

Detail Report: Local Nature Recovery Strategy Event 3 21st April 2021

Summary

DEFRA is funding five Local Nature Recovery Strategy (LNRS) Pilots to inform national environment policy. Underpinned by the 25 Year Environment Plan (2018) and the Environment Plan 2020, the aim of the LNRS pilots is to guide delivery of national policy objectives at a local level. This includes prioritisation based on spatial factors and wider public benefits.

Cumbria County Council, together with other members of the Pilot Area Team (PAT), convened an initial stakeholder engagement event in early November 2020 and a follow-up event in early February 2021 to gain feedback on the work to date.

A third event was held on the 21st April 2021, focusing on the latest material to be included in the draft strategy. **Objectives** of Event 3 included:

1. To update stakeholders on recent progress with the LNRS.
2. To seek stakeholder feedback on the measures and mapping included in the emerging draft.
3. To gauge overall support for the strategy itself, before it's submitted to Defra.
4. To capture learning about how the pilot LNRS development was undertaken.

The draft strategy was emailed to all participants as a pdf document prior to the meeting. All materials were also published on an [online whiteboard](#) which remained open for comment for 9 days following the meeting.

At the end of the meeting, 97% of respondents were either “Very supportive” or “Quite supportive” of the focus and direction of the LNRS at the moment.

Introduction

This report is a brief overview account of an online meeting held on 21st April 2021, discussing the Cumbria Local Nature Recovery Strategy. The report was compiled by 3KQ, the independent facilitators running the meeting. The report is a combination of:

- An outline of the meeting content.
- Feedback given on the online whiteboard.
- Questions asked live by the participants during the meeting.
- Edited 'chat' contributions from participants during the meeting.

A full list of participants in the meeting is included in the Appendix.

1. Briefing on the Strategy and progress to date

Members of the PAT presented an overview of the LNRS pilots, explained the work that had been carried out since the last meeting, and explained the forward timeline for the work.

The following slides were presented on the whiteboard:

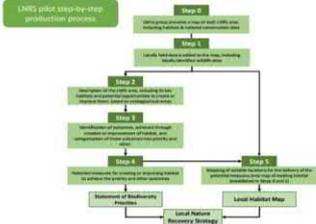
Update on Cumbria Local Nature Recovery Strategy

April 2021



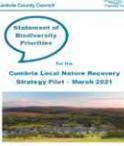
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LNRS Pilot process




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Statement of Biodiversity Priorities



Local Habitat Map





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Our progress since Event 2

- Stakeholder input to consider measures and locations – how and where to deliver desired outcomes
- Habitat network modelling by CBDC to identify areas with potential for habitat creation and extension
- ELM convenor held focus groups with farmers and land managers, and also with Historic Environment colleagues and Protected Landscape teams
- First Draft LNRS product sent to Defra 31 March 2021



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Reviewing Outcomes and Measures

- The aim of the LNRS is to achieve nature recovery through promoting changes in land management
- **OUTCOMES** = the changes we want to see happen
- **MEASURES** = actions that will deliver these changes on the ground



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National LNRS timelines



- Pilots finish 31 May 2021
- Development of guidance by Defra (May – October)
- Environment Act incorporating requirement for LNRS – expected Nov 2021
- LNRS roll-out across England – from April 2022

Building on LNRS pilot in Cumbria



- Incorporating stakeholder feedback into draft strategy (end of May)
- Further work on species (May onwards)
- Testing and development of mapping – workshops with end-users (May) and continued refinement following feedback.
- Preparation for April 2022 roll-out

Monitoring and Evaluation



- Key part of LNRS pilots
- Collected throughout process, and fed-back directly to Defra
- Defra very interested in feedback from stakeholders
- Will be used to develop LNRS guidance, and improve process for full roll-out

2. Mapping explanation and demonstration

Members of the PAT presented the following slides to explain the mapping process:

Cumbria LNRS Mapping

LNRS Pilot Mapping Steps:

- 1. To identify existing wildlife habitats**
 - Working from most up-to-date national and local habitat data
- 2. To identify potential habitat enhancement, restoration and expansion areas**
 - Modelling of wildlife habitat data - where best to take action for 'Nature Recovery'
 - Where to target 'Measures' identified in the LNRS



Cumbria Local
Nature
Partnership

Cumbria LNRS Mapping

Purpose:
A Spatial (mapped) representation of where best to take action for nature:

'More, Bigger, Better and Joined up'

And providing a 'Guide' for Decision Making:

Assisting farmers, land managers, local communities, conservation organisations and others to identify opportunities for 'Nature Recovery' across Cumbria



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Nature
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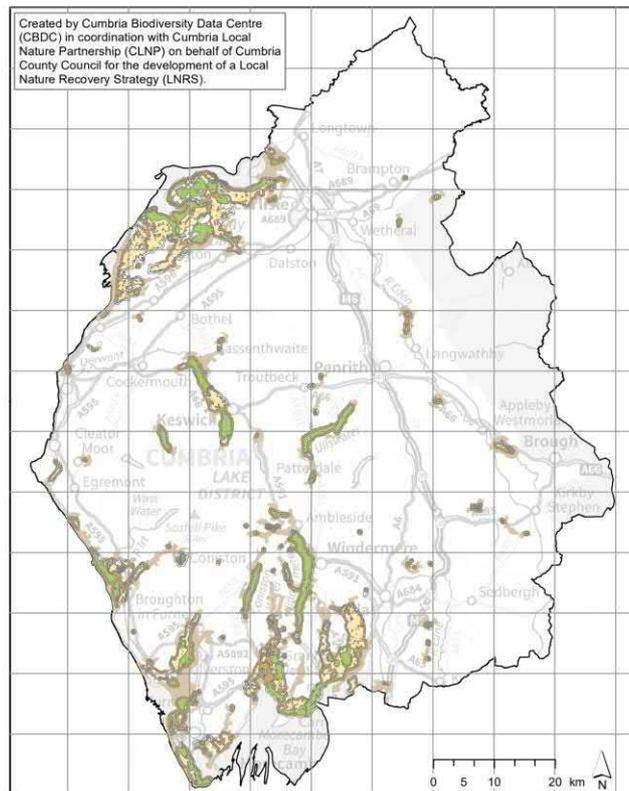
Cumbria LNRS Mapping

- 1. Interpreting the mapping**
 - What the mapping shows (habitat, potential restoration/creation areas)
 - Expert and on-the-ground advice/interpretation
- 2. Limitations**
 - Modelling is only as good as the data we have/use
 - Soils, hydrology, current/future land management
- 3. Other mapping**
 - Environment Agency, Forestry Commission, National Parks, AONB's etc.

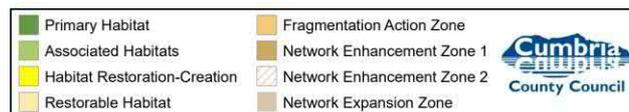


Cumbria Local
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Partnership

The stakeholders were given a demonstration of the mapping element of the LNRS strategy. This is an interactive, web-based tool which unfortunately did not function fully in the environment of a large Zoom meeting. However, static maps shown on the whiteboard were used to explain the mapping capability and aims.



Cumbria LNRN Habitat: Reedbeds



Contains Ordnance Survey data © Crown copyright and database right 2021

An example map, showing the different habitat classifications for one particular habitat (here, Reedbeds), and zones for fragmentation, enhancements and expansion

Questions and comments (answers in italics):

Anonymous sticky note: Concerned that a focus on individual habitat networks could cloud the value of habitat mosaics. Could there be some sort of habitat mosaic network or a clear explanation that (dynamic) habitat mosaics can enhance most habitat networks.

Frank - Watchtree Nature Reserve & Thornhill Meadows Trust: Is it Government intention to create a new organisation to deliver this and control the cash and overall objective?

There will not be a new organisation as such, but elements of the strategy will be fed into a range of activities delivered by government – such as Environmental Land Management schemes and Biodiversity Net Gain payments.

Andrew LDNPA: Thanks for answer Kath. I wonder whether there is a risk from what might appear to be a narrow definition of "land management" when our opportunities for impact are much wider as you described?

BlanaidDenman, RSPB: Is this intended to be a living or static document and how often is it likely to be reviewed in future?

Kath M - NE (PAT): Yes, it is intended to be a document that is regularly reviewed. One of the things that needs to be thought about further is how you report actions undertaken which contribute to delivery.

Rachel Whaley CCC - PAT: Should be a living document. Habitat data and opportunities will be updated. Likely to be reviewed every 5 years or so.

Julian: how does this relate to the National Landscape proposals which may see a new management body?

Kath M - NE (PAT) to Everyone : There should be linkage between these things - with the LNRS's providing a strategic framework. However, there are lots of initiatives at the moment and we do need to make sure there is good join up.

Frank - Watchtree Nature Reserve & Thornhill Meadows Trust: how does this map link with the map the FC use which also a multi-layer map with a large number of layers

Kate Tobin FC: Responding to Frank - will be great to get feedback on a comparison between the Cumbria maps and what is online at FC Land Information Search (<https://www.forestgis.com/Apps/MapBrowser/>) or MAGIC. Lots of debate in each of the pilot LNRSs about what info to include or not. Also lots of work at FC going into making more datasets open source. Often depends on underlying datasets that don't belong to us and affects EA and NE data too. Forest Research very involved with Defra, NE and EA in a big data and evidence programme coming through over next few years. Should see everything more aligned and accessible.

Steve Cumbria Wildlife Trust PAT: is there somewhere on the CBDC website we could explore these at our leisure?

Moustafa, CBDC to Everyone :

https://www.cbdc.org.uk/CLNRRN/CLNRRN_Habitat_Networks/Habitat_Network_Mapping_Guidance.pdf

Caitlin Pearson - West Cumbria Rivers Trust: Is the data on these maps different to the National Habitat Network recent updates available on Magic map?

Kath M - NE (PAT) to Everyone : Caitlin - these maps use the same NE model as the maps on MAGIC, but locally adapted with refined local habitat maps

Steve Cumbria Wildlife Trust: what software has been used to create the restoration zones - doesn't match the B line maps we already have unless I've missed something...confusing as the fragmentation maps don't provide connectivity at a county scale? Would suggest it needs further work...?

olivia nelson: Issue of open source data available vs data which is reserved for commercial needs? The FMP have mapping data we can't share because we haven't agreement from land owners for data to be open access.

Peter Welsh (Yorks Dales Biodiversity Forum): How will the guidance for the habitat network mapping describe the range of nature recovery options for an area - eg reed bed recovery area could be reed bed or wet pasture for curlew or mosaic reed, fen and willow carr. . .?

Kath M - NE (PAT): that's a very good point and something that we need to think about.

Kate Tobin FC: Agree with Peter and Kath. It's really tricky and we could do with a way of showing it visually.

Frank - Watchtree Nature Reserve & Thornhill Meadows Trust: I do not suppose that any habitat management mapping can accommodate Hedgerows. so many hedges being felled with little or no wildlife assessment

BlanaidDenman, RSPB: Good point about hedgerows - vital habitat and corridors for wildlife and pollinators, lots of potential for restoration

Marion Brown: we have done hedgerow mapping in our area which I think are on CBDC mapping tool

Frank - Watchtree Nature Reserve & Thornhill Meadows Trust: It is not just about mapping it is also about the wildlife value of the hedge. Some need grubbing out and need a new dyke and replanting, but lots of old tall hedges need a full season to evaluate wildlife value.

Kath M - NE (PAT): Within the main statement of biodiversity priorities we have tried to pull out some key actions on farmland which cover hedgerows as one key feature...partly because it is difficult to map some of these things.

3. Discussion of measures

Participants had been asked to select which broad theme (out of nine, listed below) they would like to discuss, and were split into breakout groups for this session. PAT members facilitated a discussion of a table with the following headings:

Outcome	Supporting these species	Contributing to these services	Measures
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The tables were divided into:

1. Habitat mosaics and networks; Species (9 outcomes)
2. People and nature (8 outcomes)
3. Urban Habitats and Brownfield Sites (9 outcomes)
4. Grassland Habitats and Limestone pavement (8 outcomes)
5. Peatland and wetland habitats (11 outcomes)
6. Fell and Fell edge and lowland heath (5 outcomes)
7. Rivers and Streams; Lakes and Tarns (11 outcomes)
8. Coastal habitats (6 outcomes)
9. Woodlands (8 outcomes).

Participants were asked to focus on the measures, as the outcomes had been covered in Event 2, and to think about the two key questions listed below the heading on each table.

Comments from the whiteboard against each table of measures:

1. Habitat mosaics and networks; Species

Much of this relies on money and delivery. If we are to make a real impact it needs people on the ground and money.

Key Question: Any measures to add, take away or change?
Please use the comment function to add notes below.

HABITAT MOSAICS AND NETWORKS – BIGGER, BETTER, MORE JOINED-UP			
Outcome	Supporting these species	Contributing to these services	Measures
We want to achieve nature recovery at a landscape scale through creating bigger, better and more joined-up areas of wildlife-rich habitat.	All species groups	Biodiversity Climate Change Mitigation/adaptation Flood Risk Protection Mass stabilisation Water quality Pollination Pest and disease control Public access and engagement	Protection and restoration of protected sites/habitats Agri-environment incentives for habitat creation and restoration in wider countryside as set out in more detailed tables. Advice and support to farmers and landowners to help deliver these changes. Seeking opportunities for expanding networks to create larger, dynamic, mosaic sites
Establish resilient and well-connected networks of habitat, allowing species to move between existing habitats, and creating migration corridors for key species.	All species groups	Biodiversity Climate Change Mitigation Flood Risk Protection Mass stabilisation Water quality Pollination Pest and disease control Public access and engagement	Protection and restoration of protected sites/habitats Agri-environment incentives for habitat creation and restoration in wider countryside (see habitat tables). Use of Biodiversity Net Gain to create habitat networks. Use of Green Infrastructure to create habitat networks
Farmland within which food production and thriving wildlife co-exist, supported by healthy soils and a network of features such as hedges, farmland trees, flower-rich pastures and field margins.	All farmland species	Biodiversity Cultivated crops Reared animals Water quality Flood risk protection Climate change mitigation/adaptation Pollination Pest and disease control	Advice and support to access ELM and other investment opportunities to map assets and deliver public goods and services. Collaboration and mutual learning between farmers, land managers, woodlanders and foresters. Organic, low input, mixed and regenerative farming supported to improve soil health, flora and fauna.

			Herb leys supported in grassland management. Support for hedgerow restoration, tree planting, orchard restoration, set-aside. Avoidance of harm to non-target species through pesticide and herbicide use.
Restoration of functional, dynamic ecosystems-communities of plants, animals, and microorganisms living and interacting together and with their physical environment as a functional unit- enabling habitats and species to sustain themselves into the long-term.	All species groups	Biodiversity Climate Change adaptation/ Mitigation Flood Risk Protection Mass stabilisation Water quality Pollination Pest and disease control	Establishment of more 'wilder' areas where wildlife is allowed to thrive in less managed conditions and natural processes are allowed to take place. More land managed for nature – meeting Government target of 30% by 2030 Leave some areas, in all habitats, protected from human disturbance.
Dynamic mosaics of different habitats established, at varying scales, providing different food, shelter and nesting areas for common and rare species.	All species groups	Biodiversity Climate Change adaptation/ Mitigation Flood Risk Protection Mass stabilisation Water quality Pollination Pest and disease control	Establishment of more 'naturalistic grazing' areas with less compartmentalisation of different habitat blocks. Eg enabling transitions to scrub at woodland edges; transitions to brackish habitat at the coast. Establishment of more 'wilder' areas where wildlife is allowed to thrive in less managed conditions and natural processes are allowed to take place.
Improved condition and more varied structure of all habitats to provide a wider range of species with the conditions they need to thrive.	All species groups	Biodiversity Climate Change Mitigation/adaptation Flood Risk Protection Mass stabilisation Water quality Pollination Pest and disease control Public access and engagement	Protection and restoration of protected sites/habitats Habitat creation and restoration in wider countryside as set out in more detailed tables. Agri-environment incentives. Advice and support to farmers and landowners to help deliver these changes.

PW Peter Welsh 4/21/21 10:47 AM
Perhaps we need some sort of overarching description of the value of dynamic habitat mosaics vs single habitat expanses. Also of the various ways of achieving the mosaic - scales of wilder or more natural processes.

PW Peter Welsh 4/21/21 10:41 AM
Need specific measures to provide advice eg focussed on different main farm types + forestry + sporting

PW Peter Welsh 4/21/21 10:39 AM
Need clarity around options on land - eg dynamic mosaics often as or even more valuable than expansion of a single habitat

DB Deborah Brady 4/21/21 11:05 AM
it would be great to overlay habitat selection models for individual (exemplar?) species, or clusters of species to examine how the habitat selection fits with habitat creation/improvement. Ideally looking closer at movement/expansion models for species to identify blockage/priority areas. I realise this is work is habitat focussed, and perhaps this specific species work is a next step, but I wonder if an outcome could be that the basemaps are fully accessible for this modelling and also have the intention for this as an important next step included

KF Kate Tobin FC 4/21/21 10:47 AM
Isn't BNG one of the "delivery mechanisms", like other incentives and grants. It could be used for most if not all of the measures, but shouldn't be a measure in itself.

KF Kate Tobin FC 4/21/21 10:30 AM
So pleased to see foresters and woodlanders alongside farmers here. Thank you!

KF Kate Tobin FC 4/21/21 10:45 AM
Where deer populations are high, measures to encourage landscape-scale deer control will be important to ensure that natural colonisation works. Light pressure can help with mosaic effect. Heavy browsing can make it impossible to establish.

The BTO/RSPB and indeed Defra should have a great deal of information about breeding waders. indeed the BTO/RSPB are repeating the breeding waders of lowland wetlands survey (first done in 1983) this year starting now.

I have a personal crusade about hedgerows, so many old, perhaps some might say neglected, are being felled with no wildlife surveys and much of it under the guise of agri-environment schemes.

PW Peter Welsh 4/25/21 9:32 AM
There is a lack of recent experience of 'naturalistic' grazing of wood pasture-like dynamic habitat mosaics. Scope for experimental pilot projects working with farmers.

KF Kate Tobin FC 4/21/21 10:55 AM
We could do with some mapping on seed dispersal patterns to help decide where natural colonisation would work best.

2. People and nature

Key Question: Any measures to add, take away or change?
Please use the comment function to add notes below.

PEOPLE AND NATURE			
Outcome	Supporting these species	Contributing to these services	Measures
Adaptation through natural solutions to reduce the impacts of climate change on people and landscapes.	Various	Climate change mitigation Biodiversity Clean air Clean water Health and wellbeing	Woodland creation, management and retention, including trees, hedges and scrub and riparian planting. Peatland restoration. Future environmental land management schemes Restoration and appropriate management of coastal defence systems Restore coastal habitats for 'blue carbon storage'
Creation, restoration and management of habitats to improve air and water quality.	Various	Beauty, heritage Access, recreation and education. Biodiversity Clean water Clean air Health and wellbeing	Woodland creation, management and retention, including trees, hedges and scrub and riparian planting. Peatland restoration. Wetland creation and restoration. Catchment sensitive farming advice.
Creation, restoration and management of habitats to give protection from environmental hazards such as flooding.	Various	Beauty, heritage Access, recreation and education. Biodiversity, Clean water Health and wellbeing. Natural flood management. Climate change mitigation and adaptation	Habitat management, restoration and creation to support naturally functioning hydrology to help reduce high water flows. Floodplain meadows, wet grasslands and wetlands management, restoration and creation (seasonal, temporary or permanent). Peatland restoration. Sustainable soil management. Woodland, scrub and tree planting, retention and expansion. Kests, hedgerows, walls and rough vegetation strips maintained, restored and created across the farmed landscape.
			Leaky dams help slow water higher up in catchments. Species reintroduction (beaver) to assist in natural flood management in some areas. Improve soil health and condition to help retain more water.
More people from diverse backgrounds are engaged with, enjoying and helping to manage places for more wildlife, in our cities, towns, villages and countryside.		Beauty and heritage Biodiversity Access, recreation and education Health and Wellbeing	Landscape Partnerships, outdoor and nature based learning and other community based projects are delivering integrated schemes for nature, culture, landscape, access, education and learning that are close and connected to the places where people live and work. Information and education is available to support people to enjoy nature in a way that protects nature that is vulnerable to disturbance, such as breeding birds. Nature recovery projects are developed to engage people with management, restoration and recreation opportunities. This will include volunteering.
People are healthier and happier through increased interaction with and access to nature.		Beauty and heritage Biodiversity Access, recreation and education Health and Wellbeing	Safe and managed access is provided to connect people of all ages, health and backgrounds to nature through a wide range of projects and environmental land management.
Nature recovery underpins our local economy with people visiting areas because of their nature value and interest.		Beauty and heritage Biodiversity Access, recreation and education Health and Wellbeing	Green recovery fund Future environmental land management scheme investment in nature, beauty, heritage, access and education.
Nature recovery underpins our cultural landscapes, their beauty		Beauty and heritage Biodiversity	Landscape Partnerships, outdoor and nature based learning and other community-based projects are delivering integrated schemes
and heritage, access, education and understanding for all.		Access, recreation and education Health and Wellbeing	for nature, culture, landscape, access, education and learning that are close and connected to the places where people live and work. Future environmental land management scheme investment in nature, beauty, heritage, access and education.
Dark skies are protected for the benefit of people and wildlife across urban and rural environments.	Various – including bats	Biodiversity Recreation Health and wellbeing	By reducing light pollution through the use of appropriate lighting through planning policies. By increasing awareness of the problems excess lighting can cause to nature.

 Tim Duckmanton
4/21/21 10:33 AM
comprehensive concern - will involve extra cost to orgs
Will ELM scheme

 Tim Duckmanton
4/21/21 10:34 AM
will ELM scheme provide resource for this?

 Tim Duckmanton
4/21/21 10:37 AM
where does geology fit with this?

 Tim Duckmanton
4/21/21 10:38 AM
and more widely as a habitat approach

 Tim Duckmanton
4/21/21 10:43 AM
how do we engage with

 Tim Duckmanton
4/21/21 10:44 AM
farming community? to get the best out of this is to learn how we produce food on a conservation basis

 Tim Duckmanton
4/21/21 10:53 AM
how do we engage young people - need a measure to show that - particularly for all forms of land management

 DM Deb Muscat
4/21/21 10:56 AM
More young people seeing natural environment as a career

 DM Deb Muscat
4/21/21 10:53 AM
Does this statement need to be stronger given our discussion?

 Tim Duckmanton
4/21/21 10:54 AM
needs beefing up with access and recreation measures to engage people in a variety of ways

 DM Deb Muscat
4/21/21 10:33 AM
Really pleased to see this in!

3. Urban Habitats and Brownfield Sites

Key Question: Any measures to add, take away or change?

Please use the comment function to add notes below.

URBAN AND URBAN FRINGE			
Outcome	Supporting these species	Contributing to these services	Measures
Increase the number of pollinating insects, such as bees,	Invertebrate and bees	Biodiversity Health and wellbeing	By creating more pollinator habitat in urban areas e.g. through the use of green walls and roofs. By Encouraging the use of natural pesticides on council sites and through discussions with landowners. By promoting environmentally friendly methods to council allotment holders i.e. pollinator leaflets included in invoice letters. By supporting opportunities for the creation of bee-lines By considering using pollinator-friendly plant/flower species in public flower beds. By requiring wildflower and pollinator mix in landscape schemes submitted for planning approval.
Increase the quantity and diversity of nesting, breeding birds and invertebrates.	Nesting birds; Invertebrates	Biodiversity	By creating suitable nesting and breeding sites within development
Reduce surface water flooding and reduce the pollutant effect of waste and other water discharges.		Flood resilience Climate change mitigation Biodiversity	By introducing more man-made habitats into urban areas such as green roofs, wetlands and ponds. By encouraging the use of permeable hard surfacing instead of impermeable hard surfacing when landscaping in gardens and public spaces. By requiring the use of SuDS in new developments where appropriate.
More residents and businesses creating more wildlife friendly environments.		Biodiversity Health and well-being Climate Change Mitigation	By encouraging the use of ponds/wildflower areas in gardens, allotments and public open spaces. By encouraging the use of non-solid fencing and hedging instead of walls in new developments to allow species movement – through raising awareness and through planning policies and negotiation with developers designing landscaping schemes/ considering boundary treatments.
Our multi-functional spaces will be better managed for wildlife.		Green recovery/economic growth Biodiversity Recreation Health and wellbeing	By encouraging new wildflower planting. By retaining unmanaged areas where appropriate to allow natural succession to take place. By requiring the use of SuDS in new developments where appropriate.
Areas of green infrastructure to be better connected, including connecting the urban and rural environment.	Various – including reptiles, invertebrates, birds, butterflies, small mammals	Biodiversity Recreation Health and wellbeing Flood resilience Climate Change Mitigation	By identifying gaps in the links between areas of Green infrastructure. By identifying opportunities to better connect areas of population with areas of green infrastructure, e.g. through the Local Plan process. By identifying opportunities for the greening of key transport routes e.g. creating and enhancing green infrastructure that is easily accessible from the Cumbrian coast railway line. By supporting initiatives such as the Cumbrian Community Forest.

Noting reference to former railway routes as corridors, suggested more focus could be given to existing stations and how to enrich the habitat at those. Range of different locations from coastal to inland. Over 40 stations in Cumbria - this is an opportunity.

Also consider routes along the journey - Network Rail land.

Stressed importance of incorporating nesting sites into new development - housing estates and also house extensions. Not just add-ons, but incorporate into design - built into wall - as a permanent solution.

The planning process key but all stages have an impact - builders and scaffolders. Need to have nature recovery at beginning of process, in training for tradespeople and contractors.

Consider linking in with schools and colleges. Not just their sites, but involvement of pupils and students.

On an individual level, raise awareness to make people more aware of they have already and how to protect it, not just about mitigation when wanting to build on it.

BROWNFIELD SITES			
Outcome	Supporting these species	Contributing to these services	Measures
Increase the quantity and diversity of important plant, invertebrate, reptile and amphibian populations.	Invertebrates (spiders, bees, beetles) Plants Butterflies, birds, amphibians, and reptiles)	Biodiversity Recreation Health and wellbeing Climate Change Mitigation	by managing and enhancing brownfield habitats found on industrial sites, quarries and other previously developed urban sites.
Increased awareness of the value of brownfield land in terms of biodiversity.	Invertebrates (spiders, bees, beetles) Plants Butterflies, birds, amphibians, and reptiles)	Biodiversity Recreation Health and wellbeing	New development must incorporate brownfield habitats where possible and if not possible replace them elsewhere or provide compensation
Maximise the use of linkage routes such as historic rail routes to create wildlife areas for nature and people.	Invertebrates (spiders, bees, beetles) Plants Butterflies, birds, amphibians, and reptiles)	Biodiversity Recreation Health and wellbeing	By seeking opportunities through the Local Plan process

4. Grassland Habitats and Limestone pavement

Key Question: Any measures to add, take away or change?
Please use the comment function to add notes below.

GRASSLANDS			
Outcome	Supporting these species	Contributing to these services	Measures
<p>Grasslands rich in plants, fungi, and/or invertebrates (including soil biota) are all identified, mapped and being managed in a way which conserves or enhances their value for wildlife</p> <p>[Important grassland types in this context include: calaminarian grasslands, calcareous or limestone grasslands, species-rich acid grasslands, rush pasture which provides breeding territories for ground nesting birds, species-rich haymeadows, species-rich floodplain grassland, tall herb communities, grasslands supporting waxcap and other fungi, species-rich pastures and road verges]</p>	<p>Grassland & soil flora Grassland & soil fungi Grassland & soil invertebrates</p>	<p>Carbon capture and storage Biodiversity Clean water Natural flood management Pollination services Clean air Health and wellbeing Cultural services</p>	<ul style="list-style-type: none"> Survey, to ensure all existing species-rich grassland and all former habitat ('semi-improved' or degraded habitat) is recorded and mapped Ensure appropriate vegetation control on these grassland sites according to grassland type e.g. traditional management of hay meadows; appropriate stocking mix and densities for limestone, wet, waxcap & calaminarian grasslands; meadow cuts, species enhancement & nutrient removal from amenity grassland and road verges. Achieve appropriate chemical/nutrient levels on these grassland soils according to grassland type e.g. through elimination of artificial fertilisers, removal of arisings from road verges after cuts, avoiding nutrient hotspots, from stock feeding, elimination of agricultural medicines through dung, etc. Manage grasslands to create a mosaic of structure, a variety of flowering times, and microhabitats for invertebrates. Often achieved through appropriate grazing regime (above), or artificially through a varied cutting regime to avoid homogeneity Manage grasslands as part of a habitat mosaic including e.g. early successional bare ground habitat, tall herb vegetation, scrub & seasonally wet areas, as appropriate to grassland type and landscape.
<p>Grasslands which are important for threatened or rare species are identified and managed appropriately for those species.</p> <p>[Important grassland types in this context include: calaminarian grasslands, calcareous or limestone grasslands, species-rich acid grasslands, rush pasture which provides breeding territories for</p>	<p>Grassland & soil invertebrates Waxcap fungi Wading bird assemblage (Curlew, Lapwing, Redshank, Snipe, Oystercatcher) Skylark Barn Owl Corncrake Harvest mouse</p>	<p>Biodiversity Health and wellbeing Cultural services</p>	<ul style="list-style-type: none"> Ensure management takes into account specialist fungi, breeding and feeding invertebrates, birds and mammals including rare, threatened or otherwise nationally important species. Manage upland rush pasture for the range of species it supports e.g. wading birds, Marsh fritillary, Small pearl-bordered fritillary, Forester moth Sensitively manage grasslands and tall herb communities which support harvest mouse

The need for big data is huge. How would a farmer know what "the powers that be" want and what they think is important.

Scale and detail of data will be really important

How do you balance competing demands - e.g. grassland vs tree planting in the forgotten lands

E(Ellyse Mather (EA) 4/21/21 10:44 AM

Soil quality and soil structure - could be good measures to be added for these objectives. Also link this to carbon sequestration

E(Ellyse Mather (EA) 4/21/21 10:44 AM

A standard methodology for carbon auditing will be need to provide benchmarks and allow for evaluation of measures

<p>ground nesting birds, species-rich haymeadows, species-rich floodplain grassland, tall herb communities, grasslands supporting waxcap and other fungi, species-rich pastures and road verges]</p>			
<p>Many more grasslands are being managed to increase species diversity (including within the soil) and greater naturalness.</p>	<p>Grassland & soil flora Grassland & soil fungi Grassland & soil invertebrates</p>	<p>Carbon capture and storage Biodiversity Clean water Natural flood management Pollination services Clean air Health and wellbeing</p>	<ul style="list-style-type: none"> Restore 'semi-improved' grassland through appropriate management (usually grazing) control (this often means a shift from sheep to cattle grazing to provide more structural diversity in the sward). Restore 'semi-improved' grassland habitat through species re-introduction where necessary, e.g. plug planting or seeding, using local seed where possible Encourage adoption of farming practices which increase soil health and plant diversity e.g. through regenerative farming methods, nutrient management (no artificial fertilisers or slurry zones) Manage road verges in a way which improves the whole resource e.g. by implementing cut and collect management to reduce nutrient levels and increase species diversity over time, varying and staggering the timing of cuts, introducing appropriate seed and subsequent management of new verges. Manage amenity grasslands in a way which increases structural and species diversity, e.g. by reducing areas of close mown grass and implementing cut and collect management of long grass areas to reduce nutrient levels and increase species diversity over time
<p>There is increased connectivity between wildlife-rich grasslands habitats, and with other wildlife-rich habitats, to provide movement and expansion corridors and habitat mosaics for wildlife, including pollinating insects.</p>	<p>Grassland flora Grassland fungi Grassland invertebrates Small mammals Raptors such as kestrel, barn owl.</p>	<p>Biodiversity Health and wellbeing Pollination services</p>	<ul style="list-style-type: none"> Target grassland restoration and creation to expand and connect the Nature Recovery Network Create new wildflower grasslands, of types which are locally appropriate, to expand and connect existing areas of good or restored habitat. Create new wildflower grasslands on nutrient poor soils as part of green infrastructure work in urban areas Ensure all quarry restoration plans maximise opportunities for creation of species-rich grassland habitats

E(Ellyse Mather (EA) 4/21/21 10:40 AM

Not much of this seen locally. Is it possible, should it be used more?

E(Ellyse Mather (EA) 4/21/21 10:53 AM

The current writing of the measures make it seem like grassland creation is permanent, but the case if this can be embedded in a farming system

E(Ellyse Mather (EA) 4/21/21 10:56 AM

Education is required for this.

LIMESTONE PAVEMENTS			
Outcome	Supporting these species	Contributing to these services	Measures
<p>The whole pavement resource is protected from deliberate or incidental mechanical destruction (PROTECTION)</p>	<p>Limestone pavement (LP) supports a characteristic assemblage of vascular plant species often including ones typical both of woodland ground flora (e.g. Dog's Mercury & Common Dog Violet) and those of more open calcareous grassland (e.g. Wild Thyme</p>	<p>Carbon capture and storage - Limestone is a carbonate mineral. Weathering of limestone deposits by rain tends to return carbon atoms to the short term reservoirs</p>	<ul style="list-style-type: none"> Ensure all Limestone Pavements in Cumbria are covered by Limestone Pavement Orders (LPOs) and that the responsible authorities are properly aware of the powers the Orders confer and they enforce the Orders; Introduce new LPOs where this would protect

PW Peter Welch 4/25/21 9:40 AM

Add a measure relating to grassland as part of a habitat mosaic; eg Target extensive grassland areas as mosaics with scrub and woodland patches

5. Peatland and wetland habitats

Facilitator comment: General discussion within group about work on peatlands and wetlands needs to be viewed in a landscape context, as actions in one place can have knock-on effects elsewhere - particularly in relation to manipulating drainage.

Key Question: Any measures to add, take away or change?
Please use the comment function to add notes below.

PEATLANDS			
Outcome	Supporting these species	Contributing to these services	Measures
Peatlands of all types (upland and lowland) are in a healthy and functioning state, actively forming peat.		Carbon capture and storage Natural flood management Clean water Biodiversity Clean air Health and wellbeing	<ul style="list-style-type: none"> End all peat extraction Restore hydrological function on peatlands by blocking all active grips (drains) and gullies, and/or bunding as appropriate. Manage adjacent habitats to protect the hydrological and nutrient status of peatland e.g. <i>managing nutrient run-off into valley mires, reducing or removing drainage adjacent to lowland raised bogs, allowing/encouraging scrub development below active blanket bog</i> Remove inappropriate planting which is negatively affecting the hydrology of peatland Consider removal of self-sown trees and scrub as part of hydrological restoration (taking into account needs of other rare and threatened species) Restore bare peat using established techniques e.g. <i>the siting of coir or stone dams to retain water or slow its flow, spreading heather brash, sphagnum inoculation, and the reprofiling of peat hags</i> Cease burning management which is damaging to peat soils (shallow or deep) and the habitats they support. Avoid creation of infrastructure such as paths and tracks which will damage peatland habitats or affect hydrology. Provide incentives for peatland restoration measures which can be applied to lowland raised mires in multiple ownership Support measures to reduce airborne nutrients from farming and industry which lead to vegetation changes on peatland habitats e.g. <i>Ammonia regs, voluntary codes, education campaigns, enforcement, planning policy and guidance</i>
Peatlands and their associated mire, fen, flush, lagg woodland, carr and wet grassland habitats support the full range of plants and animals associated with these habitats		Carbon capture and storage Natural flood management Clean water Biodiversity Clean air	In addition to the measures above: <ul style="list-style-type: none"> Encourage or mandate for less intensive management for game shooting on upland peatlands e.g. <i>an end to the practice of medicating red grouse, predator control which is more limited and targeted, an end to burning heather on</i>
		Health and wellbeing	<i>deep peat and reduction of wildfire risk through hydrological restoration</i> <ul style="list-style-type: none"> Ensure appropriate types and levels of grazing on peatlands Ensure management takes into account rare species and rare associated habitats and microhabitats e.g. <i>willow tit on wet woodland bordering lowland raised mires, Argent and sable butterfly requiring young birch and bog myrtle, unique invertebrate fauna of some boggy flushes</i>
Former peatland habitats are restored on peatland soils			<ul style="list-style-type: none"> Identify peatland soils where peatland habitat lost due to drainage and agricultural conversion and prioritise habitat restoration there to expand and connect the Nature Recovery Network Restore former peat extraction sites
Peatlands are being managed as part of dynamic, landscape-scale mosaics of habitats, including wet and dry heath, scrub and wet woodland, springs, flushes, tarns and lakes		Carbon capture and storage Natural flood management Clean water Biodiversity Clean air Health and wellbeing	<ul style="list-style-type: none"> Restore and manage peatlands as part of the habitat mosaics upon which they rely for their intact hydrology, nutrient status and species composition e.g. <i>blanket bog is thought to benefit from adjacent wet heath on shallower peat and scrub/woodland downslope in order to protect its hydrological integrity, small lowland mires rely intimately on their larger upstream and downstream catchments.</i> Consider carefully management options for dry heath. <i>Is it former broadleaved woodland on peaty soil, is it former wet heath which has been drained?</i>

Will there be a Champion / Champions for this habitat in the LNRS to ensure the targets and measures are delivered.. The Floodplain Meadows Partnership could contribute?

Facilitator note of group comment: The measures are a mix of action and ambition. Need to also think about deliverability and build this in. Support for noting that some of measures require incentive and longer-term funding

Ellyse Mather (EA)
4/22/21 10:35 AM

Some of the wording around fire/grouse may need to be amended on the release of England's peatland strategy

WETLAND HABITATS (including valley mires, basin mires, fens, marshes, swamps, reedbeds, springs and flushes, water meadows).			
Outcome	Supporting these species	Contributing to these services	Measures
Dynamic mosaics of wetland habitats established, at varying scales, providing different food, shelter and nesting areas for common and rare species.	All species	All the below	Combination of all the measures below.
Ensure that existing wetland habitats, including valley mires, basin mires, fens, marshes, swamps, reedbeds, springs and flushes and water meadows, are in good condition, with a diverse vegetation structure, and supporting a range of dependant species.	Assemblages of wetland plants and wetland invertebrates. Amphibians Wetland birds	Biodiversity Flood Protection	Maintaining/ re-instating natural hydrology. Ensuring high quality water enters wetlands through <ul style="list-style-type: none"> • Creating 'no-fertilizer zones' in wetland catchments. • Reduction in diffuse and point source pollution, from agriculture, through management of fertiliser inputs, slurry and silage pits. Help with this through provision of advice. • Buffering of wetland habitats with low-input land management on surrounding land. • Advice/resource/regulation for private wastewater treatment in catchment Grazing at ecologically appropriate and sustainable levels where required to maintain open, diverse habitat. Light cattle grazing in particular promotes structural diversity. Removal of trees and scrub where required. Removal of invasive non-native species (INNS) eg Himalayan Balsam where required
Increase the area of wetland habitats, particularly adjacent to existing sites, including wet woodland and carr and transitional habitats.	Assemblages of wetland plants and wetland invertebrates. Amphibians Wetland birds	Biodiversity Flood Protection	Maintaining/ re-instating natural hydrology Incentives for habitat restoration
Increase the area and number of reedbeds, supporting invertebrates, amphibians and birds and helping reduce lake sedimentation.	Assemblages of wetland plants and wetland invertebrates. Amphibians	Biodiversity Flood protection Clean water	Incentives for habitat restoration Appropriate management to prevent maintenance cycle addressing sedimentation and successive encroachment and removal of reeds.

Could this section contain a specific segment on floodplain habitats recognising the complexity of the hydromorphology and geology

	Wetland birds, including bittern		
Increase the area of species-rich wet grassland and water meadows, providing important feeding and breeding areas for invertebrates, amphibians and birds and temporary storage of flood waters.	Assemblages of wet grassland plants Invertebrates – including bees and butterflies Amphibians Birds eg waders	Biodiversity Climate change mitigation (inc carbon storage) Flood protection Clean water	Maintaining/ re-instating natural hydrology. Protect existing sites. Provide incentives for wet grassland and water-meadow restoration, including allowing seasonal flooding. Incentives for sustained long-term management of these habitats. Manage ditches important for wildlife
Ensure there is a network of smaller wetland features in the landscape including ponds, seasonally wet areas, muddy pools for invertebrates, amphibians and birds.	Invertebrates including hoverflies, dragonflies and snails. Amphibians Reptiles Birds eg waders	Biodiversity Flood protection	Maintaining/ re-instating natural hydrology Incentives for habitat restoration, including allowing seasonal flooding and re-naturalisation of rivers. Manage existing ponds for wildlife, create new ponds. Manage ditches important for wildlife
Ensure that the quality of water entering wetland sites is high.	Assemblages of wetland plants and wetland invertebrates. Amphibians Wetland birds	Biodiversity Clean water	Reduction in pollution entering wetlands through <ul style="list-style-type: none"> • Creating 'no-fertilizer zones' in wetland catchment. • Reduction in diffuse and point source pollution, from agriculture, through management of fertiliser inputs, slurry and silage pits. Help with this through provision of advice. • Advice/resource/regulation for private wastewater treatment

Cumbria LNRS will deliver a measure for prioritising these habitats and develop / manage a list of where farmer can find the incentives to deliver this

Incentives will include ELM funding, flooding related funds & strategies, carbon offsetting. This will be supported by adequate and appropriate advice and guidance

6. Fell and Fell edge and lowland heath

Key Question: Any measures to add, take away or change?
Please use the comment function to add notes below.

FELL AND FELL EDGE HABITATS: Includes - dry, wet and montane heaths, blanket bog, rocky slopes and screes, springs and flushes, tall herb vegetation, upland and montane scrub.			
Outcome	Supporting these species	Contributing to these services	Measures
<p>Ensure that Cumbria's nationally and internationally important upland habitats*, and the species they support, are in good condition, with robust habitat linkages which give species room to move in response to climate change .</p> <p><i>*Dry, wet and montane heaths, blanket bog, rocky slopes and screes, springs and flushes, tall herb vegetation, upland and montane scrub</i></p>	<p>Upland and montane plants, including Arctic-alpine species</p> <p>Invertebrates, including pollinators.</p> <p>Upland birds including waders, raptors and black grouse</p>	<p>Biodiversity</p> <p>Flood Protection</p> <p>Climate change mitigation/adaptation</p> <p>Water quality</p> <p>Erosion control</p> <p>Pollination</p> <p>Public access & engagement</p>	<p>Appropriate levels of grazing and types of stock to maintain and enhance existing habitats, and restore species-poor areas to create habitat linkages.</p> <p>Control of deer where numbers are causing over-grazing.</p> <p>Grip blocking to restore peatland hydrology.</p> <p>Cease burning management which is damaging to peat soils (shallow or deep) and the habitats they support.</p> <p>Avoid creation of infrastructure such as paths and tracks which will damage upland habitats.</p> <p>Management of recreational activity to avoid damage and disturbance.</p> <p>Improve air quality to reduce nitrogen deposition on upland habitats, which rely on low-nutrient status for maintenance of diversity.</p>
<p>Encourage development of more naturally functioning upland ecosystems, with dynamic habitat mosaics and transitions including heath, acidic grassland, tall herb vegetation, native scrub, wood pasture and bracken, providing food shelter for a wide diversity of species and providing resilience to climate change.</p>	<p>Upland and montane plants, including Arctic-alpine species, Oak, juniper, mountain willow (which require open ground for regeneration).</p> <p>Invertebrates, including pollinators</p> <p>Upland birds including waders, raptors and black grouse</p>	<p>Biodiversity</p> <p>Flood Protection</p> <p>Climate change mitigation/adaptation</p> <p>Water quality</p> <p>Erosion control</p> <p>Pollination</p> <p>Public access & engagement</p>	<p>Tailored grazing management for enhancing diversity and structure of species-poor areas, including more cattle-grazed areas.</p> <p>Creation of naturalistic grazing and non-intervention areas</p> <p>Encouraging natural tree regeneration.</p> <p>Tree and scrub planting.</p>
<p>Ensure that upland vegetation, from summits to moorland fringes, has a varied structure and composition, providing food and shelter for a diverse range of species, slowing water flow from the fells and reducing soil and sediment loss.</p>	<p>Upland and montane plants, including Arctic-alpine species.</p> <p>Invertebrates, including pollinators</p> <p>Upland birds, including waders, raptors and black grouse</p>	<p>Biodiversity</p> <p>Flood Protection</p> <p>Climate change mitigation/adaptation</p> <p>Water quality</p> <p>Erosion control</p> <p>Pollination</p> <p>Public access & engagement</p>	<p>Tailored grazing management for enhancing diversity and structure of species-poor areas, including more cattle-grazed areas.</p> <p>Encouraging natural tree regeneration.</p> <p>Tree and scrub planting.</p>

PE Paul Evans 4/21/21 10:36 AM
Use 'grazing regime' to encompass grazing management, stocking levels through the year, ungrazed areas etc.

PE Paul Evans 4/21/21 10:49 AM
could relate to all of the outcomes

PE Paul Evans 4/21/21 10:46 AM
need active guidance/advice for general public re 'responsible public access, including advice on the habitat and work land managers are carrying out

PE Paul Evans 4/21/21 10:39 AM
could use this terminology in the first box above - see comment on 'grazing regimes'

PE Paul Evans 4/21/21 10:43 AM
'need to reflect species - e.g. supporting wild herbivores

PW Peter Welsh 4/25/21 9:50 AM
Perhaps worth indicating the particular priority and opportunity for scrub and patchy woodland (wood pasture) development along gillsides and within bracken beds

PE Paul Evans 4/21/21 10:54 AM
native

PE Paul Evans 4/21/21 10:53 AM
natural tree and scrub regeneration (or use 'colonisation' (i.e. new areas away from existing wooded areas?)

PE Paul Evans 4/21/21 10:51 AM
'Right tree right place' - add 'native'

PE Paul Evans 4/21/21 10:56 AM
water management/retention

LOWLAND HEATH			
Outcome	Supporting these species	Contributing to these services	Measures
<p>Existing lowland heath is in good condition, supporting a thriving community of heathland species.</p>	<p>Heathland plant assemblages.</p> <p>Invertebrates.</p> <p>Reptiles.</p> <p>Birds.</p>	<p>Biodiversity</p> <p>Climate change mitigation (Carbon capture)</p> <p>Flood protection</p>	<p>Appropriate levels of grazing and types of stock to maintain and enhance existing habitat.</p> <p>Managing excessive tree encroachment.</p> <p>Management to maintain suitable areas of open habitat for reptiles</p>
<p>The extent of lowland heathland is increased, expanding habitat for specialist species and creating connecting corridors for species movement along the Eden valley and between the Pennine and Lake District uplands.</p>	<p>Heathland plant assemblages.</p> <p>Invertebrates.</p> <p>Reptiles.</p> <p>Birds.</p>	<p>Biodiversity</p> <p>Climate change mitigation (Carbon capture)</p> <p>Flood protection</p>	<p>Incentives for reversion of agricultural land on suitable soils in network expansion zone.</p> <p>Removal of commercial forestry on areas of former lowland heath.</p>

AH Andrew Herbert 4/21/21 11:01 AM
Is this only dry heath? Does peatland pick up all the wet habitats? The habitat list in fell and fell edge was helpful. Can this be done for the other habitat groups?

7. Rivers and Streams; Lakes and Tarns

Some disappointment that it's still very high level, no clear plan for delivery or time scales yet. Questions re: how stakeholders will be incentivised or funded to work on these measures. How will it link to other themes? One specific concern was how can people 'report' on others who are doing damage e.g. spraying slurry near a river.

Key Question: Any measures to add, take away or change?
Please use the comment function to add notes below.

RIVERS AND STREAMS			
Outcome	Supporting these species	Contributing to these services	Measures
1 More natural and dynamic water courses, in which river processes and hydrology are less modified, and which are better connected to their floodplains and associated wetland habitats	Assemblages of aquatic plants and aquatic invertebrates, including Freshwater Pearl Mussel, White clawed cray-fish Fish, including Atlantic Salmon and Brown Trout, bullhead, lamprey. Water-dependent birds Mammals, including otter, water vole, beaver, bats	Biodiversity Climate change mitigation/ adaptation, Flood protection Water quality Water supply	Incentivise allowing and enabling river re-naturalisation, including landscape scale restoration and collaborative multiple landowner agreements. Undertake active habitat improvements where re-naturalisations not possible. Water management at catchment scale – slow the flow to reduce flood peaks and also maintain drought flows Management of water extraction – maintaining suitable minimum flows and suitable flow regimes Re-introduction of ecosystem engineers such as beaver and water vole More natural' should include removal or alteration of riparian lighting that impacts riverine habitat species (eg bats, migratory fish, roosting birds).
2 Increased lengths of river and stream accessible to migratory fish	Atlantic Salmon, brown trout	Biodiversity Public access/ engagement (Recreation)	Removing artificial barriers to migratory fish such as redundant weirs.
3 Ensure that there is suitable breeding and feeding habitat within our rivers for a wide range of aquatic and water-dependent species.	Assemblages of aquatic plants and aquatic invertebrates, including Freshwater Pearl Mussel,	Biodiversity Climate change mitigation/ adaptation, Flood protection	Incentivise allowing and enabling river re-naturalisation, including landscape scale restoration and collaborative multiple landowner agreements.

JW Jayne Wilkinson
4/21/21 10:35 AM
What is meant by riparian lighting?
Shade from trees?

<i>Habitats present should include gravels, riffles, and backwaters.</i>	White clawed cray-fish Fish, including Atlantic Salmon and Brown Trout, bullhead, lamprey. Water-dependent birds	Water quality	Undertake active habitat improvements where re-naturalisations not possible. Removing artificial barriers such as redundant weirs to allow natural migration of gravel allowing the development of in-river substrate features for spawning fish of all species Natural Flood Management (NFM) measures such as woody debris dams in the upper reaches also provide nursery habitat for fish. Consider re-introduction of ecosystem engineers such as beaver and water vole
A greater variety of habitats within river corridors and floodplains providing suitable breeding and feeding habitat for a wide range of dependant species. <i>The mosaic of habitats should include ponds, muddy scrapes, seasonally wet areas, scrapes, reedbeds, flower and insect-rich flood plain meadows and pastures, rough grassland, scrub and woodland and woody material.</i>	Assemblages of wetland plants and Invertebrates, including dragonflies, bees, butterflies Amphibians Wetland and water-dependant birds, including sandpiper Mammals – otter, water vole, water shrew, bats.	Biodiversity Climate change mitigation/ adaptation, including carbon storage. Flood protection Water quality Pollination	Incentives for retaining and creating these habitats, including through allowing natural processes. Manage existing examples of flood plain meadows, and carry out restoration in suitable locations. Designing sluices in drainage channels to hold water on land during winter/spring.
5 Natural and dynamic river banks and river corridors, with taller bankside vegetation and increased numbers of native broadleaved trees and shrubs to provide dappled shade, shelter and food for wildlife (aquatic and water-dependant).	Assemblages of aquatic and wetland plants and Invertebrates, including dragonflies. Amphibians Fish, including Atlantic Salmon and Sea Trout, bullhead, lamprey. Water-dependant birds – including kingfisher, sandmartin, sandpiper	Biodiversity Flood protection Water quality Mass stabilisation	Incentives (through ELM) to encourage development of bankside vegetation, through reduction in grazing or fencing-off buffer strips. Management of buffer strips to maintain species diversity. Bankside planting of native trees and shrubs. Reduce occurrence of conifer plantations alongside rivers

AJ Anna Johnson
4/20/21 12:48 PM (edited)
support this

CP Caitlin Pearson
4/21/21 10:31 AM
Bank stabilisation? Not sure what mass stabilisation means

	Mammals, including Otter, water vole, water		
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	Mammals, including Otter, water vole, water shrew.		
6	Improved water quality in our rivers and streams Assemblages of aquatic plants and aquatic invertebrates, including Freshwater Pearl Mussel, White clawed cray-fish Fish, including Atlantic Salmon and Brown Trout, bullhead, lamprey.	Clean water Natural Flood management Biodiversity Public access (recreation)	Reduction in diffuse and point source pollution, from agriculture, through management of fertiliser inputs, slurry and silage pits. Help with this through provision of advice. Reduction in diffuse and point source pollution from roads, railways and urban run-off. Reduction in pollution from septic tanks and sewage treatment works. Prevent artificial drainage systems (agricultural and residential) from polluting watercourses. Reduce pollution through combination of regulation, advice and incentives. Create no-fertiliser buffer zones alongside watercourses. Sediment management at catchment scale eg reduced input of sediment through management of inbye pastures and fells to reduce both diffuse erosion and large scale sediment movement eg through landslips Blocking of upland drains (grips) to reduce sediment losses. Incentives (through ELM) to encourage development of bankside vegetation, through reduction in grazing or fencing-off buffer strips. Planting of native trees and shrubs to stabilise banks.

CP Caitlin Pearson
4/21/21 10:32 AM
Improved Water quality won't reduce flood risk but measures could contribute to both outcomes.

CP Caitlin Pearson
4/21/21 10:48 AM
And combined sewer overflows

CP Caitlin Pearson
4/21/21 10:49 AM
Link to Rivers Trust maps showing location of CSO and duration of overflows.

EW Emma Wright
4/21/21 10:12 AM
Suggest also include reduction and/or remediation of diffuse and point source mine water pollution

7	Reduce, and where possible eliminate, populations of invasive non-native species (INNS) in rivers and river corridors which threaten native species, and prevent new introductions of invasive non-native species.	Native plants White-clawed crayfish Brown Trout Atlantic salmon	Biodiversity Pest and disease control Programmes for management of INNS, in particular signal crayfish, coarse fish, Himalayan balsam, skunk cabbage. Prevent any new introductions of INNS. Increased biosecurity around rivers, including better public education on biosecurity and working with event organisers to include biosecurity measures
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DI Daniel - Individual
4/21/21 10:35 AM
as well as providing advice; to alert the according authority for the potential of occurrence

LAKES AND TARNs			
Outcome	Supporting these species	Contributing to these services	Measures
1	Lakes and tarns which have plentiful, clean, cool waters, supporting a variety of aquatic wildlife. Assemblages of aquatic plants and aquatic invertebrates. Amphibians Fish, including Atlantic Salmon and Brown Trout, bullhead, lamprey. Water-dependent birds, including common gull. Mammals, including otter, bats	Biodiversity Water quality Water supply Flood regulation Public access and engagement	Clean water: Reduction of pollutants entering lakes and tarns through: <ul style="list-style-type: none"> Advice/resource/regulation for private wastewater treatment Targeted interventions around septic tanks, trialling new technology to reduce P input. Creating 'no-fertilizer zones' around lakes and tarns. Reduction in diffuse and point source pollution, from agriculture, through management of fertiliser inputs, slurry and silage pits. Help with this through provision of advice. Developing nutrient balances / plans for all the lakes to inform both remedial work and planning. (Consider initial focus on maintaining and improving those lakes still with high water quality but at risk of deterioration, eg Wastwater) Society-wide reduction in air-borne pollutants (eg N) Reduction of sediment entering lakes and tarns through sediment management at catchment scale eg reduced input of sediment through management of inbye pastures and fells to reduce both diffuse erosion and large scale sediment movement eg through landslips Designation of more bathing waters Maintain consistent long-term monitoring of lakes and tarns to inform their future management. Management of water extraction – maintaining suitable minimum levels.
2	Lakes and tarns which support thriving and diverse populations of native wildlife through having a rich-mosaic of associated habitats including fringing wetlands, swamp, carr woodland and transitional habitats and areas of low disturbance. Assemblages of aquatic plants and aquatic invertebrates. Amphibians	Biodiversity Water quality Flood regulation	Incentive schemes for managing lakes and the surrounding land to provide a mosaic of associated habitats including fringing wetlands, swamp, carr woodland and transitional habitats

CP Caitlin Pearson
4/21/21 10:47 AM
And public wastewater treatment works

	Fish, including Arctic char, brown trout Water-dependent birds, including common gull. Mammals, including otter, bats		Ensure there is a wide buffer-zone of semi-natural edge habitat around lakes and tarns which is allowed to flood, including some ungrazed/ undisturbed areas. Reduce disturbance to wildlife through: <ul style="list-style-type: none"> Creation of refuge areas free from disturbance Sustainable tourism initiatives Working with recreational users and event organisers. Maintaining safe breeding areas (eg floating islands for Common Gull)
3	Increasing populations of native lake and tarn species that are threatened and re-instate those that have been lost.	Arctic Char (Ennerdale)	Biodiversity Targeted conservation programmes for threatened species. Consider re-introductions.
4	Reduce, and where possible eliminate, populations of invasive non-native species (INNS)	Assemblages of native aquatic plants and	Biodiversity Programmes for management of INNS (eg Crassula, skunk cabbage)

JW Jayne Wilkinson
4/21/21 10:42 AM
Not just present/ remnant populations in Ennerdale. Also present in Coniston & Windermere and other lakes.

8. Coastal habitats

Key Question: Any measures to add, take away or change?
Please use the comment function to add notes below.

MP Matthew Park
 4/21/21 10:43 AM
 Barrow - Earnse Bay... Issues of motor vehicles, fires etc at or close to sand dunes. Needs management to prevent this from happening.

COASTAL HABITATS			
Outcome	Supporting these species	Contributing to these services	Measures
Dynamic coastlines created supporting a diverse mosaic of habitats and providing a variety of food, shelter and nesting areas for common and rare species.	Various - see below	Biodiversity Local economy (shellfish industry) Improved water quality	Combination of measures identified below.
Restore natural coastal processes to a healthy and functional state, to enable restoration of coastal and transitional habitats.	Vegetated shingle Biogenic reefs	Biodiversity Climate change mitigation	Implement innovative ways to restore these habitats by embracing natural processes through the identification of opportunities and delivery mechanisms for managed realignment. This will: <ul style="list-style-type: none"> - Create space for shifting dune systems. - Allow natural cycles of erosion & accretion of saltmarsh, so that overall a positive balance in area is maintained - Habitat features of coastal designated sites in favourable condition Flagship example project: Habitat creation near Sastletown, Rockcliff marsh
Create natural coastal defence systems through restoration and appropriate management of coastal habitats and processes.	Biogenic reefs	Biodiversity Natural coastal defence systems/ Climate change mitigation	Restoration and appropriate management of coastal habitats such as sand dune and saltmarsh. Natural coastal processes able to occur on a greater proportion of the coast
Restore coastal habitats for the benefits this brings through 'blue carbon storage' (carbon sequestration).	Sea grass Salt marsh Kelp forests	Climate change mitigation	Facilitate expansion of Kelp-forests Restore seagrass beds, with a focus on existing mapped areas: use existing resources to inform and prioritise, such as 'ReMeMaRe' project
Improve water quality, by encouraging habitat restoration and reducing human impact.	Native Oyster Blue mussel	Water quality Biodiversity	Utilise natural systems for improving water quality, such as restoring shellfish beds

RW Rachel Woodward
 4/21/21 10:35 AM
 How as all this been put together? Has it come from previous workshops? I'd need to share this with colleagues eg erosion studies in Morecambe Bay and what is being proposed would need to be aligned with what are in the measures here.

RW Rachel Woodward
 4/21/21 10:43 AM
 Supporting which species? - this needs to be clearer

RW Rachel Woodward
 4/21/21 10:43 AM
 These of these sub headings are not clear

RW Rachel Woodward
 4/21/21 10:47 AM
 What does this mean

RW Rachel Woodward
 4/21/21 10:50 AM
 This isn't just a species, it's a habitat

	Cockles Seagrass beds Salt marsh Smelt Atlantic Salmon and sea trout	Human wellbeing - (eg bathing water quality)	Take a catchment approach - linking freshwater & marine habitats Tackle sources of pollution and marine plastics.
Promote and restore communities of native and characteristic coastal species.	Sea grass Oysters Shellfish Biogenic reefs - honeycomb worm, blue mussel beds Mud and sand flats Vegetated shingle Smelt Atlantic Salmon and sea trout River and Sea Lamprey Wildfowl and waterbirds Seabirds	Biodiversity Local economy (shellfish industry) Improved water quality	Create (undisturbed) sites for breeding terns & gulls (inner Solway particularly important for overwintering wading birds and geese) Facilitate expansion of mussel & cockle beds (more characteristic of Cumbria than native Oyster beds, e.g. at the Drigg Coast and Solway Firth) Ensure sea cliff bird colonies are protected and undisturbed Restoration of natural coastal processes will support the ability of these species to complete their life cycles e.g. migratory fish passage is better in estuaries where natural processes are allowed to occur. Reduce damage/disturbance to sensitive intertidal habitats and the species that use them by influencing and educating users.

RW Rachel Woodward
 4/21/21 10:40 AM
 gathering information - we need evidence and reports before we can start to make any decisions

RW Rachel Woodward
 4/21/21 10:52 AM
 Why is salt marsh not here? These are habitats not species

RW Rachel Woodward
 4/21/21 10:41 AM
 Habitat and species information - we need more information on this

RW Rachel Woodward
 4/21/21 10:41 AM
 Specific mention of invasive species

RW Rachel Woodward
 4/21/21 10:48 AM
 Is there a cross cutting public theme to this plan. If not we need to be clear about public audiences?

RW Rachel Woodward
 4/21/21 10:54 AM
 Ensure opportunities for cross boarder work - working and learning together

MP Matthew Park
 4/21/21 10:49 AM
 Water quality - Ensuring that SuDS are incorporated into new development, therefore reducing pressure on the wastewater network and risk of spillage at sewer overflows into the sea. Also look at opportunities for retrofitting SuDS to reduce surface water runoff, including into wastewater network.

RW Rachel Woodward
 4/21/21 10:57 AM
 Improving water quality and tackling marine plastics - marine invasives comes into this as it can effect water quality

9. Woodlands

Key Question: Any measures to add, take away or change?
Please use the comment function to add notes below.

WOODLAND			
Outcome	Supporting these species	Contributing to these services	Measures
A resilient and connected network of treescapes (including native woodland, wood pasture, parkland, coppice, scrub, field trees and pollards, hedgerows and hedgerow trees).		Biodiversity Natural flood management Clean water Economy and jobs Air quality Noise regulation Temperature regulation and climate adaptation Erosion reduction Pollination Services	<ul style="list-style-type: none"> Establish new broadleaved woodlands as below but through a spatially planned and coordinated approach which provides landscape-scale connectivity Facilitate dynamic mosaics of scrub, trees and woodlands amongst other habitats (e.g. grasslands, transitional habitats, wetlands, heathland, wet woodland, wood pasture). Allow more scrubby and ungrazed edges around woodlands (increasing food and shelter for a range of invertebrates and other wildlife) <i>The edges of many woodlands are fenced – so tall trees of the woodland canopy turn abruptly into open grassland. Areas of lower growing scrub and ungrazed vegetation between the wood and grassland provide very important areas for wildlife to feed, shelter and some species use this to bask and warm themselves in the sun.</i> Establish an even more connected, diverse and coherent network of hedgerows across Cumbria with a high proportion of field trees. Significantly expand and increase the length of hedgerows Integrate the rejuvenated hedgerow network with the distribution of woodlands and the opportunities provided by the road and rail network Improve the management of neglected and/or uniform hedgerows and associated habitats (increasing nesting, shelter and food supplies for wildlife) Maintain our hedgerows in a variety of conditions (including some uncut wide hedges, and hedges with bramble patches, increase diversity of species and vegetation structure in hedgerows and hedge bottoms) which will provide more food and shelter for wildlife. Facilitate a significant increase in the extent of wood pasture and individual trees outside woodlands in conjunction with farmers who wish to develop agro-forestry
Maintain the extent and resilience of surviving ancient woodland and make it bigger, better and more joined-up	Woodland mammals (e.g. red squirrel) Invertebrates Deadwood fauna Flora Bryophytes Fungi	Biodiversity Natural flood management Carbon capture and storage Clean air Clean water	<ul style="list-style-type: none"> Maintain an up-to-date inventory of all ancient woodlands in Cumbria and regularly survey and report on their condition Register ancient woodlands as local wildlife sites (if not SSSI) and identify / protect them from inappropriate management, loss or development in local plans / development management

ST Sarah Tooze
4/2/21 10:35 AM

And on mineral soils in steep sided gyls in blanket bog areas (probably mapped as entirely priority habitat blanket bog)

MB Marion Brown
4/2/21 10:37 AM

This is a major undertaking given current degraded state (certainly in my local area)

ST Sarah Tooze
4/2/21 10:32 AM

Plus in-field trees

I think registering sites is critical given patchwork nature of ownership. But how would landowners feel about this?

	Lichens	Health and wellbeing Cultural and Historic Environment Air quality, Noise regulation Temperature regulation Erosion reduction Pollination Services	<ul style="list-style-type: none"> Promote active, appropriate and improved management of ancient semi-natural woodlands so that they meet favourable conservation status criteria Increase the volume of deadwood in Cumbrian woodlands. Increase size of existing woodlands through planting adjacent 'buffers' of trees and scrub Provide advice, support and payments to owners of such sites to promote the management of woodlands to maintain and improve their biodiversity value Specifically promote continuity and sensitive management of ancient trees in and outside woodland Specifically prioritise the protection and enhancement of Cumbria's internationally important Atlantic Woodland a.k.a. 'temperate rain forests' through improved management and by increasing their extent via buffering and joining them up through woodland creation and tree planting at a landscape-scale Celebrate Cumbria's woodland heritage and promote deeper understanding and appreciation of their rich heritage Where ancient sites have been planted with conifers or otherwise altered inappropriately, deliver gentle and sympathetic restoration of plantations on ancient woodland sites (PAWS)
Significantly increase the extent of other native broadleaved woodlands, wood pasture, trees and scrub, and hedges, in the right places. We want more of them, making them bigger, better and more joined-up to improve their value for biodiversity, people and ecosystem services.		Biodiversity Natural flood management Carbon capture and storage Clean air Clean water Health and wellbeing Cultural and Historic Environment Economy and jobs Air quality Noise regulation	<p>Promote 'wilder' and multi-purpose management of a broad range of woodlands which will benefit wildlife diversity and abundance</p> <p>Promote more structural and species diversity within the wooded landscape</p> <p>Establish new trees and woodlands - as buffers and extensions to existing woods as well as the creation of new woodland. A wide range of establishment mechanisms should be used depending on the location and local conditions, including for example:</p> <ul style="list-style-type: none"> through natural regeneration (where possible and by preference) and recognising this natural process either via passive mechanisms or actively through grazing and herbivore disturbance seed sowing / scarification / use of thorny shrubs / cuttings / direct seeding / pegs cut from site planting, where necessary to achieve local objectives re-establishing keystone woodland species, ground flora and fungal associates.

This is challenging given fragmentation of ownership?

MB Marion Brown
4/2/21 10:55 AM

Bio security is so important here - locally propagated and disease free to avoid bringing in problems

		Temperature regulation and climate adaptation Erosion reduction Pollination Services	<p>The opportunities for woodland restoration / expansion in the right places might include:</p> <ul style="list-style-type: none"> urban and peri-urban locations (e.g. West Cumbria Community Forest; St. Cuthbert's Village) brown field sites damaged industrial and agricultural land bracken-dominated and degraded fell / moorland landscapes riparian habitats farmland and agro-forestry as part of wetland mosaics re-establishing the altitudinal range of woodlands including the natural tree line in some locations <p>Specifically restore and increase the extent of wood pasture (with new</p>
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			<p>Specifically restore and increase the extent of wood pasture (with new recruitment of trees and scrub, and healthy invertebrate, fungi, lichen and bird populations). Alongside agricultural livestock grazing, wood pasture provides a valuable mix mature trees, dead wood, scrub and grassland/heathland. It provides a wide range of conditions for wildlife to live and can support a large number of wildlife species, including many rare invertebrates, fungi and lichens. It can also be a very valuable habitat for bats.</p> <p>Increase extent and diversity of scrub habitats within other habitats (and the food and shelter this will provide wildlife). Scrub is a rare but is incredibly important habitat for wildlife – providing different conditions for nesting/shelter as well as a range of food (berries, nuts, insects, seeds) for wildlife to eat. Allowing scrub to develop within other habitats provides a better mix of places for wildlife to thrive.</p> <p>NB Trees and woodland creation must not be at the expense of other existing good quality habitat and will avoid, for example:</p> <ul style="list-style-type: none"> - planting on/near to priority habitats unless it has been very carefully assessed as being complimentary to that habitat - no tree planting that requires installation of drainage as this cancels out carbon benefits - no planting on peat soils - avoidance of important areas for ground-nesting birds
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MB Marion Brown
4/21/21 10:56 AM
need to do in context of grasslands as well? overlaps?

PW Peter Welsh
4/25/21 9:54 AM
Yes, agree

PH Peter Hensman
4/21/21 10:34 AM
This is a huge list of measures and it is very difficult to see how it can all be achieved. Should we not focus on a few key issues.

PW Peter Welsh
4/25/21 9:59 AM
Over-stated? Suggest any extensive areas of single habitat other than raised/blanket bog will be more biodiverse and natural with some scrub and tree cover

Increase the wildlife value of conifer woodlands, plantations and other woodlands	Key woodland species	Biodiversity Carbon capture and storage Clean air Clean water Health and wellbeing Cultural and Historic Environment Pollination Services	<p>The number and range of wildlife species living in productive conifer and amenity woodlands can be increased through the creation of wider rides, open sunny glades, and through planting in of native species etc. more structural and species diversity.</p> <p>Restructuring of conifer and other plantations to provide more wildlife-friendly habitat e.g. targeted thinning of new plantations, restoring hydrology to wet woodlands, low level grazing of large habitat mosaics like wood pasture, more room for natural regeneration, and management for key woodland species</p> <p>Woodlands where the majority of tree/shrubs are native species generally support a wider range of wildlife species.</p>
Promote resilience to the impacts of climate and resistance to other stresses caused by disease, pests and invasive non-native species		Biodiversity Natural flood management Carbon capture and storage Clean air Clean water Economy and jobs climate adaptation	<ul style="list-style-type: none"> ▪ Promote measures which lead to the favourable conservation status and resilience of all broadleaved woodland habitat ▪ Maintain vigilance and undertake relevant surveillance of diseases, pests and INNS ▪ Develop a plan for dealing with Ash Die-back, Juniper Die-back and other significant tree diseases ▪ Promote precautionary tree health measures amongst land managers and the public ▪ Control problematic species like roe and red deer and eradicate INNS such as grey squirrel ▪ Further investigate and consider establishing tree species which have a greater resistance to future climate. <p>Native vs Non-native? There is broad support for encouraging species that are locally-sourced and 'ecologically appropriate' for their site. The debate about the planting of native / non-native species is not resolved. The issues are complex and further work is required to achieve greater consensus.</p>
Reverse the adverse impacts of previous tree planting on other priority habitats and reinstate other more natural habitats and species.		Biodiversity Carbon capture and storage Clean water Cultural and Historic Environment	<p>Remove all conifers from peatland soils and wild flower grassland sites and restore these ancient habitats</p>

TE Tom Forestry England
4/21/21 10:32 AM
This process is welcome reference to the ability for productive woodlands to contribute to conservation gain and mitigate climate change. Restructuring through the public consultation known as design plan review is making this possible

MB Marion Brown
4/21/21 10:34 AM
This is critical in my view - hard to maintain regeneration without disease/threat surveillance and action

TE Tom Forestry England
4/21/21 10:36 AM (edited)
The post war effort for timber security undoubtedly afforded some unsuitable habitats. However many coniferous forests now support protected species and through restructuring will increasingly do so. Many peat soils under forestry are not restorable to their original condition and will cause net carbon loss as a result. Restoration of the Kielder Border Mires over 50 years has shown how productive forestry and peatland restoration can be combined, but all peat soils can not be restored

Woodlands managed to benefit key species of significance in Cumbria.	Pine marten Black grouse Pied flycatcher Redstart Wood Warbler High Brown Fritillary Pearl-bordered fritillary Duke of Burgundy Hairy wood ant Moths spp at least ten s41-listed butterfly and moth species. Already rare Lichens, bryophytes Beaver	Biodiversity Health and wellbeing Cultural and Historic Environment Economy and jobs Pollination Services	<ul style="list-style-type: none"> ▪ Ensure woodland habitats and species are monitored to understand trends and inform conservation action ▪ Undertake projects and programmes to support the conservation and recovery of key species in Cumbria according to IUCN and Defra guidelines
Restoration and creation of new orchards and farm woodlands and hedges.	Pollinators Fungi, Bryophytes and Lichens	Biodiversity Health and wellbeing Cultural and Historic Environment Pollination Services	

ST Steve Trotter
4/21/21 10:40 AM
These damaged sites can be restored and there are plenty of demonstration sites, even in Cumbria.

MB Marion Brown
4/21/21 10:36 AM
We need to add some measures here. I'm not sure the orchard habitat has been mapped? Very important for rare lichen species etc. Do we know what we have?

Jenny's brief notes of comments in the discussion:
 - huge list - how possible to take it all forward - e.g. hedgerow maintenance a massive task in itself. Good to have the measures to highlight the issues.
 - Peat issues - need further discussion - productive woodlands can contribute to habitat recovery
 - Unresolved issue - about what is planted - natives that can't be replaced
 - Orchards - were there before - should be back in
 - recognition that fragmented ownership - might make buffer zones a challenge (but small land owners might get more help with ELMS and cluster groups)
 - ELMS tier 3 collaborative option could have potential here
 - Tier 2 could also help.
 - Proposal for 2 levels of targets - 1 for 25 yr plan and another for 5 year plan - otherwise could be disappointed at the end of 5 years
 - Single greatest opportunity for 50 years - support ambition but recognition that needs to be a long term vision
 - Agreement that woodland cover is a good thing - it's the mechanisms that are more complicated to get right

4. Next steps

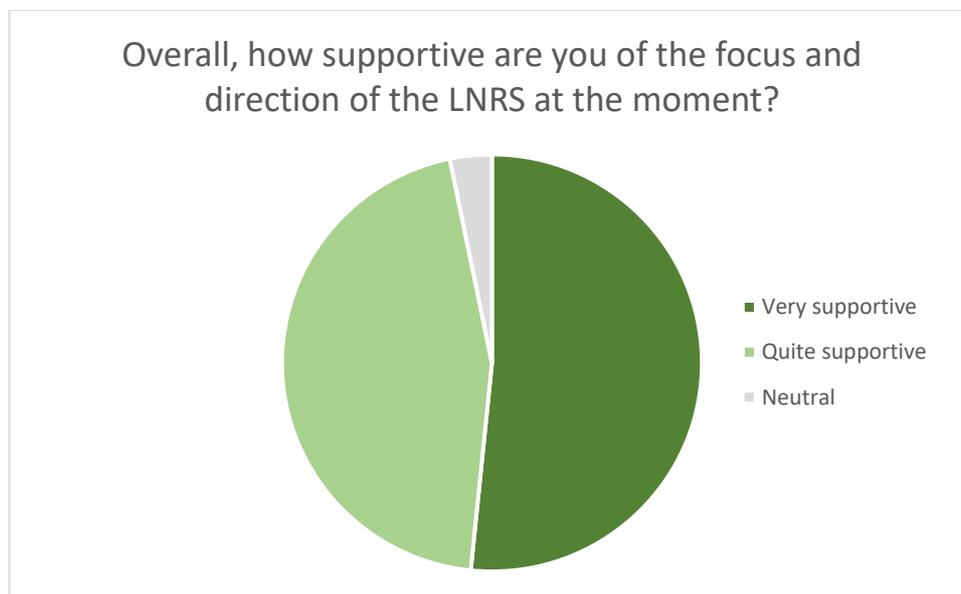
Participants were reminded of the next steps of the pilot process – the pilots are due to finish on the 31st May 2021, with Local Nature Recovery Strategies rolled out across England from April 2022, following the development of guidance by DEFRA.

They were then asked to participate in a Zoom poll which asked:

“Overall, how supportive are you of the focus and direction of the LNRS at the moment?”

97% of respondents were either “Very supportive” or “Quite supportive”.

3% (1 respondent) was “Neutral”



Comments

Ellyse Mather -EA (PAT): We need really clear examples of how potential users of the strategy could utilise the objectives and measures to turn it into delivery

olivia nelson: What will be key are the resources (funding AND provision of advice / guidance) to help deliver the LNRS. Also the degree of much wider community consultation and involvement beyond this stakeholder group.

daniel rayson - individual: a lot farmers do not like being told what to do without according effort by the government to uplift the prices for farmer's produce. either by import controls or price controls

Frank - Watchtree Nature Reserve & Thornhill Meadows Trust: I have seen 50 years of wildlife decline and so many similar documents trying to address the problem and still wildlife under dire threat. My concern is that this is just another government exercise that will have limited funding and not enough feet on the ground. What has happened to NE is a classic example. Even SSSI's seem to be neglected and there is the never ending threat of green energy production on our estuaries or more wind turbines.

Frank - Watchtree Nature Reserve & Thornhill Meadows Trust: I hope the developers will use this and take note when proposing schemes that will damage wildlife?

5. Evaluation

Participants were then randomly split into eight groups, and guided to the learning and evaluation section of the whiteboard, where they were asked to post comments relating to the two questions:

“What specifically have you liked about the way in which the draft LNRS was developed?”

“What specifically could have been done even better regarding how the draft LNRS was developed?”



A screenshot of participants’ comments on the whiteboard – with positive comments towards the green end and suggestions for improvement at the red end of the diagram. The full comments are listed below.

Comments on how the draft LNRS was developed:

Suggestions for improvement

- 3 hours is a bit too long for a Zoom meeting
- At some stage would be good to have comment on relative priorities around overlapping options (eg mosaics vs single habitat or species)
- Concern about delivery - farming community - real opportunity to get this right in terms of getting farmers to embrace nature recovery . Recognition about managing the natural environment. Blocker is focus on nature - need to say that production business is also important. (significance of current high sheep prices)
- Could have spent much more time discussing such as complex set of issues
- Face to face meetings - would have added more value (understandable this was not possible at this time)
- Found it awkward to move the conceptboard about
- Go out wider with consultation to local community groups with specialist knowledge.
- good to have more farming involvement

- Have found the whiteboard a bit tricky - when need to read the documents in detail easier just to have a pdf - can't download them from the whiteboard. Copies of the powerpoints would be helpful too to report back to work colleagues.
- I don't appear to have been involved and I am very disappointed.
- If time and resources had allowed for further survey work to fill gaps in habitat knowledge the maps would be more robust
- Is this going to be practical and deliverable? I'm a bit skeptical as I've seen a lot over the years
- Its difficult to get farmers to buy in unless there is something concrete
- more time if possible for this complex process - time also builds trust
- Need to link to delivery/ funds particularly for small organisations.
- Not enough time!
- Online meetings felt slow, not much content for a 3 hour meeting
- Opportunities to ensure LRNS is embedded at fundamental education level eg within schools,, part of training courses etc - don't jst wait for planning processes to have to tick a box
- Would be good to have an idea of how different options can be shown.
- Would be good to have wider communications/ summary about what the strategy is trying to achieve and how we get other members of our organisations to buy into this
- Would have been good to share docs more widely in own group with time to get widest input
- Would have been helpful to have the full draft document more than a day or two in advance of this last workshop, with enough time to read through properly and thus contribute more meaningfully in the workshop (2 x agree)
- Would like a clearer pathway to how the strategy will aid delivery - not a delivery plan but examples of how the strategy will facilitate delivery - may need to come from DEFRA

Neutral comments:

- A lot of talk about certain habitats and 'silo's' which is really useful but good to see how this all links together.
- Found it hard to make full contribution given time constraints in existing job, but not sure how this could be addressed - all LA are operating with limited resources, and the LNRS does need real time and effort.
- If we get this right it will be brilliant if we don't it will be a disaster.
- Making sure that local breeds and produce are taken into account in measure
- Need for wider community engagement but that will happen in due course
- The strategy is a great idea and plan. Reaching out to local people and groups with local knowledge would be beneficial. However I do appreciate this will have been made difficult due to covid restrictions
- Took a bit of time at the start to understand the benefits, and opportunities - to show that this isn't just another strategy
- We have to bring landowners on board otherwise we won't get the percentage coverage. Whether measures are aspirational or achievable

Positive comments:

- A huge task, and a well produced document
- At this early stage it is wide ranging - giving everyone a chance to look at every opportunity
- Coming together really well.

- Enjoyed the opportunity to discover new organisations to potentially work with
- Extensive stakeholder participation which helps ensure range of needs/ aspirations are covered
- Felt like comments made in the first stakeholder meeting did shape the strategy
- Frequency of stakeholder meetings throughout the process to keep everyone updates and get input
- Good wide engagement
- Good general communication throughout despite restrictions
- Good opportunity for lots of people to be involved through the use of Zoom
- good range of participants / stakeholders
- Good to bring it out in open and talk to a range of people
- Has been very inclusive in approach - gives everyone chance to contribute
- Inclusive of organisations like ours which hadn't been considered previously
- Interactive meetings and breakout rooms have been good and you've established common ground
- it has been a balance with the current pandemic - has helped to bring together in a manner and take part in a way then it might have been achieved before with just face to face - it will be good to see how it can be backed up with site visits on the ground and more face to face. so well done on bringing together consultations in this format.
- It's felt inclusive
- Large number of stakeholders participating
- Opportunities to feed in outside of meetings such as NCA descriptions and surveys. Allowed more discussion with other member of organisations.
- Really good way of collating together a wider range of comprehensive measures
- Regular ongoing meetings throughout the process with NE, WT, Districts, AONBs, NPs etc, with updates, actions etc; plus wider stakeholder engagement professionally facilitated. Therefore ensured comprehensive and effective engagement and input and ensured process has moved along swiftly.
- Seems to be a wide range of stakeholders involved
- Starting with NE's Habitat Network mapping saved time. Doesn't feel like any wheels have been re-invented
- The concept board was very useful to read and add comments.
- The engagement of so many different and diverse groups working together
- Timeline & next steps
- using technology very good- I wouldn't have travelled to meeting
- Very impressed by the number of attendees and views obtained. Achieved better through Zoom than perhaps could have been achieved by face to face meetings.
- well organised and focused
- well led with a dedicated staff resource at the County Council
- Well run within the confines of the online format and technical difficulties. The whiteboard tool is excellent, good facilitation

At the end of the meeting, participants were reminded to continue to feed back on the tables until the 30th April 2021.

Appendix - attendees

Pilot Area Team	Organisation
Andy Lees	North Pennines AONB
Ellyse Mather	Environment Agency
Julie Alexander	Allerdale Borough Council
Kate Tobin	Forestry Commission
Kath Milnes	Natural England
Keith Jones	Forestry Commission
Matthew Park	PAT - Barrow
Naomi Kay	PAT - Solway Coast AONB
Paul Evans	Cumbria Local Nature Partnership
Rachel Whaley	Cumbria CC
Stephen Trotter	PAT - CWT
Tim Duckmanton	Lake District NPA

Participant	Organisation
Adam Day	The Farmer Network
Barbara Smith	Bewcastle Parish Council
Clair McFarlan	Solway Firth Partnership
Daniel Rayson	Individual
Dawn McGough	Community Rail Cumbria
David Clarke	David Clarke
David Harpley	Cumbria Wildlife Trust
Dean Mason	Lake District National Park Partnership
Deb Muscat	Cumbria Biodiversity Records Centre Manager
Deborah Brady	Lifescape project / University of Cumbria
Fiona Knox	North Pennines AONB Partnership
Fran Richardson	ACT
Frank Mawby	Thornhill Meadows Trust & Watchtree Nature Reserve
Jayne Wilkinson	South Cumbria Rivers Trust
Julian Oston	Dallam Tower Estates
Kate Gascoyne	The Farmer Network
Kevin Holmes	SLDC parish council engagement
Marion Brown	Rusland Horizons Trust
El-Moustafa Eweda	Cumbria Biodiversity Records Centre
Olivia Nelson	Floodplain Meadows Partnership
Peter Faulder	Forgotten Lands ELM test
Peter Hensman	Lake District Estates
Peter Welsh	Yorkshire Dales National Park Biodiversity Forum
Richard Spiers	Interested party - Solway area - Watchtree Nature Reserve
Sarah Tooze	North Pennines AONB
Tim Jacobs	North Pennines AONB
Tom Dearnley	Forestry England
Warren Birch	Community Rail Cumbria

Facilitators	
Rhuari Bennett	3KQ
Ruth Dalton	3KQ
Jenny Willis	3KQ
Rachel Woodward	3KQ
Rowena Harris	3KQ