all grasslands are home to a range of mammals including brown hare, hedgehog and field vole. Beyond the farmland, roadside verges, village greens, churchyards, cemeteries, school grounds and private gardens provide 'mini meadows' or 'pollinator patches' acting as stepping stones for species across the area.

Now





- 2040
- KEY
- [1] Woodland planting and in field trees
  - [2] Hedgerows and trees reinstated
  - [3] Concessionary access provided for visitors
  - [4] Scrubby edges
  - [5] Herbal leys and cattle grazing
  - [6] Species rich grassland

Illustrative only. Not all plants will flower at the same time.

Outcomes	Steps to recovery	Restoration and management approaches
<p><b>Species-rich grasslands</b></p> <ul style="list-style-type: none"> <li>Species-rich meadow, pasture and biodiversity roadside verges are conserved, enhanced and restored. They are rich in plants, fungi and invertebrates, are better connected, are storing carbon and have a greater resilience to climate change.</li> </ul>	<ul style="list-style-type: none"> <li>More traditional meadows and pastures have a management plan in place to support restoration, enhancement and management for a wide range of flowering plants, invertebrates and fungi.</li> <li>Hay meadows continue to provide a good crop for livestock.</li> <li>Coordinated farm advice is provided through the Hay Time Project and by advisors at the Rivers Trusts, National Landscape team, RSPB and Yorkshire Dales Millennium Trust enabling opportunities for species-rich meadow and pasture restoration to be identified during farm advisory visits.</li> <li>Agri-environment grants are secured for good management of species rich meadows and pastures.</li> <li>Agri-environment and other grants are secured to support restoration through ELM, Farming in Protected Landscapes and the Hay Time Project.</li> </ul>	<ul style="list-style-type: none"> <li>Adopt HNV farming systems with low inputs (no chemical fertilisers).</li> <li>Manage grazing of hay meadows and pasture to enable the right plants to grow and set seed.</li> </ul> <p>More information and advice on managing and restoring species-rich grasslands for hay meadows and pastures can be found through The Hay Time Project. This has run for a decade in the National Landscape:  <a href="https://www.forestofbowland.com/Hay-Time-Project">https://www.forestofbowland.com/Hay-Time-Project</a></p>
<ul style="list-style-type: none"> <li>More globeflowers are thriving in more places across the National Landscape.</li> </ul>	<ul style="list-style-type: none"> <li>Ancient grasslands are surveyed and mapped to understand their extent and distribution.</li> <li>LCC supports the management of biodiversity roadside verges.</li> <li>Information is available on seed collecting, propagating and planting of globeflower in meadows.</li> </ul>	<ul style="list-style-type: none"> <li>Ancient grasslands remain unimproved, undisturbed, and unplanted.</li> <li>Biodiversity verges are managed in line with LCC protocols.</li> <li>Globeflower seeds are collected, propagated and planted in species rich meadows.</li> </ul>

<ul style="list-style-type: none"> <li>• Purple moor-grass and rush pasture is restored, expanded and created along the moorland fringe. These areas are better connected with transitional habitats.</li> </ul>	<ul style="list-style-type: none"> <li>• Agri-environment and other grants are secured for good management of purple moor-grass and rush pasture management and restoration.</li> </ul>	<ul style="list-style-type: none"> <li>• Purple moor grass and rush pasture is managed in line with grant protocols and advice from NE and other advisors.</li> </ul>
<p><b>Semi-improved and improved grasslands</b></p> <ul style="list-style-type: none"> <li>• More farms are deploying HNV farming and regenerative farming systems,</li> <li>• More farms have pasture with more diverse plant species and sward, with little or no use of artificial fertilisers and slurry and herbal leys have been widely adopted.</li> <li>• Healthier soils are helping to store more carbon.</li> </ul>	<ul style="list-style-type: none"> <li>• Information and demonstration events are available for HNV farming and regenerative farming systems.</li> <li>• Silage cutting regimes adapt to enable safe nesting and fledging of curlew and other ground nesting birds. Nests are identified and protected from predators.</li> <li>• Agri-environment scheme grants are accessed to support HNV and regenerative farming systems.</li> </ul>	<ul style="list-style-type: none"> <li>• Adopt HNV farming or regenerative farming systems and techniques to support healthy soils, livestock shelter, and greater pollination and biodiversity. Techniques can include: <ul style="list-style-type: none"> <li>○ Adding herbal leys to improve soils and plant nutrients whilst reducing the use of additional fertilisers,</li> <li>○ Managing grazing that enables plants to flower and seed, ground nesting birds to nest and chicks to fledge.</li> <li>○ Diversified planting in and around fields including wood pasture, scrub and hedgerows.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• More curlews (and other wading birds) are nesting, roosting and feeding on the mosaic of inbye, wet meadows, semi-improved, improved pasture and moorland fringe farmed habitats.</li> </ul>	<ul style="list-style-type: none"> <li>• Information and advice are available to farmers and land managers on meadow and pasture restoration and creation of good quality wet areas on semi-improved and improved grassland for breeding and overwintering waders.</li> <li>• Agri-environment scheme grants are accessed to support the management, restoration and creation of habitat to support curlew and other wading birds throughout the year.</li> </ul>	<ul style="list-style-type: none"> <li>• Manage semi-improved and improved grassland to boost the availability of seeds and insects, with a more diverse sward, management of water levels in spring and winter, and the creation of wet scrapes with rush management.</li> <li>• Adapt silage cutting regimes on semi-improved and improved grassland to protect breeding wader nests, with cutting taking place later, once the chicks have fledged the nest.</li> </ul> <p>More information on managing land for breeding waders is set out at the end of the wetlands section.</p>
<p><b>Other grasslands</b></p>		

<ul style="list-style-type: none"> <li>• There are more species-rich or pollinator friendly grasslands outside farmed land.</li> </ul>	<ul style="list-style-type: none"> <li>• Information is available to local authorities, landowners, communities and individuals on managing roadside verges and public open spaces to manage, conserve and restore species-rich grasslands.</li> <li>• Information is available to support the creation of 'mini meadows' in public and community spaces and gardens.</li> <li>• Agri environment and other grants are accessed to support the management, restoration or creation of species rich grasslands outside farmland.</li> </ul>	<ul style="list-style-type: none"> <li>• Plant flowering species to provide food for pollinators.</li> <li>• Leave grass to flower before cutting.</li> <li>• Remove grass/graze after cutting.</li> <li>• Create a nature pond.</li> <li>• Plant native hedgerows and trees.</li> <li>• Install bird and bat boxes on buildings/trees.</li> </ul> <p>More information can be found at:  <a href="https://www.lancswt.org.uk/action-for-nature">https://www.lancswt.org.uk/action-for-nature</a></p>
<p><b>Champion species</b></p>	<p>Eurasian curlew      globeflower and chiastocheta flies      ballerina waxcap</p>	



#### 5.2.4 Wetlands

Our wetland habitats are mainly a mixture of upland fens, flushes and swamps, lowland fens, floodplain grazing marsh and wet grassland. The tussocky and damp swards can be rich in plants and invertebrates and provide good feeding and breeding areas for wading birds such as curlew, lapwing, snipe and oystercatcher in spring, and areas for wildfowl in winter. These habitats are often defined due to their proximity to water, topography and management.

**Upland fens, flushes and swamps** – there is 808ha of these habitats are found around the moorland fringe. Around 13% of these are designated SSSI. These habitats support high concentrations of invertebrates including craneflies, beetles and spiders.

**Lowland fens** – there are just over 300ha of lowland fens in the National Landscape, often found in small fragments across farmland. Around 10% (32ha) are designated SSSI. These habitats support high concentrations of invertebrates including craneflies, beetles and spiders.

**Floodplain grazing marsh and wet grassland** - large areas of floodplain grazing marsh are found along the wide, low lying areas of the River Lune, River Hodder and River Ribble, totalling 556ha. Wet grassland can occur alongside floodplain grazing marsh, water courses, and on improved or semi-improved grassland or species rich grassland. Floodplain grazing marsh is often drained and banked and improved for grazing. Wet grassland areas are usually managed for grazing, but some can be managed as hay meadows. Both habitats are characterised by temporary wet areas, including water filled hollows and scrapes, as well as ponds and networks of ditches. They often have tussocky areas, where grass is longer and thicker, and damp swards which provide excellent habitat for foraging and breeding waders, and shallow flooding creates ideal conditions for wildfowl during the winter.

#### VISION

By 2040 wetlands and grazing marsh are supporting functional floodplains next to rivers. Fens, swamps, and flushes provide a mosaic with wet grasslands and are better connected to river restoration projects. Damp, tussocky land, wet flushes and scrapes provide more feeding, resting and nesting places for wading birds. The call of the curlew bubbles up in the spring, mixing with those of lapwing and the drumming of snipe. Redshank have returned to the area.

<b>Outcomes</b>	<b>Steps to recovery</b>	<b>Restoration and management approaches</b>
<ul style="list-style-type: none"> <li>Fens, flushes, species-rich floodplain grazing marsh and wet grassland are maintained, created, expanded and are better connected.</li> </ul>	<ul style="list-style-type: none"> <li>Information and advice are available from Lune, Ribble and Wyre Rivers Trusts, the RSPB and National Landscape team on the management and restoration of wetlands and floodplain grazing marsh.</li> <li>Areas of wet grassland are created alongside rivers and in other grassland on farms to support waders and wildfowl and to help reduce diffuse pollution and improve water quality and provide nature-based solutions including NFM.</li> <li>Agri-environment scheme grants are accessed to support the management, restoration and creation of wetland habitats.</li> </ul>	<ul style="list-style-type: none"> <li>Restoring natural river forms enabling natural processes to reconnect rivers to floodplains.</li> <li>Maintain or restore water level management (where appropriate) including ditch networks and in field gutters to provide appropriate water levels throughout the year.</li> <li>Where appropriate, re-wet grazing marsh for breeding season habitat that is resilient to drought and heat waves exacerbated by the climate crisis.</li> <li>Create scrapes in areas of grazing marsh and wet grassland that can retain surface water during spring and summer.</li> <li>Manage grazing to produce a varied sward, and areas of bare or muddy ground.</li> <li>Monitor invasive non-native species and introduce management measures that minimise the colonisation of undesirable species.</li> </ul>
<b>Champion species</b>	Eurasian curlew	

For more advice on supporting wading birds visit:

[Re-wetting grassland for waders](#)

[Curlew Advice](#)

[Lapwing Advice](#)

[Snipe Advice](#)

### 5.2.5 Rivers & Water

Supporting the nature of rivers, streams, reservoirs, and ponds involves much more than just looking after the water of the water body itself. Water runs across a catchment – for example from a river’s headwaters in the upland peatlands, along its length draining into streams and rivers, crossing other habitats, including woodlands, grasslands and wetlands, before it drains into the sea. Ponds and reservoirs can be found across the other habitats and connect with other water bodies. The condition of the mosaic of habitats surrounding any water body is critical to its health and water quality.

**Rivers and streams** – The Rivers Brock, Calder, Conder, Hindburn, Hodder, Loud, Roeburn, Wenning and Wyre all originate in the upland core of the Bowland Fells. There are 411km of rivers covered by the Water Framework Directive. Just over half (52%) are in good ecological condition, with a further 42% in moderate condition. The headwaters provide some of the best breeding grounds in Lancashire for Atlantic salmon and brown and sea trout.

**Reservoirs** – Stocks, Barnacre, Barn Fold and Longridge Reservoirs draw water from the area's river catchments to provide good quality drinking water for people across Blackburn, Burnley, Lancaster and the Fylde. Stocks Reservoir is classified an 'Important Plant Area' by Plantlife for its rare mosses and liverworts that grow at the edges of the reservoir, establishing when the water level drops. Reservoir bunds often provide refuges for migrating birds such as whimbrels. Industrial reservoirs, ponds and leets can also provide important areas for nature.

**Ponds** – ponds used to be numerous providing watering places for livestock and arising from extracting building materials. They have been declining and are now found in a few places across farmland and woodlands. They provide habitat for a range of freshwater plants and invertebrates, feeding areas for bats, and feeding and breeding areas for voles, toads, newts and frogs. Lost ponds, or 'ghost ponds' may remain visible as damp circular marks or depressions in fields. These could be prioritised for restoration. The National Landscape is a 'Strategic Opportunity Area' (SOA) for creating ponds to support great crested newts. Since the SOA scheme started in Lancashire in December 2021, five ponds have been created in the National Landscape.

## VISION

By 2040 rivers and streams are cleaner with less barriers to fish, with the headwaters providing the best breeding grounds for salmon and trout in Lancashire. They form natural wildlife corridors, with wooded areas, trees and flower rich banks and wet meadows along their routes. In places natural processes have been restored with rivers meandering across floodplains and slowing the flow of water downstream. Ponds and reservoirs provide havens for nature across farmland, woodlands, and forests, including habitats for rare shoreline plants. Osprey, otter, water vole and kingfisher are regularly seen fishing in and around the National Landscape. Lune, Ribble and Wyre Rivers Trusts are working with landowners, managers and farmers to deliver this vision at a catchment scale. The rivers and streams of the National Landscape are supporting nature recovery in the wider landscape, and NW coast and marine environments as watercourses continue downstream to Morecambe Bay and beyond.

**Rivers and wetlands**  
**Now**



**Rivers and wetlands  
2040**



- KEY
- [1] New riparian woodland
  - [2] Woody debris in rivers
  - [3] Riparian woodland connecting with other woodland
  - [4] Wooded cloughs
  - [5] Network of hedgerows and in field trees

- [6] Scrubby edges established
- [7] Wet grassland and scrapes
- [8] Species rich grassland
- [9] Gravels and riffles in river

Illustrative only. Not all plants will flower at the same time.

<b>Outcomes</b>	<b>Steps to recovery</b>	<b>Restoration and management approaches</b>
<ul style="list-style-type: none"> <li>• River water quality and quantity are improved.</li> <li>• Hydrological networks are restored, and river habitats are better connected and healthier.</li> <li>• The rivers and streams of the National Landscape are supporting nature recovery in the NW coast and marine environment.</li> </ul>	<ul style="list-style-type: none"> <li>• Projects are developed to gain a greater understanding in the ecological network potential of rivers to enable effective restoration.</li> <li>• Strategic placement of new woodlands, wetlands and hedgerows along and close to rivers reduces diffuse pollution, improves water quality, provides shading for fish, and provides nature-based solutions including NFM.</li> <li>• CSF provides advice to farmers on a range of nature friendly approaches to managing and restoring healthy water courses and water bodies.</li> <li>• Agri-environment scheme grants are accessed to support management and restoration of healthy water courses and water bodies.</li> <li>• Information is available on the options to manage and restore riverbanks for woodland (native species) and species-rich grassland.</li> <li>• Information is available on invasive non-native species and approaches to remove them, including Himalayan balsam, Japanese knotweed, giant hogweed and rhododendron growing close to watercourses.</li> <li>• Lune, Ribble and Wyre Catchment Partnerships and Rivers Trust's secure funding to: <ul style="list-style-type: none"> <li>○ bring partners and communities together to deliver projects to improve river health.</li> <li>○ Support farmers to work together to improve farm infrastructure, reduce phosphate levels, and increase NFM measures in catchments.</li> <li>○ Provide advice on, and deliver, ways to minimise pollution with farmers, land managers, communities, businesses and visitors.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Planting and restoring hedgerows to slow the flow of water.</li> <li>• Planting riparian woodlands to provide shade to fish.</li> <li>• Building leaky dams.</li> <li>• Fenced and unfenced river buffers are created.</li> <li>• Creating other habitats that support natural functions and forms of rivers, such as wet grassland and floodplain grazing marsh.</li> <li>• Weirs and other artificial structures in rivers are removed and riverbanks restored.</li> <li>• Fish passages are installed where structures can't be removed.</li> <li>• Canalised and modified rivers are restored to natural forms enabling natural processes including the reconnection to active floodplains.</li> <li>• Blanket bog is under restoration (see Peatland section).</li> <li>• Invasive non-native species are controlled or eradicated across catchments and in water bodies.</li> </ul>

	<ul style="list-style-type: none"> <li>○ Provide advice on opportunities to plant trees along watercourses (based on 'right tree, right place') is available to farmers, land managers, communities, businesses and visitors. See woodland section for more information on this.</li> <li>○ Deliver habitat improvements to rivers, and habitats that support improved rivers and water quality.</li> <li>○ Continue monitoring mayfly populations to determine water quality.</li> <li>○ Implement projects to remove in river structures such as weirs to enable species migration, habitat connectivity and for natural channels and features to form.</li> <li>● United Utilities Catchment Systems Thinking (CaST) approach is deployed in multiple catchments across the area.</li> </ul>	
<ul style="list-style-type: none"> <li>● More ponds are restored or created in farmland.</li> </ul>	<ul style="list-style-type: none"> <li>● Research identifies the number of ponds in the National Landscape now and in 1935 and identifies a target for restoring and creating more ponds in farmland.</li> <li>● Lancashire Wildlife Trust supports the delivery of more ponds through Natural England's Great Crested Newt (GCN) District Level Licensing (DLL) scheme.</li> <li>● Agri-environment scheme grants are accessed to support the management, restoration and creation of ponds.</li> </ul>	<ul style="list-style-type: none"> <li>● Ponds are maintained, restored and created in farmland.</li> </ul>
<ul style="list-style-type: none"> <li>● More people are caring for and enjoying rivers, stream, ponds and lakes.</li> </ul>	<ul style="list-style-type: none"> <li>● Rivers Trusts and other partners develop people facing projects that raise awareness of the importance of clean, connected rivers and watercourses and engaged people in caring for the rivers and water bodies in the Lune, Ribble and Wyre Catchments.</li> </ul>	<ul style="list-style-type: none"> <li>● Volunteering opportunities are in place to reduce Himalayan balsam, Japanese knotweed, giant hogweed, and rhododendron along rivers and water bodies.</li> </ul>

		<ul style="list-style-type: none"> <li>• People are volunteering in river cleans, monitoring species and other activities that promote river health.</li> </ul>
<b>Champion species</b>	brown trout   yellow may dun	

### 5.2.6 Built Environment

**Dry stone walls** – dry stone walls criss-cross the landscape, providing stock-proof boundaries to fields, fells, roads and paths. Some are no longer required for livestock management but remain strong features in the landscape. Walls are built to shed water and are full of nooks and crannies that can provide a valuable habitat to a range of invertebrates and mosses and lichens. They provide cover and hunting grounds for mammals, amphibians, and reptiles, and provide corridors and connections with other habitats across the landscape.

**Traditional buildings**– traditional houses, farmhouses, cottages, churches, vernacular barns, other buildings, lime kilns and stone bridges can all provide places for wildlife. These could be gaps in timber soffits under the eaves, in roofs where there are gaps and openings, and in nooks and crannies in walls, and in open chimneys. Swifts, swallows, house martins and bats often roost and nest in the gaps in traditional buildings. When buildings are renovated, these important gaps can be closed up, removing important habitat. Simple steps, such as installing bird and bat boxes on the outside of the buildings can replace these nesting or roosting places for wildlife.

**New buildings** – new buildings have the potential to provide options for birds and bats. It is relatively easy to provide nest sites and roosts for birds and bats by installing bird and bat boxes to the exterior of the building. Some outdoor lighting can produce light pollution and reduce dark places for nocturnal wildlife to live, breed and feed. Careful placement of exterior lighting and low light levels can reduce light pollution.

**Gardens** - gardens can be a valuable resource for wildlife and can provide stepping stones across towns and villages and connect with nearby farmland. Everyone with a garden or outside space could encourage wildlife by choosing flowering plants that pollinators can feed on, providing a pond for amphibians, and a whole range of invertebrates, and homes for small mammals. Native hedgerows along garden boundaries can connect with hedgerows in the wider countryside.

**Disused quarries** – disused quarries and lead mines that have laid dormant for decades can be recolonised by nature. Some are now LNR (including Cross Hill Quarry and Salthill Quarry near Clitheroe) with a mosaic of species-rich grasslands and woodlands providing habitats for a diverse range of birds, bats, butterflies, mammals, plants (including many types of wildflowers) and invertebrates. They are also rich in geology and fossils.

### VISION

By 2040, local communities and people are providing space for nature in public spaces, school grounds, churchyards, village greens, community places and in their gardens, yards and terraces, and on their homes. New developments and restored traditional buildings have swift boxes and bat boxes, low levels of lighting and native garden boundaries that connect with hedgerows, trees and dry stone walls at the countryside edge. More buildings and trees have bird and bat boxes. Disused quarries and industrial areas are havens for nature. People, skilled in traditional techniques, maintain hedges, walls and vernacular buildings, while people from all backgrounds are connecting to nature, exploring nature rich places responsibly, and caring for the area’s wildlife.



<b>Outcomes</b>	<b>Steps to recovery</b>	<b>Restoration and management approaches</b>
<ul style="list-style-type: none"> <li>• Dry stone walls connect with hedgerows to create corridors.</li> </ul>	<ul style="list-style-type: none"> <li>• Agri-environment scheme grants are accessed to support the management and restoration of dry stone walls. Advice, grants, training and skilled people are available to support the restoration and maintenance of dry stone walls.</li> <li>• The National Landscape team works together with the Dry Stone Walling Association and local training providers to help train more people in traditional boundary skills.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintaining, repairing and restoring dry stone walls.</li> <li>• Dry stone wall training to upskill people in traditional dry stone walling techniques.</li> </ul>
<ul style="list-style-type: none"> <li>• Buildings, trees, hedgerows and open spaces in the urban environment provide roosting and breeding sites for swifts, other birds and bats.</li> </ul>	<ul style="list-style-type: none"> <li>• Planning authorities work with developers to encourage buildings and their landscaping to support nature and to secure BNG within or adjacent to new development sites, where applicable.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintaining access to nesting sites or installing swift and bat boxes when traditional buildings are restored.</li> <li>• Installing bat boxes and bird boxes on buildings and in trees.</li> <li>• Planting native trees and hedgerows in gardens, open spaces and along curtilages that connect with open countryside and farmland.</li> </ul>
<ul style="list-style-type: none"> <li>• Open spaces are managed for nature as well as recreation.</li> </ul>	<ul style="list-style-type: none"> <li>• National Landscape partners provide advice to communities, businesses, education and religious organisations, and others to encourage nature friendly management techniques.</li> </ul>	<ul style="list-style-type: none"> <li>• Planting pollinator friendly native flowering plants and 'mini meadows' in gardens and open spaces and the fringes of towns and villages.</li> </ul>
<ul style="list-style-type: none"> <li>• More people of all ages are engaged and inspired in the nature and wildlife that can be encouraged in villages and towns.</li> </ul>	<ul style="list-style-type: none"> <li>• National Landscape partners provide advice and events for communities, businesses, organisations and individuals to encourage creating space for nature.</li> </ul>	<ul style="list-style-type: none"> <li>• Discover Bowland events provide nature rich experiences.</li> <li>• Partners provide information and events including: <a href="#">Lancashire Wildlife Trust - action-for-nature</a> <a href="#">RSPB – nature in your garden</a></li> </ul>
<b>Champion species</b>	swift	

### 5.2.7 Transitional areas

Transitional areas between two adjoining habitats are commonly known as ecotones. These transitions play a crucial role across the National Landscape, providing a gradual change in habitats, connecting, buffering and enabling habitats to expand and regenerate. They are particularly important as part of the mosaic of habitats found across the Connecting Farmland. They are found in areas where two different habitats meet such as woodland and grassland, enabling a gradual change in vegetation between the habitats. This can allow subtle changes in vegetation structure and composition that can support a greater abundance and diversity of native species in the transitional areas and the neighbouring habitats. They can often provide species with requirements for nesting, shelter and sources of food.

#### Types of transitional habitats

**Scrub** - is an important transitional habitat. It is often temporary as it is a successional habitat, for example growing at the edge of woodland and grassland, but over time becoming more wooded as shrubs mature. In the past scrub would have been used for a range of things, including fuel, animal fodder, tools, medicine, wine making and furniture making. But as traditional practices have declined some areas have been removed to allow for more intensive agricultural practices, or scrub has become woodland. It is often found between open areas such as grassland, wetland or peatland and planted areas such as woodland, carr woodland or clough woodland. It can consist of brambles and nettles, scattered hawthorn, blackthorn or hazel bushes, gorse or other hedgerow species, or can be a dense thicket close to a woodland. Scrub can be an important element in the natural regeneration of woodlands as trees can grow up if protected by brambles and thorny shrubs. Scrub can be managed on field corners, alongside woodland edges and hedgerows, on land that it difficult to graze and next to water bodies and water courses. Scrub mosaics need little management, apart from some grazing and browsing by livestock and wildlife to keep a diverse structure with varied heights and species, to maintain its value to wildlife.

**Bare ground or scree** – these are both important transitional habitats associated with grassland and heath. Bare ground and scree can support lichen and mosses, and early coloniser plants providing food, nectar and pollen for a range of invertebrates. It can be managed by being left undisturbed. Patches of south facing bare ground are essential for ground burrowing invertebrates.

**Wetland transitions** - this transitional habitat can be associated with grassland and water bodies and water courses, grassland and peatland, mosses and fens, and grassland and woodland. Draw down zones of lakes and rivers enable early colonising species to develop. In some cases, for example at Stocks Reservoir, rare mosses and liverworts are found growing at the margins of the reservoir when shoreline mud is exposed following the draw down of water. This provides opportunities for the bryophytes to establish when conditions are appropriate.

**Unimproved grassland** - areas of bracken with an understory of plants can be a transitional area at the edges of grassland, woodland or moorland. If left unmanaged bracken can easily outcompete grassland species, in which case it is no longer a transitional habitat. Planting scrub and wood pasture in areas of transitional bracken could help reduce bracken dominance and support a more diverse understory.

**Riparian gravels** – these provide transitional areas at the edges of water bodies and water courses, through shingle banks and gravel bars. These are often used by ground nesting birds, such as little ringed plover. Underwater riparian gravels can provide breeding habitat for aquatic species, and in particular Atlantic salmon and brown trout.

**Ponds/scrapes** – these are transitional areas in themselves, often drying out in summer and filling up in wetter seasons and provide different functions throughout the year. They support a range of aquatic, invertebrate and plant species that live in and around the ponds/scrapes. These in turn support a range of birds and mammals that feed on the species that rely on the pond.

## 5.3 Species

There are 14 Champion Species at the heart of the Nature Recovery Plan. These species were selected following stakeholder engagement and represent:

- Species of conservation concern that are rare or threatened and consequently have been identified as:
  - Species of Principal Importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act, or
  - Species on the UK Birds of Conservation Concern Red List or
  - Nationally or locally rare or threatened species. This includes black grouse, where the Bowland Fells have been identified as a nationally important expansion area for reintroduction.
- Charismatic species that are distinctive and provide inspiration for people to care for nature.
- Indicator species that can show that an ecosystem or habitat is healthy.

Although only 14 species have been identified as Champion Species, any work that seeks to sustain resilient, healthy and better-connected habitats and ecosystems will support the full range of species found throughout the National Landscape, providing more space for them to expand and thrive.

### 5.3.1 Champion species

- Eurasian curlew<sup>14</sup> (*Numenius arquata*)
- Hen harrier<sup>14</sup> (*Circus cyaneus*)
- Black grouse<sup>14</sup> (*Lyrurus tetrix*)
- Swift<sup>15</sup> (*Apus apus*)
- Pied flycatcher (*Ficedula hypoleuca*)
- Juniper<sup>14</sup> (*Juniperus*)
- Globeflower (*Trollius europaeus*) and associated Chistocheta flies
- Hard-fern (*Blechnum spicant*)
- Ballerina waxcap (*Porpolomopsis calyptriformis*)
- Brown long-eared bat (*Plecotus auratu*)
- Brown trout (*Salmo trutta*)
- Yellow May dun (*Heptagenia sulphurea*)
- Bilberry bumblebee (*Bombus monticola*)
- Green hairstreak butterfly (*Callophrys rubi*)

Twelve of the species (all but Hard-fern and Yellow May dun) are either S41 species on the IUCN Red list or species on the UK Birds of Conservation Concern Red List or are a nationally or locally rare or threatened species.

If you would like to find out how you could help support these species, please contact the National Landscape team.

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<sup>14</sup> S41 species on IUCN red list

<sup>15</sup> UK Birds of Conservation Concern Red List



### Eurasian curlew

The Forest of Bowland National Landscape is critically important for curlews and maintaining curlew populations remains a high priority for the National Landscape Partnership. In 2023, there were 114 nesting pairs in the Forest of Bowland with the population appearing to remain stable. However, more action is needed for this species to recover and thrive, as they are globally under threat and populations continue to decline nationally. Unenclosed peatland habitats and adjacent semi-improved grassland pastures and meadows are important areas for breeding populations, but these habitats can be vulnerable to climate change. These habitats need to be more abundant and appropriately managed for populations to thrive in the National Landscape.



### Hen harrier

This iconic upland bird is exceptionally rare, and steps have been taken nationally to increase its population. The National Landscape is one of the most important areas in England for breeding hen harriers. In 2023 around 22% of the breeding population nested in the area. Land owned by the water utility company, United Utilities, is a stronghold for breeding pairs. In 2022, 39 chicks fledged from 11 nests. With an additional 3 nests on other moorland estates, it was the first time in over 10 years that the Bowland Fells SPA has reached the minimum number of breeding pairs for which it was designated. For the population to thrive, more of the Bowland Fells need to provide suitable habitat and incidences of persecution must be reduced and ultimately cease in the wider countryside.



### Black grouse

Black grouse were once widespread in the Forest of Bowland, connected with a larger population in the Yorkshire Dales, but by the mid-1990s they were considered locally extinct. Today, sightings of single birds in the area are occasionally reported, but no leks have been re-established. They thrive in areas with a mosaic of heather moorland, in-bye and woodland or scattered tree habitats. National projects have been supporting their recovery, with numbers increasing or stable in the North Pennines and Yorkshire Dales over recent years. In 2019, the Bowland Fells were identified as an area to promote expansion of black grouse through continuing habitat enhancement on moorland fringe via agri-environment

schemes. The restoration of this mosaic of habitats could support species translocation before 2030.<sup>16</sup>

### Swift



The swift is a medium-sized bird that sleeps, eats, bathes and mates on the wing. They rarely touch the ground. Swifts are summer visitors to the National Landscape and can be seen feeding over fields and rivers, displaying their scythe-like wings and short, forked tail. Swifts pair for life and return to the same site each year to breed. Swifts like to live in old buildings, squeezing through small gaps to nest in roofs. As old buildings are renovated swift nest sites are lost. They are now globally threatened and nationally in decline. Climate change and severe weather events across Europe may affect migratory patterns. Installing swift bricks or nest boxes in renovated or new buildings could help reverse declines.

### Pied flycatcher



The pied flycatcher can be found in Forest of Bowland's ancient and Atlantic oak woodlands. Nationally they are in decline. It is a small, flycatching bird, slightly smaller than a house sparrow. It arrives in summer to breed. Each autumn it returns to over winter in West Africa. Increased connectivity between Atlantic oak woodlands and other mature woodlands is needed to support their expansion.

### Juniper



Juniper is a native moorland coniferous shrub. In Bowland it is restricted to just a few sites in the northern fells of the National Landscape and is in decline. Cragg Wood in Littledale is one of the last refuges for juniper. None of the colonies appear to be producing new seedlings. This could be due to the *Phytophthora* disease and grazing. The existing populations are aging, Grazing management could help support regeneration along with new planting.

### Globeflower (and associated *Chiastocheta* flies)



Once abundant in Bowland, the globeflower has been declining and is now found at just a few sites of species rich grassland within the National Landscape. It is a spectacular species found in limey damp patches within grasslands. The Bowland Hay Time Project is facilitating the propagation of globeflower seedlings from local sustainably sourced seed.

<sup>16</sup> A Strategic Approach to Delivering Black Grouse Conservation Targets in Northern England, Updated 2020, The Game and Wildlife Conservation Trust.

These have been successfully planted out at carefully chosen sites across the National Landscape. This work needs to continue at more sites in and around the National Landscape.

### **Hard-fern**



Hard-fern is a hardy evergreen fern that can be found in the National Landscape's ancient and Atlantic oak woodlands. It is sometimes called 'deer fern' as deer eat it in winter. It is found in damp, shady gorges, on banks, rocks, and walls. It is easy to spot with feather like leathery foliage with spotty undersides. These turn orange/brown when the spores are ready to erupt. It is not under threat and is a good indicator of Atlantic oak woodlands. It can be bought in garden centres and planted in gardens.

### **Ballerina waxcap**



This pale pink fungus is rare and vulnerable to extinction due to declines in ancient grasslands across the National Landscape. It is found in old, undisturbed and unimproved grassland. These are usually natural and semi natural pastures and meadows, but occasionally it can be found in churchyards and lawns of historic buildings. Its pink conical cap and white stem appear in late summer/autumn. As the cap opens it curls upwards giving the appearance of a ballerina tutu. The mycelium it relies on takes centuries to develop. Retaining ancient grasslands is the only way to support its conservation and expansion.

### **Brown long-eared bat**



The brown long-eared bat is a protected species in the UK along with their roosts. It is a medium sized bat with huge ears that are almost as long as its body. It has a slow fluttery flight. They roost in holes in trees, old buildings, lime kilns and caves and feed at night along hedgerows, woodlands and in parks and gardens. It is not under threat nationally, but changes in woodland management, barn conversions and urban development can have a negative impact on them. Management of ancient and mature woodlands and traditional buildings and features can help provide habitat. The introduction of bat boxes in new woodlands would also help support the brown long-eared bat.

### **Brown trout**



Native wild brown trout can be found in unpolluted rivers and streams with cold water and gravel areas for spawning. They are often found in the headwaters of the main rivers across the National Landscape. They primarily feed on invertebrates that live in the water or drop on to the water from trees and plants on riverbanks. They have been in decline across the National Landscape since 2014 and are vulnerable to changes in water flows and periods of

drought. They are a useful indicator that the water quality, quantity and habitat of a river or stream is good. The Rivers Trusts are working with communities to remove in river structures and enable rivers to re-naturalise to help support the recovery of brown trout.

### **Yellow May Dun**



The Yellow May can be found in unpolluted rivers and streams with gravel and vegetation to support their lifecycle. It is sensitive to pollution and is an indicator of good water quality. It is a favoured food of brown trout. They are easily identified from the yellow body and transparent lacy wings and two long tails. The flies hatch from May to July, often emerging from mid-morning but on bright sunny days most flies hatch at dusk. They can appear to glow bright yellow when the sun hits them.

### **Bilberry bumblebee**



The bilberry bumblebee is distinctive, with extensive red marking over its abdomen. It is nationally scarce and in serious decline. It relies on peatland habitat that is susceptible to climate change. Queen bees feed almost exclusively on bilberry stands found across moorlands. However, a mosaic of habitats including heath and species-rich grasslands are needed for the worker bees to forage on heathers, clovers, brambles, and thistles. It can be vulnerable to loss of species rich grassland along the moorland fringe.

### **Green hairstreak butterfly**



This eye-catching green butterfly is widespread across England but has undergone local losses in some parts of the UK. It lives and feeds on upland heath habitat that can be vulnerable to climate change and land management change. It can be found feeding on plants in species-rich grassland, blanket bog and heathland in the National Landscape. Restoration of these habitats could support an increase in colonies across the area.

## **6.0 Connecting people and nature**

A key outcome of the plan is for people to be better connected to nature. The National Landscape team and partners are working with communities across Lancashire and North Yorkshire and are committed to connecting more people to nature.

The Forest of Bowland is a place where people can experience and be uplifted by nature, a place where people can know the feeling of being immersed in and utterly captivated by nature. There is an inspiring story to share and plenty of opportunities to engage people when it comes to nature and its recovery. There is the potential to improve access, encourage more people to understand the area's nature, and for more people of all ages to get involved in caring for nature. There is a



power in connecting with nature that can support the health and wellbeing of communities in and around the National Landscape, helping people to feel better, whilst enhancing the life support functions that resilient ecosystems provide.

The National Landscape's Connecting People and Nature programme, in partnership with Ernest Cook Trust and Lancashire and South Cumbria NHS Foundation Trust, is already showing people that connecting with nature can be for everyone. It is inspiring people to feel happier and healthier and foster a lifelong connection with nature. It is connecting through everyday nature, as well as some of the areas rarer and scarcer nature. Partners including LWT, Lune, Ribble & Wyre Rivers Trusts, RSPB, Yorkshire Dales Millennium Trust, Friends of Bowland, farm businesses in the Forest of Bowland Farmer Group and Forest of Bowland Sustainable Tourism Network are also connecting people with nature through a range of projects and activities. For example, LWT is one partner that is committed to supporting 1 in 4 people in Lancashire to take action for nature by 2030. It is working alongside the National Landscape's team to build support and engage with people, communities, businesses, organisations and LAs in the area to get nature recovering in ever more and creative ways.

The plan seeks to build on the existing programmes, projects and activities to engage more communities both within the National Landscape and across other parts of Lancashire and North Yorkshire in a range of ways. Some of these are set out below.

Countryside access – this includes maintaining and improving the Public Rights of Way network and signage, promoting routes and guided walks, and sharing information on nature rich walks on websites and social media. To ensure this is sustainable, new access routes might need to be provided or existing routes enhanced, particularly in places with high nature value to ensure people and their dogs don't disturb sensitive sites and species. Sharing the Countryside Code can encourage people to explore the landscape in a responsible and sensitive way.

Discovering and learning – there are many ways that people can get closer to nature this way:

- Activities in nature can encourage people to discover new things and learn more about the area's nature. This could include activities such as guided farm or river walks, art classes in nature, foraging events, mindfulness sessions, toddler groups that encourage play and exploration in nature. The annual Festival Bowland programme of events provides many opportunities for people to connect with nature.
- Volunteering to carry out practical conservation tasks from hedge laying to tree planting, to meadow planting and dry stone walling, to helping with monitoring/citizen's science through species and habitat surveys, access surveys, and bioblitzes.
- Outdoor learning with teachers, children and adults. The Connecting People and Nature programme is training teachers to improve nature in school grounds, take the curriculum outdoors and take children on trips to farms and nature rich places in and around the National Landscape. It is also training community and group leaders to enable them to lead activities in nature for people in their local communities.

Training - People that work the land have knowledge, skills and experience that should be shared. There is a need to unlock knowledge from farmers and land managers and support skills development with them and others in the community to help with delivery. Skills include hedge laying, dry stone walling, woodland, upland heath and grassland management. The Farming in Protected Landscapes (FiPL) programme is supporting the Forest of Bowland Farmer Group to help share skills and knowledge. More funding will be needed to support the group in the long term and to provide skills programmes.

Networks – The Forest of Bowland National Landscape Sustainable Tourism Business Network brings businesses together to engage visitors more positively with the things that make the area special, including its nature and wildlife, through walks, bike rides, activities and farms that have diversified to secure an income from visitors. The FiPL team is working with farmers and land managers to look for new opportunities for creating concessionary routes across the landscape to connect more people to nature. Recreational groups, such as angling clubs, walking groups, horse riding and cycling clubs, and natural history groups are important local networks that could all help to connect more people with nature.

## 7. Targets and monitoring

### 7.1 Targets

The following ambitious targets have been set to help deliver the Nature Recovery Plan vision by 2040. These targets will contribute to the Government's commitment to have 30% of England's terrestrial, inland water and coastal and marine areas being effectively conserved and managed for nature by 2030.<sup>17</sup> They seek to go beyond this achieving 35-40% of land being conserved and managed for nature by 2040. They will only be achieved through long term commitments and sufficient resources and funding being available to farmers, land managers, landowners, advisors and National Landscape partner bodies. Defra's new ELM schemes, especially the Countryside Stewardship Plus and Landscape Recovery schemes, will be critical to delivery. These need to be long term and funding rates need to be set at a level that support farmers to effectively deliver the full range of public goods.

34% of the AONB is designated for nature or identified as a Priority Habitat. From data provided by Natural England in 2022 it is thought that 22.5%<sup>18</sup> of the National Landscape is currently being managed for nature and is in a good condition or moving towards a good condition. It should be noted that the percentage of land meeting this target could be higher as the data used relied on survey information that is up to 10 years old.

To achieve and exceed a 30x30 target changes would be needed across the National Landscape's Core Areas, Priority Habitats and Connecting Farmland. The targets below seek to achieve this:

By 2040:

#### Core Nature Areas

- 75% of SSSIs will be in good<sup>19</sup> condition.
- All LWS will have been re-surveyed. 75% will be in better management.
- 2,400ha of peatland in the Bowland Fells SSSI is restored or undergoing restoration.<sup>20</sup>

#### Priority Habitats and Connecting Farmland

- 80% of the National Landscape will be delivering nature friendly and/or regenerative farming<sup>21</sup>.
- 75% of waters to have good ecological condition.
- Species diversity and abundance is improved in 80% of rivers.

#### To support this:

- 2,000ha of peatland outside the Bowland Fells SSSI is commencing restoration.
- 900ha of meadow and species-rich pasture (outside SSSIs) is created, restored or undergoing restoration.
- 1,000ha of wet grassland is created, restored or undergoing restoration for wading birds.
- More floodplain is reconnected to rivers and wetlands. Target to be confirmed.

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<sup>17</sup> Land that is in long-term management for nature conservation

<sup>18</sup> Data from NE Monitoring Environmental Outcomes 2022 indicated that 22.5% of land in the AONB was either SSSI in favourable/favourable recovering condition or Non SSSI PHI in a long term agri-environment scheme.

<sup>19</sup> Good condition is Natural England's 'Favourable' condition status. Due to the long term nature for the recovery of some habitats, particularly blanket bog, SSSI land where suitable restoration management has or is taking place and is in 'unfavourable recovering' status will count towards the target.

<sup>20</sup> Due to the long time scales needed to restore blanket bog, it is considered unlikely that this will be in a favourable condition by 2040. The ambition is to ensure the land has a management plan in place and that work is continuing to restore the habitats.

<sup>21</sup> This is likely to be achieved through land manager/owners and farmers being under agri-environment schemes. This will include all Environmental Stewardship and Countryside Stewardship Agreements and all new and emerging Environmental Land Management Schemes. It could also be achieved through High Nature Value and regenerative farming approaches.

- 34,500ha of permanent pasture is being managed using nature friendly and/or regenerative farming techniques.
- 5,300ha of woodland is being actively managed to increase its wildlife value.
- 750ha of woodland will be created ('right tree, right place') or allowed to regenerate naturally, with a particular focus on clough and riparian planting.
- Atlantic oak woodland is expanded in area. Target to be confirmed following survey of current extent.
- 200km of native hedgerows are restored, enhanced or created.
- Veteran, ancient and other in field trees have new succession trees planted alongside them. Target to be confirmed following survey of current number.
- Wood pasture and parkland are expanded. Target to be confirmed following survey to establish current extent.

## Species

Species action plans will be published for 12 nationally and locally rare or threatened<sup>22</sup> Champion Species. These are:

- |                   |                    |                              |
|-------------------|--------------------|------------------------------|
| • Eurasian curlew | • Pied flycatcher  | • Brown long-eared bat       |
| • Hen harrier     | • Juniper          | • Brown trout                |
| • Black grouse    | • Globeflower      | • Bilberry bumblebee         |
| • Swift           | • Ballerina waxcap | • Green hairstreak butterfly |

Hard-fern and Yellow May dun are not included as they are neither rare nor threatened.

Species action plans will consider the potential effects of climate change for curlew, hen harrier, black grouse, globeflower, ballerina waxcap, bilberry bumblebee, green hairstreak and brown trout as they depend on habitats that are identified as vulnerable to climate change in the AONB Climate Change Adaptation and Mitigation Plan (2009).

## 7.2 Monitoring

A nature recovery monitoring framework will be developed in 2023/24 to measure the success of the targets of the Nature Recovery Plan for habitats and species. The framework will align with Natural England's Monitoring Outcome Framework and will take into account monitoring protocols in the National Landscape Management Plan and Climate Change Adaptation and Mitigation Plan.

Effective monitoring will be reliant on easily accessible nationally held data and evidence, supplemented by local environmental data collated and managed by local record centres. It will also need the active involvement of National Landscape partners as many of these are collecting data on behalf of the Partnership.

There are some limitations to the existing baseline data and steps are being taken to improve this. Some of the issues that need addressing are:

- Up-to-date baseline condition information for designated nature conservation sites is incomplete across the National Landscape. Baseline data is over a decade old in some cases. There is a need for SSSI condition assessments to be carried out, along with a resurvey of LWS to confirm the baseline of the plan's Core Nature Areas. Key partners commenced this work in 2022 and data will be fed into the nature recovery plan's monitoring framework. Periodic reviews of SSSI condition will need to be carried out over the lifetime of this plan.

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<sup>22</sup> S41 species on the IUCN Red list or nationally or locally rare or threatened species.

- PHI mapping does not include up to date mapping for all the National Landscape's Priority Habitats, particularly where there is locally derived/collated data. Action is needed to ensure that data collected by partners is provided to Natural England for inclusion in the national inventory.
- Current monitoring of the distribution and abundance of Champion Species and other species found in the National Landscape is limited. Some species are monitored annually by some partner organisations and local natural history groups. Some of this data will be held by local record centres, but some will be held by the monitoring organisation. To help improve future monitoring of species the Champion Species Action Plans will include a monitoring approach for each species. These will be incorporated into the nature recovery monitoring framework.

The Nature Recovery Plan will be reviewed every five years (ideally concurrently with the review of the National Landscape Management Plan).

## 8. Delivering the Plan

### 8.1 Principles for delivery

The following principles will support nature recovery networks and a more nature rich National Landscape:

#### Bigger

- Working at a landscape scale and going beyond the National Landscape's boundaries.
- Increasing the size of and creating nature rich buffers around Core Nature Areas.
- Allowing natural processes to recover and restoring functioning ecosystems.

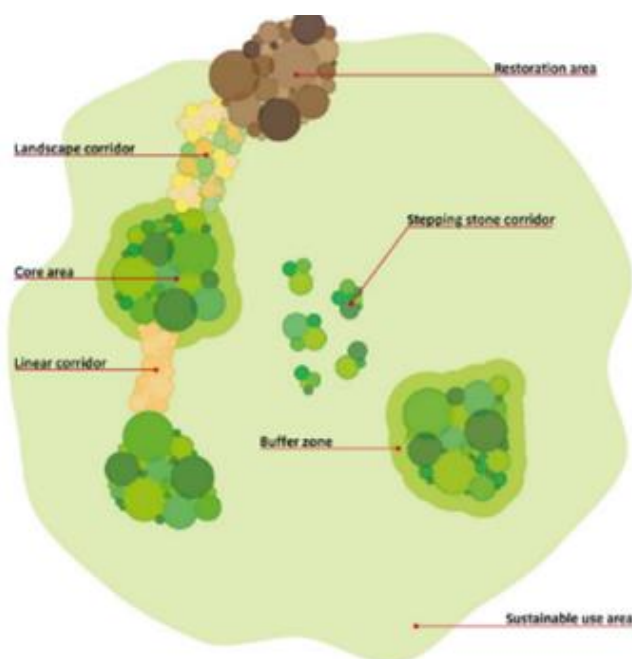
#### Better

- Ensuring Core Nature Areas are in the best condition.
- Reducing pressure on the Core Nature Areas by improving the wider environment.

#### More joined up

- Improving connection between habitats and ecosystems through new or enhanced wildlife corridors and stepping stones, transitional areas between habitats, and more farms using 'high nature value' farming or regenerative farming techniques to deliver nature friendly farming.
- Working together. Everyone has a part to play, from landowners, land managers, farmers, organisations, businesses, schools, residents, recreational users, visitors, local authorities, Government, and its advisors.
- Supporting greater connectivity with habitats beyond the boundary of the National Landscape and using the plan to inform the Lancashire and North Yorkshire & York Local Nature Recovery Strategies.

The image below shows what this might look like. Core areas are our SSSIs and LWS. Landscape and linear corridors could include rivers, woodland, hedges, walls and roadside verges. Stepping stone corridors could be new hay meadows or areas of wood pasture between SSSI hay meadows or Atlantic oak woodlands. Buffer zones could be areas woodlands planted alongside rivers. Sustainable use areas could be...



Restoration areas could be areas of blanket bog on the peatland, species-rich pasture in grasslands, or re-meandering a river across a floodplain.

Fig. 1 The components of ecological networks, or nature recovery networks, as described in Making Space for Nature, J Lawton *et al*, 2010.

## 8.2 Land management approaches

There are a range of approaches to land management and restoration that could support the delivery of the nature recovery networks. These are set out below. Some of these approaches are already being used in places within and adjacent to the National Landscape. There is a need for a greater uptake of these to accelerate the pace and scale of the delivery of nature recovery networks to achieve the Nature Recovery Plan's vision.

### Restoring functioning ecosystems

Restoring natural processes at a landscape scale can help whole ecosystems to recover, enabling a mosaic of connected habitats where the relationships between different species can properly function. This is sometimes referred to as restoring functioning ecosystems, where natural processes are enabled. A more popular term sometimes used is 'rewilding'.

Natural processes can be restored in a range of ways, including:

- Hydrological restoration.
- Native grazing animals that rootle, scrape and encourage plant growth.
- Sensitive grazing management including the numbers of livestock and the timing of grazing to allow habitats to regenerate and sustain themselves.
- Reprofilling riverbanks and enabling the re-meandering of rivers to follow a natural course across their floodplains.
- Natural regeneration of woodland, wood pasture and trees and other habitats, with seeds being dispersed by birds and other animals. This is often reliant on the removal of grazing by sheep and deer.
- Reintroducing missing species, such as the black grouse.
- Forging better connections between upland habitats across the Northern uplands.

### Nature-based solutions

Nature-based solutions provide benefits for people and nature. They usually take place at a landscape scale. They can protect and restore the management of natural and semi-natural ecosystems and support the sustainable management of river catchments and agricultural areas. Actions are underpinned by biodiversity but always provide multiple benefits to people, often delivering climate change adaptation and mitigation. Solutions are usually designed in partnership, based on research, and include input from local communities.

NFM is one example of a nature-based solution. The aim is to slow the flow of water through a catchment, slowing water down or storing it. This can help to reduce the downstream maximum water height of a flood (flood peak) or help to delay the arrival of the flood peak downstream, giving people more time to prepare for floods. It can help restore natural habitats in rivers and streams and improve water quality by reducing soil erosion. Techniques include:

- Blanket bog restoration
- Soil permeability
- Tree and hedge planting
- Swales and ponds
- Leaky wood dams
- River re-naturalisation

More information on the different techniques can be found in [Natural Flood Management Measures: A practical guide for farmers, Pendle Hill Landscape Partnership](#). Or by talking to a farm advisor at Lune, Ribble or Wyre River Trusts.

### **'High nature value' (HNV) farming**

HNV farming is a term used in relation to low intensity, traditional livestock farming systems that support food production and high levels of biodiversity. It is often associated with marginal farmland and is characterised by low livestock levels, low/no use of inorganic fertilisers and pesticides, and more labour-intensive management practices, such as hay-making. It is largely associated with livestock grazing systems. HNV farms provide wider benefits to people, including carbon storage, soil conservation, water quality and management, habitat for pollinators and space for recreation and tourism.

Many farms in the area use HNV farming systems to support the area's species-rich grasslands, peatland, hedgerows and woodlands. Many provide wet areas in byelaws for wading birds. If more farms developed a HNV system approach the mosaic of habitats and connectedness between could be improved.

HNV farming systems produce low outputs and income, whilst at the same time require high levels of labour. Studies have shown that these farming systems are economically vulnerable<sup>23</sup>. The new ELM schemes will be critical in maintaining existing HNV farms and supporting more in the future.

### **Regenerative farming**

Regenerative farming practices support soil health, encouraging the soil's microbes (biological and mineral systems) to flourish. This can lead to richer, more productive soils that can support more biodiversity and provide a range of benefits to people beyond food production such as water quality and management and carbon storage. More farmers are looking at these principles as they develop their farm businesses to respond to the energy and cost of living increases. The use of herbal leys is proving a cost-effective way for some to minimise artificial fertilisers, increasing pasture nutrients and diversity to meet livestock needs.

Simple steps include:

- Adding herbal leys (perennials and wildflowers) into pasture.
- Adding trees to provide shelter for livestock, natural animal treatments (reducing the need for artificial wormers), filter water, help with drainage and moisture retention in soils. Wood pasture or agroforestry and shrubs, alongside herbal leys, could all play a part.
- Rotational paddock grazing, including mob grazing, to ensure more species are eaten but not to excess.

### **Game management**

Extensive parts of the uplands, including much of the Bowland Fells SSSI, have been in long term management for game shooting of red grouse, and on the lower ground, red-legged partridge and pheasant. Approaches to grouse moor management include cutting heather or controlled burning (not on areas of deep peat) to provide a more diverse age structure of heathland plants across a moor. Predator control for game management supports a range of species beyond the game birds themselves, including curlew, lapwing, other wading birds and birds of prey such as hen harriers, short-eared owls, and merlin. Game keepers remain 'eyes and ears' on the ground and can provide

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<sup>23</sup> Less is more: Improving profitability and the natural environment in hill and other marginal farming systems. November 2019, RSPB, Wildlife Trusts and National Trust.



valuable information i.e. on the location and successes of nesting birds and the effectiveness of predator control in supporting other wild birds.

### **Working together**

Nature recovery takes time and involves a lot of people. But by working together, building on existing partnerships and relationships and by forging new ones, the ambitions of the plan can be delivered. Partnership working is at the heart of the National Landscape Management Plan, and the Nature Recovery Plan will be agreed by the Joint Advisory Committee to help ensure partner organisations work together to promote and deliver nature recovery in and around the National Landscape.

Partners are already collaborating to develop and implement joint projects that are providing multiple benefits for people and helping nature networks to improve and be restored. This work has highlighted that people and places are at different stages of managing land for nature. Some farmers and land managers have embraced HNV and have it embedded in their business model or are developing nature-based solutions on their land. Others are just beginning to map out what will work best for them during and after the Government's Agricultural Transition. Whatever stage people are, advice, practical and financial support and a long term commitment are needed to see the change that is needed.

### **Partners**

The plan has been prepared with the support of a Nature Recovery Steering Group comprising representatives from the National Landscape team, local authorities, environmental, water and forestry organisations, estate landowners and farmers. The following partners will be important to the delivery of the plan:

Statutory Agencies: Natural England, Forestry Commission, Environment Agency, Highways Agency.

Local Authorities: Lancashire County Council, North Yorkshire County Council, Craven District Council, Lancaster City Council, Pendle Borough Council, Preston City Council, Ribble Valley Borough Council, Wyre Borough Council, Parish Councils.

Environmental organisations: RSPB, LWT, Lune Rivers Trust, Ribble Rivers Trust, Wyre Rivers Trust, Yorkshire Dales Millennium Trust, Woodland Trust, Lancashire Local Access Forum, Lancashire Environment Record Network, North & East Yorkshire Ecological Data Centre, Lancashire Peat Partnership.

Farming, Forestry, Moorland and Water organisations and businesses: United Utilities, Moorland Association, Forest of Bowland Farmer Group, Game & Wildlife Conservation Trust, estate and other landowners, individual farmers, land managers, small holders, woodlanders and foresters.

Community and other organisations and businesses: Lancashire and Westmorland Hedge Laying Society, Dry Stone Walling Association, Forest of Bowland Sustainable Tourism Network, Champion Bowland, Friends of Bowland, Ramblers Association, local community and volunteer groups.

### **Partnerships**

The following partnerships are all supporting projects that deliver multiple benefits for people and nature across the National Landscape and in adjacent areas.

### **Catchment Partnerships**

The Catchment Based Approach is a partnership approach led by the area's Rivers Trusts – Lune Rivers Trust, Ribble Rivers Trust and Wyre Rivers Trust. Working at a river catchment scale, Catchment Partnerships bring together statutory agencies, Local Authorities, the Water Company (United Utilities), the National Landscape team, landowners, farmers, other organisations and businesses to collaborate, develop and implement projects that protect and enhance the water environment and maximise multiple benefits, including improvements to water quality, enhanced biodiversity, reduced flood risk, resilience to climate change, and health and wellbeing benefits for local communities. Projects can include habitat management and creation, farmer engagement, removal of barriers to fish migration and inspiring people to volunteer and monitor projects. Catchment Partnerships have secured significant sources of funding to date and will continue to be an important lynchpin in securing funding for future nature recovery work.

### **Lancashire Peat Partnership**

The Lancashire Peat Partnership brings together organisations working to protect and restore the areas peatlands. Partners work together to promote the importance of peatland restoration, deliver restoration projects, secure funding, and share knowledge, information, and research findings. The National Landscape team employs a Peatland Officer who connects with this Partnership and who is leading the restoration of blanket bog in the National Landscape.

### **Hay Time Project**

The Yorkshire Dales Millennium Trust brings together partners who are restoring upland and lowland hay meadows within and around the National Landscape and Yorkshire Dales National Park. Partners have been developing and implementing projects for almost two decades.

### **Forest of Bowland Farmer Group**

The FiPL programme is supporting a facilitator to run the Forest of Bowland Farmer Group and is currently funded until 2024. It is hoped the group will continue beyond this time, with an FiPL funding extension currently being considered. The group is free to join and brings farmers together across the area to provide support and connectivity during the agricultural transition. The group is providing critical knowledge sharing sessions on farming techniques, including those that are already supporting nature and sustainable farming businesses in the area. It also shares advice and information on funding mechanisms for farmers and farmer groups that could help to support nature recovery. You can find out more about the group and join by visiting:

<https://www.forestofbowland.com/Bowland-Farmer-Group>

### **Working beyond boundaries**

The National Landscape is a key part of the national Nature Recovery Network. Work on nature recovery needs to go beyond the National Landscape boundary, connecting habitats and ecosystems in the wider countryside and with other protected landscapes and sites nearby. There are several existing initiatives that can help to do this:

- Northern Upland Chain Local Nature Partnership that links National Landscapes, National Parks, National Nature Reserves and land in between along the Pennine uplands from the Forest of Bowland National Landscape in the south to Northumberland National Park in the north.
- The Great North Bog initiative which connects the Lancashire Peat Partnership with other peatland partnerships across the North of England.
- Lune, Ribble and Wyre Catchment Partnerships.
- Hay Time Project.
- Three Counties: Lune Valley is a £multi million project that is in development to help manage, conserve and enhance nature rich areas from the Forest of Bowland National Landscape to

the Yorkshire Dales National Park and along the Lune Valley. If funding is secured work will commence in 2025/26.

### **8.3 Funding for delivery**

Nature recovery in the National Landscape is highly dependent on the right funding mechanisms being in place. The Government and Defra is advocating a blend of public and private finance to support nature recovery, however in the short to medium term Government funding is likely to continue to be a significant source of funding for landowners, farmers and land managers in the National Landscape. Navigating new and emerging private finance (green finance) initiatives requires new skills and knowledge but will be critical to the delivery of the plan's ambitions. Additional staff resources will be needed within the National Landscape team and partner organisations, to develop the skills and resources to access future at scale funding from private finance. The following section highlights the funding that is currently available to support delivery.

#### **Government funding**

##### **Farming in Protected Landscapes (FiPL)**

FiPL will run until 2025. Grants are available to all farmers and land managers in the National Landscape (or outside its' boundaries where action will benefit the National Landscape) for projects that support nature recovery, mitigate the impacts of climate change, provide opportunities for people to discover, enjoy and understand the landscape and cultural heritage, or support nature friendly, sustainable farm businesses. The programme is run by a dedicated team of advisors based at the National Landscape team. For more information visit

<https://www.forestofbowland.com/farming-protected-landscapes>

##### **Environmental Land Management schemes (ELM)**

ELM schemes are in development by the Government and are critical to the future management, restoration and creation of habitats and ecosystems. They will provide funding to farmers and land managers to provide public benefits including supporting nature and wildlife, water and air quality, climate resilience and carbon storage alongside sustainable productive farming. There will be three schemes, with support for delivering benefits for nature increasing with each level.

1. Sustainable Farming Incentive (SFI).
2. Countryside Stewardship (CS), including CS Plus. This will build on existing CS schemes.
3. Landscape Recovery - this will pay for bespoke, long term, landscape scale projects to enhance the natural environment.

By the end of 2027 ELM will replace current funding mechanisms:

- Catchment Sensitive Farming: this currently supports farmers to protect water, air and soil through tailored advice, support and grants is available across the National Landscape.
- Countryside and Environmental Stewardship: this currently provides financial incentives for farmers, foresters and land managers to look after and improve the natural environment and to increase biodiversity.
- England Woodland Creation Offer (EWCO): Grant funding for the planting and maintenance of new and extended areas of woodland across England. This includes planting and natural colonisation, on areas from one hectare upwards.

#### **Environment Agency**

The main source of funding from the Environment Agency is through Government Grant in Aid (GiA) for Flood Risk Management or Water Environment Improvements. Other sources of funding, generated by fees and charges from various licences (Water Resources, Water Discharges, Rod

Licences), may also be applicable. The Environment Agency works closely with the Catchment Partnerships to develop projects in line with the criteria for different funds. The funding is normally allocated to priority projects on an annual basis. Several grants are available including Water Environment Grant, Water Environment Improvement Fund, Fisheries Improvement Fund and NFM Fund to support water quality and habitat improvement work that benefits nature in the area. For more information you can talk to your Environment Agency Catchment Coordinator. Contacts are available here: <https://www.gov.uk/government/publications/map-of-water-management-catchments>

### **Nature for Climate Fund**

The main source of one off grants for capital restoration work from Defra is the Nature For Climate Fund. This runs until 2025 and £millions have been secured to enable blanket bog restoration and woodland creation work across the National Landscape and in adjacent catchments. Partners will seek to secure any future funds made available from Defra.

### **Private finance**

There is a lot of interest in private investment and the growing markets for organisations wanting to offset and develop more sustainable business models. In the short term there are limitations to opportunities for nature recovery, particularly as private finance is currently driven by carbon and water outcomes, rather than nature recovery. It is likely that more opportunities for nature recovery will become available in the medium to long term. Some of the current opportunities are set out below.

### **Biodiversity Net Gain**

The Forest of Bowland National Landscape is actively engaged in the development of LNRSs for Lancashire and North Yorkshire & York. Mandatory biodiversity net gain (BNG) is one of the mechanisms established via the Environment Act 2021 to support the delivery of LNRS. The LNRSs will identify strategic locations to create or improve habitat that are most likely to provide the greatest benefit for nature and the wider environment. Delivery of BNG in these locations will be encouraged through Natural England's BNG metric. The National Landscape team will seek opportunities to engage with landowners, local authorities and other partners, to facilitate delivery of BNG within the most beneficial locations in the National Landscape via the planning system and potentially using national biodiversity credit funding.

### **Natural Environment Infrastructure Readiness Fund**

Ribble Rivers Trust is testing out nature capital investment models via the Natural Environment Infrastructure Readiness Fund. This is linked to water quality improvement and woodland planting. Nature recovery will be achieved via the project as it is focusing on multiple outcomes.

### **Wyre Catchment Community Interest Company (C.I.C.)**

Wyre Catchment C.I.C. has secured £1.5m of capital to pay for catchment scale NFM intervention. The funding is a mix of grants from the charitable sector and private sector loans. The loans will be repaid by buyers of ecosystem services. Farmers and land managers will be paid to host the intervention on the ground to deliver the ecosystem service. It will deliver many benefits, such as carbon sequestration, water quality improvements, and biodiversity improvements from hedgerow planting and grassland conversion.

### **Water Industry Funds**

This includes Water Industry National Environment Programme (WINEP). United Utilities is currently reviewing its next five-year Asset Management Programme (AMP) which will run from 2025 – 2030. It is likely that this will continue to support nature-based solutions to provide clean

water, with wider benefits to people and nature, with the restoration of blanket bog and the main areas of nature recovery potential.

### **Woodland and Peatland Carbon Codes**

These codes provide a quality assurance system for woodland creation schemes and peatland restoration projects, enabling carbon units to be verified for carbon trading and offsetting. The Woodland Carbon Code is established and is generating finance for landowners. The Peatland Carbon Code is establishing and is likely to be more attractive to landowners in the coming years.

### **Private landowners**

Several private estates across the National Landscape are match funding peatland restoration projects, woodland creation schemes and investing in natural capital assessments to understand the opportunities for managing and improving the natural capital of their land holdings.

### **Charitable Sector**

Several large charitable trusts and foundations provide support to organisations, charities and community organisations for nature recovery. The National Lottery Heritage Fund is a significant trust that has and continues to fund nature recovery, connecting people and nature and wider cultural and landscape benefits. The People's Postcode Lottery is supporting peatland restoration, Funding from the trusts and foundations is always competitive but many partners in the National Landscape have a proven track record at securing funding from them and delivering quality projects. A range of smaller trusts and foundation will also support work, such as the Ernest Cook Trust with its nature-based education programmes.

The Wildlife Trusts/Royal Society for Nature Conservation have secured funding through Aviva for County Wildlife Trusts to purchase land specifically for the regeneration of Celtic rainforests. Lancashire is an important stepping stone between the Celtic rainforests in Wales and those in Cumbria and Scotland to the north. The LWT has produced a list of over 90 woodlands in Lancashire and Greater Manchester that may support remnants of Celtic rainforest and/or have potential for rainforest expansion. Calf Hill and Cragg Woods is the number one site on that list. There are several other candidate sites within the Forest of Bowland National Landscape. LWT is working to map and identify sites for restoration and expansion in and around the National Landscape.

### **Individuals and communities**

There are plenty of opportunities for communities to work together to create more nature rich spaces in public spaces and gardens, and for individuals to support nature and wildlife in gardens and spaces around their homes. Nature rich grasslands, ponds, bee/butterfly friendly flowers, native hedges and trees in gardens and public places can all provide stepping stones and corridors to other nearby habitats in the wider countryside.

For more information on what you can do to help nature near your home visit:

Bumblebee Conservation: <https://www.bumblebeeconservation.org/nature-recovery/>

Lancashire Wildlife Trust: <https://www.lancswt.org.uk/action-for-nature>

## 9. Next steps

The plan seeks to set out the vision and approaches to nature recovery in the National Landscape. It builds on existing work and provides a framework for an increase in the pace and scale of delivery in the future. Partners need to work together to deliver the framework and the following actions will help ensure this happens.

### **Promoting nature recovery in the National Landscape**

In 2024/5 the National Landscape team will produce a summary of the plan, toolkit for land managers, and case studies of great examples of nature recovery in the National Landscape. We will also be working on promotional materials as a call to action to inspire and share advice and support to encourage people to take action themselves and make a long term difference to the nature of the National Landscape.

### **Developing a delivery plan**

The Forest of Bowland National Landscape Management Plan will be reviewed during 2024. As part of the review process partners will continue to work together to prepare a detailed nature recovery delivery plan based on the approaches to restoration set out in this plan. It will identify lead partners for delivery and set agreed timescales. It will be integrated into the Forest of Bowland National Landscape Management Plan 2025-30.

### **Developing a monitoring framework**

In 2024/5 partners will work together with the local record centres to develop a monitoring framework for the plan. It will build on established monitoring protocols of species and habitats in the National Landscape and align with NE's Outcomes Framework and link with LNRS monitoring.

### **Feeding into the LNRS**

The National Landscape team will continue to actively engage with the preparation of the Lancashire and North Yorkshire & York LNRSs. It will share information gathered during the preparation of this plan and feed in the plan's locally derived outcomes for nature and people.

For more information, help and advice on nature recovery please contact the Forest of Bowland National Landscape Team:

[bowland@lancashire.gov.uk](mailto:bowland@lancashire.gov.uk)

01200 448000

[www.forestofbowland.com](http://www.forestofbowland.com)

## 10. Glossary

Acronym	Meaning
AMP	Asset Management Programme
ANSW	Ancient Semi-natural Woodland
BHS	Biological Heritage Sites
BNG	Biodiversity Net Gain
CHEGD	Collective name for a group of fungi associated with ancient grasslands: spindles, club and coral fungi (Clavarioid), the waxcaps (Hygrocybe genus), pinkgills (Entoloma), earthtongues (Geoglossum and relatives), and crazed caps (Dermoloma and relatives).
C.I.C.	Community Interest Company
CS	Countryside Stewardship
EIP	Environmental Improvement Plan
ELM	Environmental Land Management scheme
CaST	Catchment Systems Thinking
CS	Countryside Stewardship
CSF	Catchment Sensitive Farming
Defra	Department of Farming and Rural Affairs
DLL	District Level Licensing
EA	Environment Agency
ELM	Environmental Land Management
EWCO	England Woodland Creation Offer
FiPL	Farming in Protected Landscapes
FC	Forestry Commission England
GCN	Great Crested Newt
GiA	Grant in Aid
HNV	'high nature value'
NE	Natural England
NERC	Natural Environment and Rural Communities
NFM	Natural Flood Management
PHI	Priority Habitats Inventory
LCC	Lancashire County Council
LNR	Local Nature Reserve
LNRS	Local Nature Recovery Strategy
LWS	Local Wildlife Site
LWT	Lancashire Wildlife Trust
NFM	Natural Flood Management
PAWS	Plantations on Ancient Woodland Sites
RSPB	Royal Society for the Protection of Birds
SAC	Special Areas of Conservation
SINC	Sites of Importance for Nature Conservation
SFI	Sustainable Farming Incentive
SOA	Strategic Opportunity Area
SSSI	Site of Special Scientific Interest
SPA	Special Protection Area
WINEP	Water Industry National Environment Programme
YEP	25 Year Environment Plan