Link Local Nature Recovery Strategies Group

Briefing on the LNRS pilots

Introduction

Local Nature Recovery Strategies (LNRSs) will be an English local-level instrument to identify and prioritise opportunities for nature recovery. They will, most likely, be drawn up at the county level and DEFRA have indicated that there will be around 50. Once developed, they will be a mechanism for targeting funding, such as Biodiversity Net Gain (BNG) and Environmental Land Management (ELM, now called Future Schemes), and for building partnerships to deliver the recovery of nature.

Responsible authorities will be mandated to develop LNRSs and the process will involve stakeholder consultation across a broad range of sectors, moving beyond the usual environmental organisations involved in wildlife conservation. The idea is that there will be a democratic mandate, through the elected local authorities, and wider buy-in from a range of stakeholders who will then 'own' the process. This co-production of the LNRS should boost the chances of successfully delivering recovery at a local scale.

Local Nature Recovery Strategies are an approach that post-dates the *25 Year Plan* and the policy has come from the Environment Bill (clauses 100 – 104). This means that the relationship with the Nature Recovery Network (NRN), which is from the *25 Year Plan*, is not clearly defined. However, Natural England see LNRSs as a key part of the NRN as a mechanism for planning and mapping local delivery[1]. These will be the spatial tools used to target the NRN, both at the local and national level. As such, there will be need for robust mechanisms integrating LNRSs with the NRN and for resolving any conflicting interests between local and national needs.

In order to test the process of developing LNRSs, five pilots were announced in August 2020. The local authorities chosen were Buckinghamshire, Cornwall, Cumbria, Greater Manchester and Northumberland. The authorities were carefully chosen to test a number of variables and initially given six months, until the end of March 2021, to complete the process. This period was subsequently extended until the end of May 2021. The pilots were then scrutinised by Natural England and DEFRA, initially to produce a '*Lessons learned*'[2] as well as to determine what the future guidelines will be. DEFRA are open to the possibility that the final guidelines may be quite different to the process trialled in the pilots.

This briefing will summarise the experiences and outputs of the five pilots and assess the outputs to see how well Wildlife and Countryside Link's members' concerns have been addressed by the pilots. This briefing will inform a response to the consultation on LNRS guidelines and secondary regulations when it becomes public.

[1] https://naturalengland.blog.gov.uk/2020/08/19/a-pioneering-step-towards-delivering-englands-nature-recovery-network/

[2] https://www.gov.uk/government/publications/local-nature-recovery-strategy-pilots-lessons-learned/local-nature-recovery-strategy-pilots-lessons-learned

The five pilots

Whilst the overall process[3] was standardised across the pilots, there was considerable scope for variation in how each local authority approached the process. The pilot areas were deliberately chosen to explore a range of issues. These included:

- Unitary (Buckinghamshire, Cornwall, Northumberland), two tier (Cumbria) and combined (Greater Manchester) authorities.
- Inclusion of AONBs and National Parks (NPs) that are either completely contained in the LNRS area (AONBs: Cornwall, Solway Coast, Northumberland Coast; NPs: Lake District, Northumberland) and those that cross LNRS area boundaries (AONBs: Chilterns, Tamar Valley, North Pennines, Arnside & Silverdale; NPs: Yorkshire Dales, Peak District). The North Pennines AONB was involved in both the Cumbria and Northumberland pilots and there may have been some resource issues.
- Incorporation of pre-existing data – four of the pilots already had considerable local biodiversity data available and one of the aims was to assess how this can be incorporated. Cumbria was the exception but Paul Evans (Cumbria Local Nature Partnership manager) was the driver behind an audit of the local data available in the run up to Cumbria being announced as one of the pilots.
- Alignment with environmental nature-based policies such as tree planting and natural floodplain management - some authorities such as Greater Manchester and Cornwall had a strong recent history of natural capital work, whilst others were more biodiversity-centric.
- Integration with local plans - although the planning review means that there is uncertainty here and so this was harder to test. There have been differences in when in the process integration with planning was discussed. For example, council members of the Cumbrian Pilot Area Team (PAT) all had extensive planning experience, whilst in Buckinghamshire the discussions with planners did not occur until after the stakeholder engagement step.
- Differences in geographies – four pilots (Buckinghamshire, Cumbria, Greater Manchester and Northumberland) used National Character Areas (NCAs), as recommended by Natural England, for reporting back the baseline, whilst Cornwall used the county as a whole. Cumbria and Northumberland then moved to using habitats, Greater Manchester used seven habitat themes for the stakeholder engagement and only Buckinghamshire stuck with NCAs, although they used NRN objectives as themes for their final statement of priorities.
- There were two different methods used to produce the final habitat map. The first was an 'organic' approach whereby opportunities and measures were prioritised and then mapped. An alternative was a systematic conservation planning (SCP) approach through a company (Biodiversify[4]). Buckinghamshire's map was primarily via SCP and collated >1,000 lines of data from the stakeholder engagement to feed into it. SCP maps should then be used as a starting point for returning to stakeholders and determining the final opportunity maps. Cumbria and Northumberland both produced their 'organic' maps, and data was sent to Biodiversify to compare the two approaches, although there were no results in time for final submission . Neither Greater Manchester nor Cornwall used SCP.

[3] The process consists of 6 steps: 0) provision of national habitat map to the Pilot Area Teams; 1) incorporation of local data; 2) description of LNRS, which was reported back to DEFRA; 3) extensive stakeholder engagement to identify and prioritise opportunities; 4) statement of biodiversity opportunities and 5) local habitat map. These last two are the outputs that are the final LNRS.

[4] https://www.biodiversify.org/

Structural differences existed in the makeup of the Pilot Area Teams (PATs) that oversaw the processes, although all were run by the councils and included a Natural England lead, the Environment Agency and the Forestry Commission (Table 1). Each pilot area had a Local Nature Partnership (LNP) that was already up and running (although the Northern Upland Chain LNP in Northumberland will cover more than one LNRS when they are rolled out). All were closely involved, although only three were directly involved in the PAT (Buckinghamshire, Cornwall and Cumbria). Northumberland had two 'Task and Finish' groups reporting to the PAT, one for the biodiversity statements and one for the maps. There were few overlaps between the two in personnel and so the communication between the two was not as extensive as would have been ideal.

Buckinghamshire	Cornwall	Cumbria	Greater Manchester	Northumberland
Council Natural England Environment Agency Forestry Commission LNP BBO Wildlife Trust AONB (Chilterns)	Council Natural England Environment Agency Forestry Commission LNP (LNP chair is Cornwall WT) National Park? AONBs?	Council 6 District Councils Natural England Environment Agency Forestry Commission LNP Cumbria WT 2 National Parks 3 AONBs Local Enterprise Partnership	GM Combined Authority Salford City Council Natural England Environment Agency Forestry Commission LNP Records Centre (GMEU) Lancashire WT RSPB National Trust National Park NFU United Utilities Peel L&P City of Trees GM Natural Capital Group	Council Natural England Environment Agency Forestry Commission LNP Records Centre (ERIC NE) Northumberland WT 1 National Park 2 AONBs

Table 1. Organisations involved in each of the Pilot Area Teams.

Environmental NGO engagement seemed to vary, with most engaging few eNGOs at an early stage (the individual Wildlife Trusts were the exception), followed by much wider engagement at the stakeholder engagement Step. There was an issue with the ability of some of the smaller, national eNGOs finding it hard to get involved in some of the pilots, even at the wider stakeholder engagement phase. At least two of the pilots (Cumbria and Greater Manchester) involved county recorders, Greater Manchester before the stakeholder engagement and Cumbria subsequent to it, to ensure that species specific requirements were not missed out.

There are also distinct differences in how the pilots undertook the wider stakeholder engagement and some stakeholder groups were generally under-represented or missing (Table 2). Although it is not possible to directly assess the diversity of the stakeholders engaged from each stakeholder group, there is a wide range of numbers, which suggest that some pilots may have been more successful. Those with the longest engagement process recorded higher numbers (Cornwall and Greater Manchester), although that may be in part due a strong history of public engagement in those two areas.

Pilot	No. stakeholders engaged	Missing stakeholder groups		
		Youth	General Business	Wider public bodies*
Buckinghamshire	358	Missing	Missing	Missing
Cornwall	>700		Missing	Missing
Cumbria	47 (+farmers?)	Missing?	Missing	Missing
Greater Manchester	148 at meetings Plus 26 workshops >1,000 online survey			Missing?
Northumberland	56 from networks 22 online @32 land managers	Missing deprived areas	Missing?	Missing?

Table 2. Summary of stakeholder engagement, including under represented stakeholder groups, across the five pilots. * Includes the health sector.

- **Buckinghamshire** began the process with a webinar in February, followed by workshops. The workshops were invite only although they were opened up so that anyone could ask to be considered. They engaged landowners and farmers through their NE ELM convenor[5].
- **Cornwall** started their engagement in November and the process ran for a while, pursuing a number of different approaches. They delegated the landowner engagement to the Cornwall AONB who already had good relationships with farmers and landowners. It is worth noting that two members (Buglife and Bat Conservation Trust) were unable to get involved in the stakeholder process in Cornwall despite both having senior staff who live in the county.
- **Cumbria** involved a wider stakeholder group in a workshop back in November with the idea that they would help with the earlier involved in incorporating local data. They continued with a workshop in February for the wider stakeholder engagement.
- **Greater Manchester** undertook an extensive approach to stakeholder engagement with eight initial externally facilitated workshops in December/January. They then reviewed these, refined and focused on delivery by project area (which were the strategic themes rather than NCAs). Stakeholders were initially approached through networks but the sessions were opened up to self-subscribing individuals. There were further meetings and workshops during February (a total of about 90 hours). Land managers and farmers were approached by the ELM convenor, with two well attended (@30 in total) workshops and 50-80 responding to a wider online survey. By having the sessions later on (because of the late appointment of the convenor), they took suggestions to the farmer, which went down well as an approach.
- **Northumberland** had a short engagement window in February with an online form. Stakeholders were identified through the networks of PAT members and landowners and farmers were engaged by their ELM convenor. He worked with the NFU to expand his network and reach out to a wider audience.

[5] Natural England ELM convenors were appointed at a late stage (around January/February) to assess how LNRSs could be integrated with ELM However, in most pilots, they became involved in stakeholder engagement of landowners and farmers. Their posts have been extended post-pilots to look at integration of the two policies.

The outputs

All five pilots submitted their final outputs, a statement of biodiversity priorities and a local habitat map, on time, although at least three felt the need for further consultation with stakeholders. In particular, Buckinghamshire did not have the time for a full multi-round iterative process with their stakeholders to refine the SCP maps. There was some variation in the formats of the final documents. Most of the statements of biodiversity priorities were detailed biodiversity action plan-like documents, with the exception of Cornwall, which produced a much higher level document that was directly aimed at different end users (see Appendix). There was also variation in the way the habitat maps were presented. Cumbria[6] and Northumberland used storyboards; Cornwall integrated the layers into their existing portal set up by Exeter University[7]; Greater Manchester included the different layers in the same document as the priorities; Buckinghamshire included a couple of examples in their written document.

Themes, Outcomes & Measures

Each pilot has identified a number of themes for which there were outcomes, and measures for each outcome. There are between five and fifteen themes, with 13 - 76 outcomes, supported by 76 - 263 measures (Table 3). The themes were either nature recovery network objectives (Buckinghamshire) or habitats (Cornwall, Cumbria, Greater Manchester and Northumberland), whilst Cornwall's 12 themes mapped, in the most part, but not exactly, to 11 priority outcomes. For those pilots that grouped their themes by habitat, there were a number of habitats in common (woodland, moorland/peatland/heathland, waterways and wetlands, semi-natural grasslands, coastal & marine, urban; Table 4). Cumbria subdivided the broader habitat categories into 14 specific habitats.

Pilot	Themes	Outcomes	Measures
Buckinghamshire	5	54	205
Cornwall	13*	13	76
Cumbria	15	76	263
Greater Manchester	6	30	121
Northumberland	5	31	80

Table 3. Tally of the number of Themes, Outcomes and Measures across the five pilots. *Cornwall had 12 outcomes and 11 priorities, which can be overlapped into 13 themes.

Cornwall's outcomes were higher level and more visionary than the other pilots, with one per theme. For example, "*Our heathland is restored, resilient and connected supporting a greater abundance of species and teeming with pollinators*" compared to "*The size, condition and quality of healthy functioning peatland is increased*", which was one of six outcomes for peatland & heathland in Northumberland. Buckinghamshire's 54 outcomes were generally of similar brevity to Northumberland (eg. "*More wetland wildlife through functioning floodplains*").

There were common themes across the different outcomes in Northumberland (eg. "*The condition and quality of areas of semi-natural grassland types is increased*" and "*The condition and quality of riparian habitats and wetland habitats is increased*"). Greater Manchester's and Cumbria's outcomes

[6] https://www.cbdc.org.uk/about-us/projects/clnrn_story_map/
[7] https://lagas.co.uk/app/product/nature-network-landscape

were somewhere between those of Cornwall and the others (eg. "*A dynamic mosaic of active blanket bog, heath, upland springs and flushes and associated habitats storing carbon, supporting improvement in water quality, reduced flood risk and reduced risk of wildfires*" is one of seven for the upper moorland theme for Greater Manchester).

Habitat	Pilot
Woodland	B, Co, Cu, GM, N
Upland Moorland/Peatland/Heathland	Co, Cu, GM, N
Waterways	Cu (Lakes), GM, N
Wetlands	Co, Cu, GM
Semi-natural Grasslands	Co, Cu, N
Coastal & Marine	Co, Cu, N
Urban Green Infrastructure	Co, GM

Table 4. Habitats in common across the pilots. B(uckinghamshire), Co(rnwall), Cu(mbria), GM (Greater Manchester), N(orthumberland).

Measures varied in their specificity and there were measures that were similar in scope across all of the pilots. For example, "*Reconnect rivers with their floodplain*" was a desired measure in all the pilots. In general, the measures were detailed and specific for each of the outcomes, although in Buckinghamshire and, to a lesser extent, Cumbria there were a number of measures that were repeated across the different outcomes (eg. "*Follow the Lawton Principles (more, bigger, better, joined up)*[8] *in LNRS decision making*", six measures, Buckinghamshire; "*Incentives for habitat restoration*", 5 measures, Cumbria).

Habitat Maps

All the habitat maps are meant to be available online as interactive documents where different layers can be either viewed or ignored. It is difficult to know exactly what Buckinghamshire envision because they only gave an example, which would involve mapping outcomes and measures directly to areas of the map. So far, three interactive maps are available online[9,10,11], although Greater Manchester are currently not able to publish the underlying GIS layers as Open Data due to constraints associated with the data[12]. Currently only Cumbria have allowed layers to be directly downloaded, either as .pdf or .kmz files[13].

[8] Lawton (2010) "Making space for nature" (https://webarchive.nationalarchives.gov.uk/ukgwa/20130402170324mp_/http://archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf)

[9] Cornwall: https://lagas.co.uk/app/product/nature-network-landscape

[10] Cumbria: https://www.cbdc.org.uk/about-us/projects/clnrn_story_map/

[11] https://mappinggm.org.uk/green/?lyrs=gmeu_lnrs_existing_habitats,v_gmeu_lnrs_opportunities#open_street_map/11/53.5069/-2.3201

[12] However, by clicking on each parcel, more informative detail behind that parcel is then given.

[13] https://www.cumbria.gov.uk/planning-environment/lnrs/default.asp

Buckinghamshire produced their maps, with two zones outside the protected sites ('Maintain and Enhance' and 'Restore or Recover') using SCP. They showed two possibilities in the final document – one that covers 40% of the county, with little connectivity in the north, and another that covers 69%, with far greater connectivity (Figure 1). In an appendix, they suggest a further possibility that is similar to the 69% but that the 'Restore or Recover' area could be split into short-term and long-term priorities.

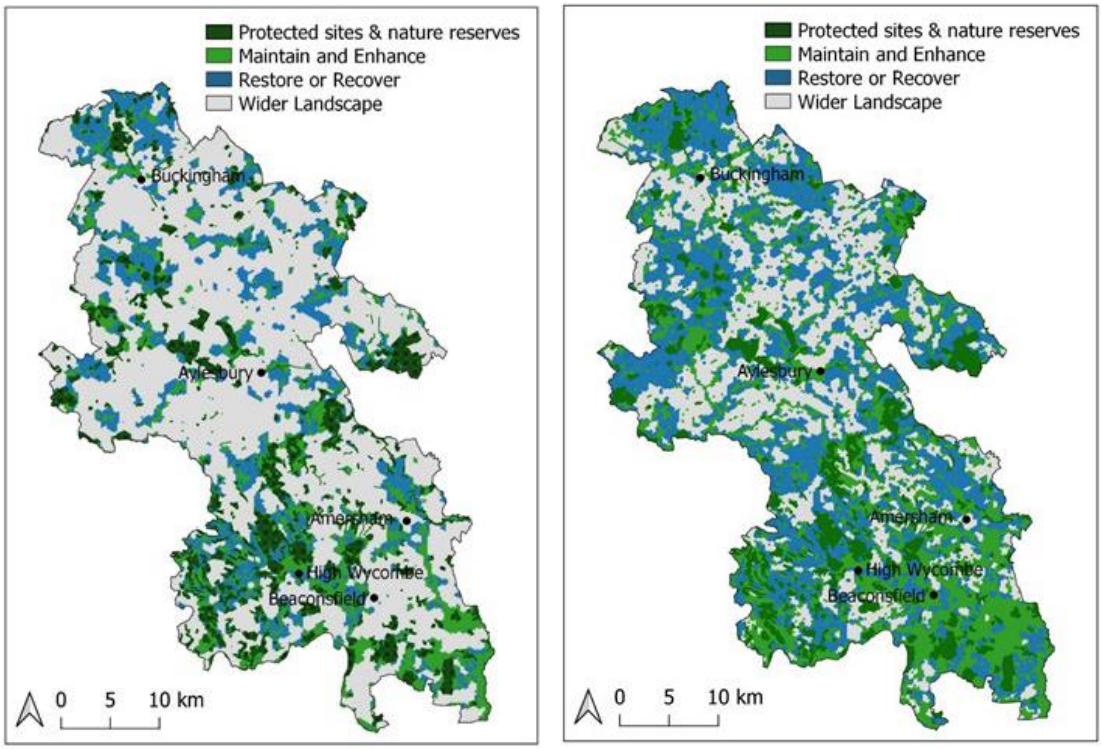

Figure 1. Buckinghamshire included two potential habitat maps. Both were outputs from SCP analysis. The first (left) covers 40% of the county, whilst the second (right) 69%. In an appendix, they suggest that the second habitat map could be used but that the 'Restore or Recover' zones are split into short-term and long-term priorities.

Cornwall's map is hosted on an existing website set up for them by Exeter University, which slots the habitat opportunity layers into a map that covers previous work. The interface is intuitive and the resolution is deliberately 'fuzzy' to reduce over-interpretation and potential conflict with stakeholders. In their document, they highlight maps of the existing nature network, which is the core area to protect and enhance (zone 1), along with potential areas for creating and restoring habitat (Zone 2). The habitat opportunities (Zone 2) on the online map are three habitats (woodland, lowland heath and wetlands) and when viewed together, there is significant connectivity across Cornwall. However, this is primarily facilitated by woodland opportunities (Figure 2).

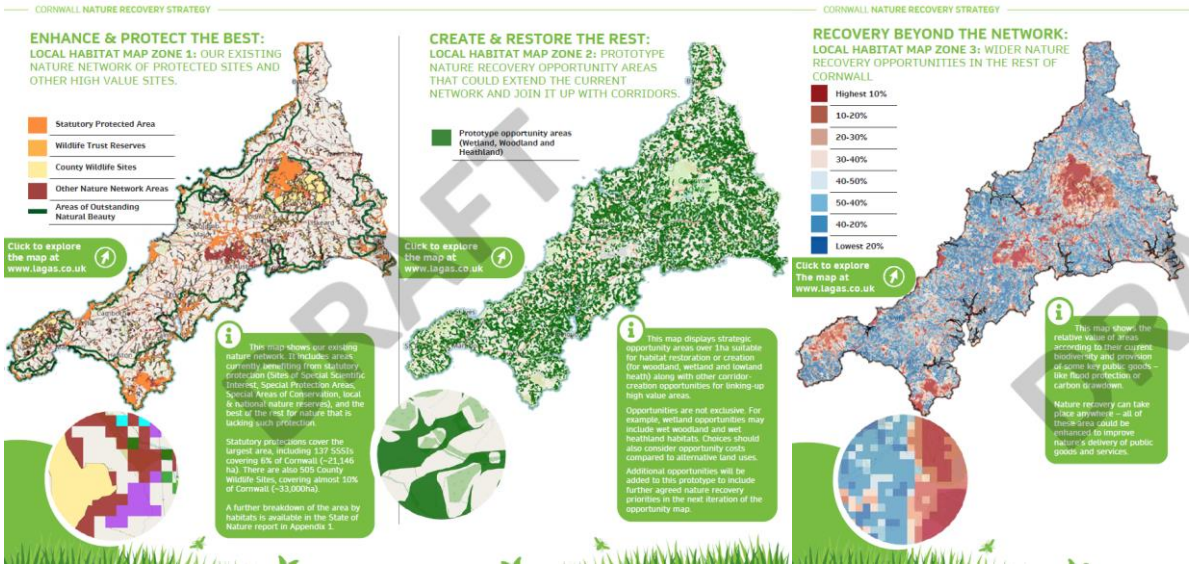

Figure 2. Cornwall's Nature Recovery and opportunities maps are in their statement of priorities. The layers for three terrestrial habitats (woodland, wetland and heathland) can be found on their mapping website[14].

[14] https://lagas.co.uk/app/product/combined_opp

Cumbria based their mapping directly on version 2 of Natural England's National Habitat Network Maps User Guidance[15], which advocates eight zones (four for existing habitats and four for network enhancement and expansion). They used the Habitat Network model with combined local-national data. There are high resolution layers for 18 habitats and when they are all combined, there is a connectivity across the LNRS, although most of that is down to the network expansion zone (Figure 3) and the majority of that is woodland.

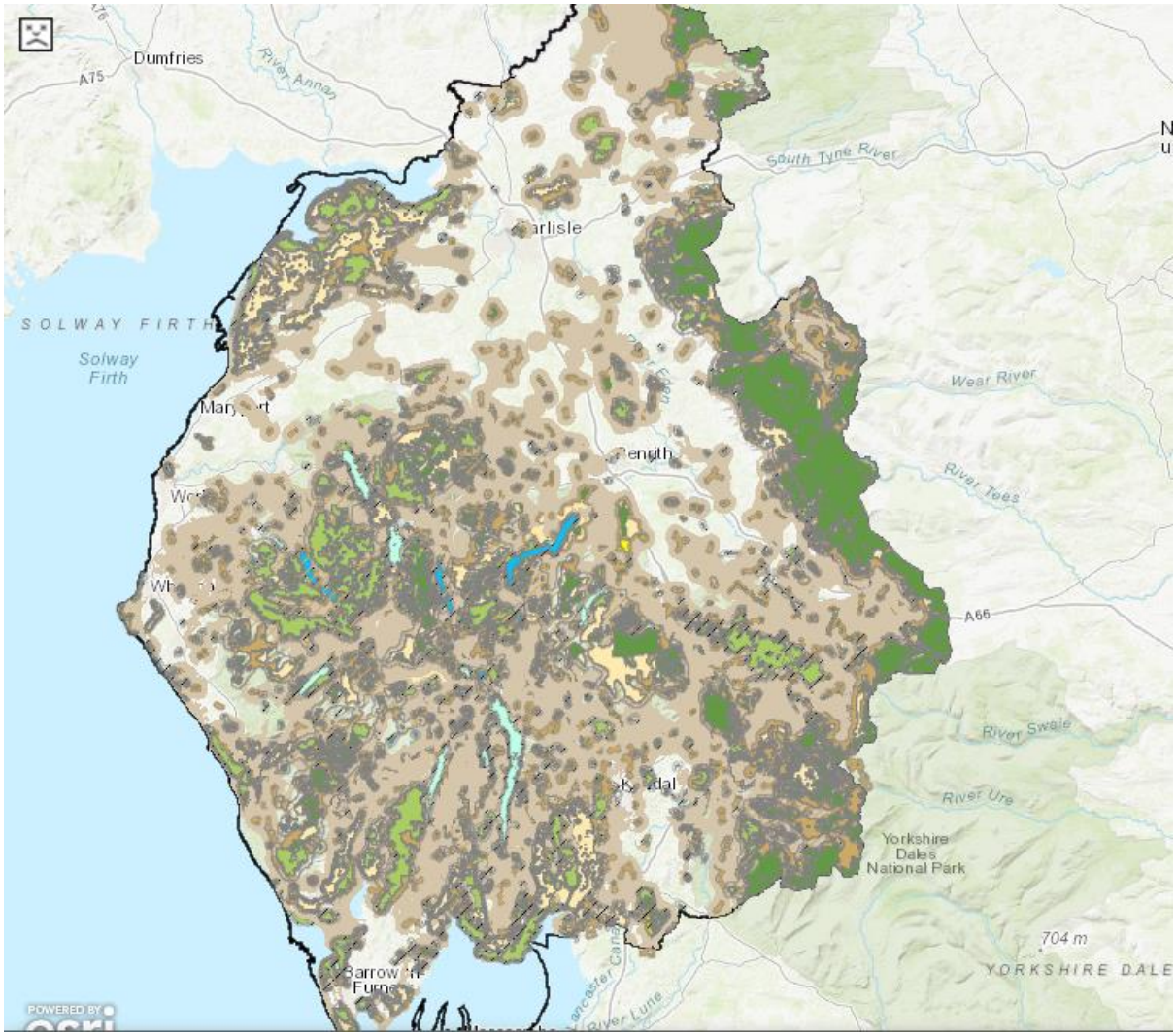

Figure 3. Cumbria combined nature recovery network opportunities map[16]. This is made up from 18 layers for different habitats. The light brown covering a large proportion of the county is the network expansion zone. For details see the current mapping guidance on the storymap page.

[15] https://magic.defra.gov.uk/Metadata_for_magic/Habitat%20Network%20Mapping%20Guidance.pdf
[16] https://www.cbdc.org.uk/about-us/projects/clnrn_story_map/

Greater Manchester use layers for the four habitat based themes (upland, woodland, water, grasslands), along with the urban area. When combined, the opportunities from all the layers allow for connectivity across Greater Manchester (Figure 4). Again, on first inspection, much of that is facilitated by tree planting opportunities.

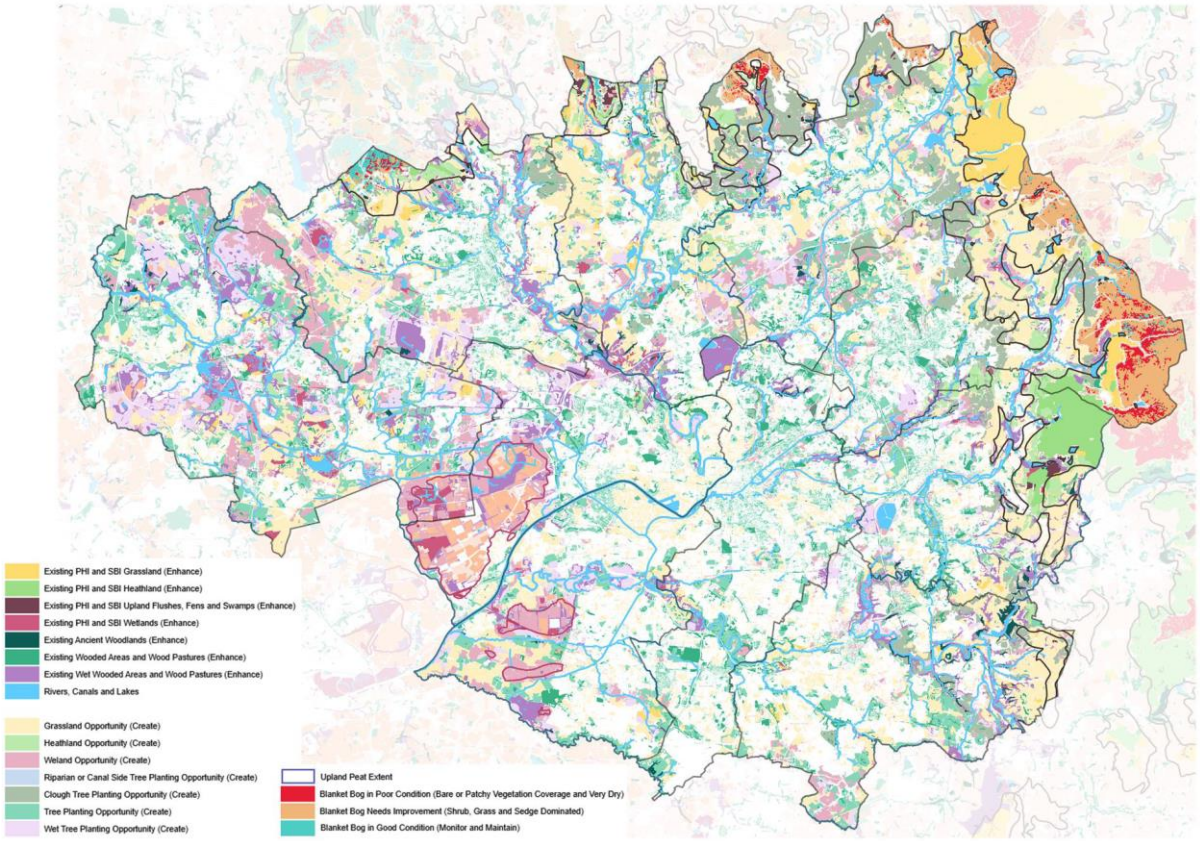

Figure 4. Greater Manchester combined nature recovery network opportunities map. This is a Prototype map produced as part of their LNRS Pilot The different layers will be available separately but it is not on their website yet.

Northumberland approach visualising the opportunity maps in a different way by presenting three maps – a priorities map, an opportunities map and a marine map (see Figure 5 for the first two). The priorities map is a map of current conservation sites with some buffers around them, and so is equivalent to Lawton's core sites. Due to a lack of time in the pilot, work to join up sites is in progress. Text in the document states "*The Priorities Map identifies areas for creating and improving habitat for nature and nature-based solutions. The areas for creating and improving nature are grouped around the five main themes used in the StoryMap as listed above*", so this is likely to be just the first layer. The opportunities map is represented by the NCAs across the county and represents wider opportunities for nature recovery. Clicking on each of them brings up a list of potential measures relevant to the NCA.

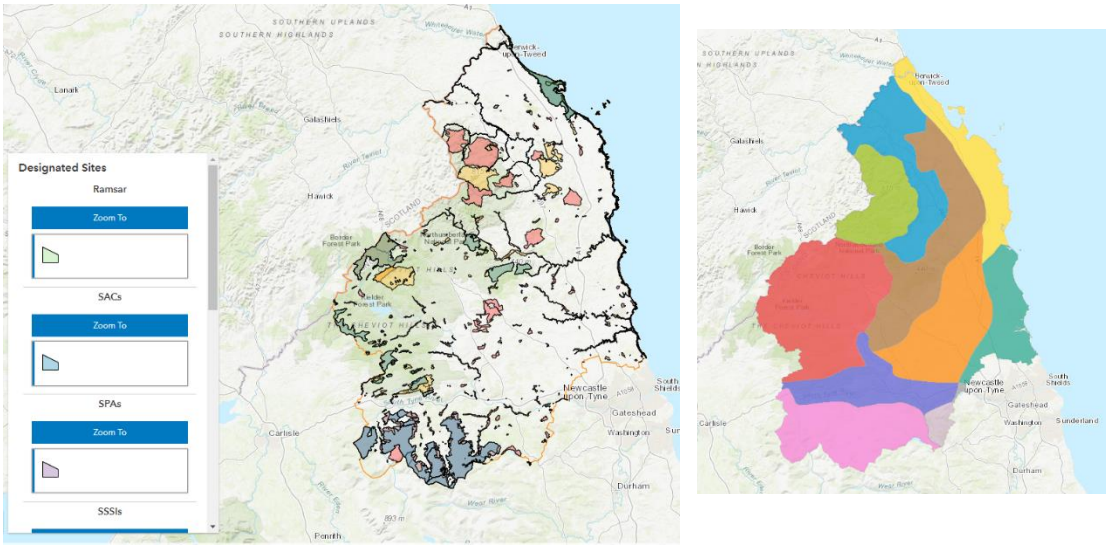

Figure 5. Northumberland priority map (left) and opportunities map (right). The priority map appears to only be designated sites and so is the core of a Lawtonian Nature Recovery Network. The opportunity areas appear to cover the whole county and clicking on each will give a list of potential measures.

How well do the pilots address our concerns?

Previously we identified three themes that are areas of interest for our members (*Process*, *Connectivity* and *Delivery*) and these can be used as a framework to assess how well the outputs from the pilots address them. There are a number of components to each theme.

1. Process

Resourcing and capacity

The overall budget for the pilots was £1m and each pilot was allocated £140k - £145k. One of the aims of the pilots was to determine whether that is sufficient. Funding needs to cover the time of fulltime staff with the relevant skills (from the local authority, second tier authorities, local Natural England staff, an LNP manager and capacity from the local records centre), collection and mapping of local biodiversity data, including data that isn't open access (such as botanical data), access to resources and conducting sufficiently wide stakeholder engagement, which may include outsourcing of stakeholder workshops. There are also likely to be further hidden costs. For example, not all LNRS areas will have people with the mapping skills to be able to take the national habitat maps and integrate local data with them. Either training will be required or there will need to be collaboration with organisations that have the relevant capability, which will need resourcing. There are also indirect costs provided by , for example, the local Wildlife Trusts, the National Trust and other Defra agencies.

Our work in preparation for responding to the comprehensive spending review consultation, and to support DEFRA's bid, estimates that for an eight month project, a more realistic estimate of direct costs is around £200k, which probably reflects the true cost of the pilots, with added indirect costs of around £180k[17]. To set up 50 LNRSs, this scales up to £19.5m in direct costs, £18.1m indirect and a further £0.6m for 12 full time DEFRA family posts to make a total of £38.2m. Furthermore, there will be an ongoing requirement for capacity and resources to manage the LNRSs once they have been developed and to monitor, report and review them on what is likely to be a five-year cycle. This will require a further £16.4m annually over three and a half years once the LNRSs have been developed[18].

[17] https://wildlifecountrysidelink-my.sharepoint.com/:x:/g/personal/bruce_winney_wcl_org_uk/ESdTfbbDlalEpz1YNqlP8DgBGQVaAIFu-J-TajifGOC2TA?e=xOJMTk

[18] The calculations are based on 18 months to set up the LNRS, which leave 3.5 years to the 5-year reporting and updating period

With the financial burdens councils are facing, it will be difficult to source this funding from council budgets. DEFRA are expecting some budget to be allocated from the treasury in 2022 and it is important that it is sufficient for the task.

This is also one of the themes from DEFRA's '*Lessons learned*'[19]:

"*LNRSs need to be adequately resourced with appropriate expertise and capacity to have the required impact*:

- *LNRSs require contributions from different parts of an organisation at different stages - for instance, Natural England and the Environment Agency required input from several different specialist officers*
- *existing capacity within the responsible authority is important to completing the process quickly and effectively - the pilot areas had existing capacity, but we recognise that this is not likely to be the case everywhere. The skills required included project management, stakeholder engagement as well as technical skills*
- *responsible authorities have to draw on partners to give them the capacity and expertise they need - they will not have everything they need 'in-house' so will need to draw on others, for instance by bringing in ecology, data analysis and geographic information system expertise*
- *resource needs will be different between responsible authorities depending on local circumstances like geography or administrative set up"*

Time

One concern that the pilots had is that they didn't have the time to complete a wide enough round of stakeholder engagement. The COVID lockdown created some problems but for many eNGOs, engaging with a wide range of landowners and farmers, especially those that are not well disposed to environmental groups, has long been a problem. The late appointment of Natural England ELM convenors in each pilot was a help and an equivalent role has been factored into the resource calculation above. This is under consideration by Natural England and DEFRA.

Stakeholder engagement will need considerably more than the month or so that some pilots allocated to the process. Face to face meetings and events will be one of the main ways of engagement and these will take time to organise and undertake, which means that an overall timeline of six months is unlikely to be sufficient time. The resource modelling allows for an average of 18 months for the LNRS process, whilst DEFRA are looking at a process that takes 12-18 months.

The National Habitat Map and other biodiversity data

The National Habitat Map will be the basis of the data supplied to each local authority. There is also a suggestion that the Living England satellite mapping project[20] will be feeding into this map, although this may have become part of the Natural Capital & Environment Assessment. Once authorities have this data, they are expected to incorporate local data and the NRN portal, or a version of it, should help by indicating other sources of data that are available.

Is the quality of data provided up to standard? For example, the focus on habitat data rather than a species led approach may lead to a problem for plants because the Botanical Societies data is not open access. A number of species led eNGOs are concerned that the needs of species and the relevant data sets might be overlooked. Bringing in, for example, county recorders at some stage

[19] https://www.gov.uk/government/publications/local-nature-recovery-strategy-pilots-lessons-learned/local-nature-recovery-strategy-pilots-lessons-learned

[20] https://jncc.gov.uk/news/jncc-harnesses-satellite-imagery-for-the-public-sector-the-living-england-initiative/

during the process, which is what Cumbria and Greater Manchester did, may go some way to addressing this and, as a minimum, is likely to make sure species needs are on the agenda.

There is a range of ways that species have been dealt with in the different documents. Three pilots (Buckinghamshire, Greater Manchester and Northumberland) address species mainly through the description of their LNRS area. During the process of creating the pilot LNYS, Cumbria liaised with taxon experts (facilitated by Buglife), whilst Great Manchester consulted vice county recorders to identify the best indicator species for each habitat type within Greater Manchester. They then used habitat parcels in combination with recent indicator species to create the LNRS layers and input layers for modelling applications.

More specifically for outcomes and measures:

- **Buckinghamshire** devote a whole theme to '*Species and Connectivity*'. In that theme, there is one outcome specific to Black Poplar and one measure that mentions water voles and otters. More generally, the outcome "*Favourable condition of invertebrate assemblages"* has the single measure "*Planting for pollinators*" and wetland birds and owls are mentioned . There is one outcome specific to invasive non-native species (INNS).
- **Cornwall** also has a theme devoted to 'species' in which the outcome and specific measures are quite broad and no individual species is mentioned. However, they give some example actions that refer to seals, bats and choughs, recommended introducing water voles and beavers and some measures against INNS. Each theme also has a panel that gives six (generally) broad groups of species that will benefit.
- **Cumbria** addresses species in the most comprehensive way of the five pilots. One theme is '*Species*' and they have a whole section on '*Developing nature recovery outcomes for species in the LNRS'*, in which they set out a proposed approach in an appendix to:
    - *"Check accuracy of the rare/threatened Cumbria Species lists provided by CBDC (e.g. identifying extinct species, misidentifications, or 'unusual 'visitors') through consultation with Cumbria Species recorders/leads and where possible with both national and local species/conservation organisations*
    - *Agree a list of Cumbria Priority Species which reflect both national and local species issues*
    - *Assess species status/requirements against the LNRS Habitat Outcomes and Measures (noting there may still be a need for more detailed habitat niche/feature/management on particular sites) and where possible link species (or groups/assemblages of species) within the Cumbria list directly to the Habitat (Outcomes and Measures)*
    - *Suggest new (or revised) Outcomes where these could address specific species needs*
    - *Confirm list of Cumbria Priority Species which need 'Bespoke' management/measures beyond those outlined in the Habitat Outcomes/Measures"*
- **Greater Manchester** have five outcomes, along with six measures, for specific species, or groups (upland bees and hoverflies, mountain hares, otter, kingfisher, trout, salmon, sparrow, yellowhammer, corn bunting and bats). There are also four further outcomes and three measures devoted to more general groups of species. They also have a number of measures against INNS.
- **Northumberland** has a column '*Associated species interest*' in tables summarising the key features and pressures for each habitat. Two of their outcomes concern groups of species (woodland-dependent species, and coastal waders and shorebirds), along with four measures (habitat for waxcap fungi, beaver reintroduction, native woodland wildlife

corridors and roost sites for coastal waders). Again there are a few measures for controlling INNS.

Species and species groups that are currently in vogue (beavers and pollinators) or are charismatic (birds, otters) tend to be mentioned most and invertebrates tend to be lumped together, often as pollinators.

One other issue is access to record centre data without compromising their business models. Natural England's model is that the data is open source whereas LERCs often rely on the income from selling the data to consultants. Cumbria seem to have found some work-arounds such as supplying habitat data but not the borders, whilst Manchester have supported the record centre financially and so have access. Natural England are aware of many of these issues and worked proactively with Cumbria to find solutions as they arose.

DEFRA are aware of a lot of these issues and data was a '*Lessons learned*' theme[21]:

"Good and accessible data is essential to the preparation of LNRSs. There were a number of important lessons here, including:

- *national-level habitats information provided to the pilots by Defra and Natural England was too voluminous and hard to use locally - Defra will further consider how best to support responsible authorities with the information it provides to them, including via a national habitat map (a requirement in the Environment Bill)*
- *there is a need for guidance on what data responsible authorities should ideally be seeking to use to prevent LNRS partnerships spending too long gathering data*
- *assessing habitat quality was difficult due to a lack of recent data - similarly, trend data for some species and habitat types were hard to ascertain*
- *presentation of data needs to be accessible enough to empower non-specialists to make informed suggestions about what their priorities are*
- *data licensing is a significant issue but it is possible to include datasets whilst protecting their commercial value"*

The role of LNPs and other partnerships

Local Nature Partnerships are likely to be integral to the LNRS process where they exist. All the pilot areas had existing LNPs and several (Buckinghamshire and Milton Keynes Natural Environment Partnership; Northern Upland Chain LNP; North East England NP) crossed potential LNRS boundaries, although no LNP covered two of the pilots. They were involved either explicitly in the PAT, or members of the LNP were on the PATs. DEFRA think that tight relationships will be important when LNRSs are rolled out. There will be LNRSs where LNPs don't exist, or are inactive, and so it is expected that there will need to be collaborations set up that look similar to LNPs. They also expect local discretion as to how they are involved. The pilots individually reported that there was a lot of enthusiasm and commitment from the partnerships but they were pilots run over a short timescale. It is likely that there will be LNRS areas where the partnerships are not so easily forthcoming or keen to be involved.

This is also a theme that also includes stakeholder engagement and links to the role of smaller national eNGOs (below)[22]:

[21] https://www.gov.uk/government/publications/local-nature-recovery-strategy-pilots-lessons-learned/local-nature-recovery-strategy-pilots-lessons-learned

[22] *Ibid.*

"*The pilots took different approaches to collaboration. The main lessons include:*

- *early engagement of a wide range of people and organisations is crucial to secure genuine engagement - effective collaboration takes time, so it is one of the first things to think about in preparing an LNRS*
- *there cannot be 'one-size-fits-all' engagement - different stakeholders need to be engaged differently. In particular, land managers' role as stakeholders and key delivery partners must be recognised*
- *local conveners performed a valuable role in bringing land managers into the LNRS process - aligning LNRSs with future schemes that reward environmental land management would likely require a local convener function*
- *professional facilitation expertise was brought in in several pilots to support stakeholder engagement workshops and was valuable*
- *use of stakeholder inputs needs to be transparent so individuals can see their priorities and views reflected*
- *establishing a common understanding of the purpose of LNRSs and the process with all stakeholder groups is essential to gathering constructive inputs"*

Stakeholder engagement and the role of smaller national eNGOs

There will be variation in the capacity and ability for local authorities to do the stakeholder engagement and, whilst DEFRA recognise this, they want the process to be locally driven. However, there is concern that some stakeholder groups such as the health sector and inner city communities have not been reached. Indeed, the experience of Buglife and Bat Conservation Trust highlighted the difficulties of small national eNGOs in getting involved with Cornwall, despite having senior staff living in the county. DEFRA think that the guidelines are likely to be more prescriptive about groups that need to be engaged. It is essential that all eNGOs are allowed the opportunity to engage with every LNRS process. It will then be up to them to decide whether they have the capacity of inclination to be involved. Indeed, this principal should be extended to all stakeholder groups.

Commercial forestry as part of LNRS?

One concern that has arisen in respect to at least two of the pilots with significant forestry plantations (Cumbria and Northumberland) is that commercial forestry enterprises should not be considered as an opportunity for LNRSs. There will be some blurring between the two but, for example, monoculture evergreen plantations should not be included as a biodiversity opportunity. Forestry per say only appears in two measures in Northumberland under the '*Peatland and Heathland*' theme (both measures are identical: "*Restructure or relocate woodlands planted on deep peat, guided by the Forestry Commission's open habitats policy*"). In the Cumbria document, they acknowledge that commercial forestry was a pressure on peatlands but also say that there is a "*need to consider how to highlight existing nature interests of commercial forestry and just as importantly opportunities for nature recovery in these areas on the maps*".

Outcomes and measures

Determining outcomes and measures seems to be a point in the process that a number of the pilots found challenging. This is partly because there was some confusion in stakeholders minds as to the difference between the two and also down to the way that DEFRA have defined the process. The defined process means that high level outcomes are identified and prioritised before measures are determined. The final step is to then map them as opportunities. For many this linear process is something that is unusual because they consider conservation in more of a parallel approach, quite often using a particular area as the starting point.

Flexibility of LNRS guidelines

To ensure that LNRSs have the greatest chance of succeeding, the DEFRA's guidelines should be flexible. Rigid guidelines could be taken as a form of a centralised top down process, which is likely to be seen by local authorities and eNGOs as disenfranchising them. Many potential LNRS areas have been collecting environmental data and doing conservation on the ground for decades and so have a great deal of experience and data that needs to be taken into account. Moreover, if one of the aims is to make the LNRSs democratically accountable by going through local authorities, then inflexible guidelines will undermine the process. However, there will be some need for firm guidance in some issues, such as ensuring as wide a stakeholder engagement as possible. They will also have to be able to deal with a range of situations including those local authorities that will have to start the process from scratch. The evidence from the pilots is that DEFRA have allowed a great deal of flexibility in how they were run and what geographies were used.

2. *Connectivity*

Relationships with AONBs and NPAs

A question that the pilots hoped to answer is the relationship between LNRSs and any Nature Recovery Plans (NRPs) that are being developed by AONBs and National Parks. As a result of the Colchester declaration[23], all AONBs should have NRPs in place within the next year. These are locally driven and each AONB's NRP is likely to be different and have different priorities. National Parks will also have a management plan that includes nature recovery but this will be top down. Most AONBs and NPs will cut across LNRS areas and a number of LNRS areas will have multiple AONBS and/or NPAs. Involvement of AONBs and NPs at an early stage should allow alignment at the local level. NPAs, as statutory bodies, were part of the PATs, whilst AONBs were also involved with the PATs.

At least two NPAs (Lake District and Dartmoor) are expected to explicitly have their management plans align with the LNRS. The Lake District Management Plan is currently out for consultation[24] at the moment and as context state that "*Cumbria is one of five Local Nature Recovery Strategy (LNRS) Pilot areas. The purpose of the Local Nature Recovery Strategy is to restore and link up habitats to deliver a bigger, better and more joined up nature network. This has tested our approach to developing the strategic framework for nature's recovery in the county. It has produced a prototype strategy and the partners and stakeholders involved across the County have for the first time in more than 20 years, an agreed prioritised statement of where nature can potentially be restored for the benefit of everyone*". Furthermore, measures of success include "*Nature recovery targets - to be developed through the Cumbria Local Nature Recovery Strategy pilot and linked to LDNP contribution*".

Only two of the pilots explicitly addressed alignment of different strategies. Buckinghamshire ("*For instance, further consideration is required in relation to linkage of the LNRS Outcomes measures to any future review of the Chilterns AONB management plan*") and Cumbria ("*As these [NPA and AONB] Management Plans come up for review they will need to reflect the outcomes in this LNRS*").

Relationships with the national Nature Recovery Network

[23] https://landscapesforlife.org.uk/projects/colchester-declaration

[24] https://www.lakedistrict.gov.uk/national-park-partnership/plan-at-a-glance

Theoretically LNRSs will constitute the national NRN but it is not clear how the top down NRN process will be aligned with the bottom up LNRSs. A NRN 'backbone' has been suggested, which links the Protected Landscapes[25]. This is currently at a conceptual level and relies heavily on two projects joining up Protected Landscapes – Big Chalk and the Northern Pennine Uplands[26]. How this will inform the assignment of LNRS areas is uncertain, along with the impact it might have on the national habitat data that will be provided to the local authorities. Overall connectivity between the LNRSs will be essential to ensure connectivity across the NRN, which is one of the reasons NCAs are proposed as a geography (they cut across LNRSs). Good relationships will be required between neighbouring LNRSs, perhaps at the level of record centres and/or LNPs, to facilitate connectivity, whilst AONBs, NPAs, catchment area partnerships etc. should help.

Connectivity across an LNRS was a concern and priority for three of the pilots. In Buckinghamshire and Cumbria, connectivity was a strong theme (one theme, seven outcomes and 15 further mentions for Buckinghamshire; two outcomes and seven further mentions in the text for Cumbria), whilst in Northumberland, all five themes had an outcome that was specifically about connectivity ("*The ecological connectivity between [theme] is increased*"). In the documents from Cornwall and Greater Manchester, connectivity only appears a couple of time in each.

Relationships with the ELM/Future Schemes

The E.L.M is, alongside Biodiversity Net Gain, the largest source of funding for delivering projects that deliver LNRS opportunities. The Local Nature Recovery component (component 2) is likely to be the major contributor, although Landscape Recovery might play a part. What the exact relationship between LNRSs and ELM is and how it will evolve is uncertain. Each pilot had a late appointment of an ELM convenor to investigate integration of ELM and LNRSs but they were generally used to help with engagement with the land manager/farming community. Their positions have been subsequently extended to allow time to assess ELM/LNRS integration.

Top down / bottom up approaches

Alignment with the NRN is a specific example of where centrally driven approaches (the NRN) need to work in harmony with bottom up processes. LNRSs need to be co-created from local engagement and local partnerships to engender the sense of ownership required for subsequent conservation action to be successful. The objectives of any LNRS will, for the most part, be implemented at the local level, often by local eNGOs and community groups.

However, at the national level, there may be habitats or priorities that could be missed or not fully included if the NRN is simply an amalgamation of all the individual LNRSs. There will be opportunities, most likely after five years because LNRSs may be obliged to report back to DEFRA. DEFRA will then have an overview and will be able to make suggestions and recommendations for changes. How strong they are and whether they will be implemented is something that is uncertain at this stage.

What about natural capital / nature-based solutions?

LNRSs are supposed to support wider environmental issues through nature-based solutions such as tree planting and flood management. These have often been thought of as value adds on top of the

[25] https://storymaps.arcgis.com/stories/e5236081d1354db8bdf64a0f3083d2a3

[26] https://naturalengland.blog.gov.uk/2021/06/05/collaboration-is-key-to-delivering-more-for-nature-and-people-through-our-national-parks-and-areas-of-outstanding-natural-beauty/

biodiversity data and have come up in some of the wider stakeholder discussions. The pilots have addressed this in different ways. Every LNRS refers to natural capital/ecosystems services as wider benefits from recovering nature but present them in a different way:

- **Buckinghamshire** devotes a complete theme to Ecosystem services.
- **Cornwall** lists wider benefits for each theme (from a set of 12 natural public goods and service).
- **Cumbria** has a table showing which of 10 applied to each of the outcomes and every outcome contributed at least to "Thriving plants and wildlife".
- **Greater Manchester** has a strong history of natural capital work and this came through in their document.
- **Northumberland** produced a table for each of the themes, which included six ecosystem services, in addition to biodiversity, as secondary benefits. They suggest that every outcome will have an impact on "Climate change mitigation/adaptation" and "Biodiversity".

When the outcomes and measures are examined in more detail, there is variation in the proportion of outcomes that either directly mention specific ecosystem services, or indirectly refer to them (eg. joining up rivers to their floodplains was inferred to help with flooding). These were 29% (Northumberland), 48% (Buckinghamshire), 50% (Greater Manchester), 69% (Cumbria) and 100% (Cornwall). A more detailed breakdown of some of the different ecosystem services is given in Table 5.

	Access	Air Quality	Carbon	Flooding	Food	Green Infrastructure	Health	Pollinators	Resilience	Soil	Water Quality	No. Outcomes
Buckinghamshire	2	4	5	6	0	6	1	3	4	8	3	**54**
Cornwall	5	5	7	6	2	2	6	5	5	3	7	**13**
Cumbria	4	4	2	14	0	7	0	6	2	3	7	**78**
Greater Manchester	0	0	5	8	0	6	1	6	3	1	4	**30**
Northumberland	0	0	1	5	0	3	0	0	0	0	1	**31**

Table 5. Tally of the number of Outcomes in each pilot that mention particular Ecosystem services.

What about planning?

One of the aims of the LNRS pilots was to ascertain how they might integrate with the planning process and there were some differences in how this was approached:

- **Buckinghamshire** intend the LNRS to be incorporated into local planning decisions and had four outcomes that had measures that directly referred to planning policy. They did two workshops with planners, with a further one planned, and so a full reflection by the PAT team hasn't yet been undertaken. They suggest that it would be worthwhile having planners on the PAT.
- **Cornwall** indicate that the LNRS should be a material consideration in planning. There is allusion to planning in a single Urban measure and they have a specific section on advice for planners and developers.

- **Cumbria** had representatives from nine local planning authorities on the PAT and the lead had a planning background. They suggest that LNRSs should inform and guide local plans and had feedback on the habitat maps that "*Planners considered the mapping to be useful in both strategic planning/site allocation and in the delivery of off-site Biodiversity Net Gain*". Three of their outcomes had measures that affect planning decisions or policy.
- **Greater Manchester** have a box on the relationship between LNRSs and planning system and mention that there is current uncertainty whilst waiting for the Planning Bill. They have no outcomes where planning is mentioned.
- **Northumberland** haven't addressed planning at all.

3. *Delivery*

How will LNRSs be used?

Once a LNRS is in place, the opportunities and priorities identified will need to be delivered on the ground. There are at least two ways that LNRSs can play a role in delivery of nature's recovery. The first is that they are used as a conduit for directing funding and initiatives (such as tree planting, peat and wetland restoration) towards the appropriate opportunities with the highest priority in the area. The most significant funding is likely to that coming from ELM and BNG, along with any other green funding (such as the Nature for Climate fund). They could also be used to help raise funding from private firms in a blended finance way. Secondly, incorporation of LNRSs into local plans would allow LNRSs to influence development decisions. Furthermore, local NGOs and communities will be central to delivering recovery through opportunities identified by LNRSs and so could be used to generate local enthusiasm and momentum.

Linked to this, how will LNRSs be monitored? DEFRA will be looking to review at least the larger LNRSs on a five year cycles so what will they be looking at? Will it be simply the LNRSs themselves, or some of the outcomes from delivery on the ground? Will they be using the reporting to show delivery of national / *25 Year Plan* targets?

All of the pilots are concerned with how the strategies might be delivered and devote space to how to fund and deliver on the ground, along with advice to, for example, developers and land managers on how to make use of the LNRSs.

This is something else that was picked up by DEFRA in their '*Lesson learned*'[27]:

"The end users of the strategies were an important consideration throughout the process:

- *the prototypes will appeal to a range of potential end users (including local authorities, Defra group, public bodies, landowners, Local Nature Partnerships, environmental organisations and developers) as they cover a broad set of potential environmental benefits as well as more specific habitats and species requirements*
- *LNRS products should look to achieve consistency across boundaries to make it easier to use more than one at a time*
- *certain end users require specific guidance on how to use the LNRS products for their means, such as planners or land managers*
- *a delivery plan is wanted by stakeholders to set out how to implement the potential measures identified in the LNRS - some pilots are investigating what a delivery plan might entail"*

[27] https://www.gov.uk/government/publications/local-nature-recovery-strategy-pilots-lessons-learned/local-nature-recovery-strategy-pilots-lessons-learned

Will LNRSs be used?

There is the big question as to whether LNRSs will actually be used. Some previous initiatives have seen only partial uptake and practical use. For success at a national scale, conservation opportunities identified by LNRSs will need to be implemented by every local authority. Have there been lessons learnt from the past to ensure this?

Moreover, the environment needs to be protected in the planning process. The pilots were supposed to investigate how LNRSs might be incorporated into local plans and this was barely addressed by most of them (see *What about planning?* above). There is a suggestion that LNRSs are being seen as planners as a way to guide BNG, with some suggestions that they be incorporated into local plans. **There is a need to think bigger than BNG and to for LNRSs to foster recovery of nature, they need to be able to prevent development in some areas and ensure that any development that does occur is compatible with nature recovery along the NRN.** However, the planning review and upcoming bill is casting uncertainty on the relationship between planning and the environment. Currently, there is no strong duty for LNRSs to be taken into account in planning decisions in the Environment Bill. Amendment 29 addresses this and such a duty would ensure that LNRSs are not just paper exercises that are then powerless to protect priority areas from inappropriate development.

Not business as usual?

The final question is will LNRSs deliver outcomes that are different to 'business as usual'? Business as usual, despite significant efforts and a few successes, has resulted in the continuing decline of nature. The *25 Year Plan* looks to reversing that and restoring nature throughout England so will LNRSs, aligned with a NRN, agricultural reform and BNG make a difference?

A final theme from DEFRA

As a final note, in their '*Lessons learned*', DEFRA highlighted a fifth theme, which was preparation for LNRSs[28]:

"*The pilots showed how responsible authorities can best set up for the LNRS process:*

- *strong leadership and transparency from the responsible authority was crucial in getting others involved from the outset*
- *establishing good governance quickly was important - all of the pilots had a 'pilot area team' which included Defra group arm's-length bodies, environmental non-governmental organisations, National Parks, Areas of Outstanding Natural Beauty, other local planning authorities and Local Nature Partnership representatives.*
- *tapping into existing networks was crucial given the time constraints, but LNRSs require a wide range of inputs and no single existing group can provide this"*

[28] *Ibid.*

Appendix – LNRS Pilot outputs

Buckinghamshire:

https://bucksmknep.co.uk/nature-strategy/outputs/

Cornwall:

https://naturecios.org.uk/blog/uncategorized/nature-recovery-pilot/

Cumbria:

https://www.cumbria.gov.uk/planning-environment/lnrs/default.asp

Greater Manchester:

https://democracy.greatermanchester-ca.gov.uk/documents/s15769/ITEM%2010%20Annex%20B%20Local%20Nature%20Recovery%20Strategy.pdf

Northumberland:

https://www.northumberland.gov.uk/Economy-Regeneration/Programmes/Rural-Growth-and-Innovation/Local-Nature-Recovery-Strategy-Pilot.aspx

Note: not all available yet