

ALERC

Association of Local Environmental
Records Centres



Local Environmental Records Centres and Local Nature Recovery Strategies



Author: Tom Hunt (ALERC)

Version: 01 (April 2021)

Summary

Local Nature Recovery Strategies (LNRSs) should be based on sound and trusted information and data. Through the provision of existing data and evidence services and adaptation of current outputs, as well as the development of new solutions and products, Local Environmental Records Centres (LERCs) provide a range of services that deliver this, adapted to the needs of individual localities.

Current services

- Context setting
- Building a baseline / collation of existing evidence
- Green Infrastructure mapping
- Species, habitat and sites data
- Data visualisation and interpretation
- Stakeholder engagement.

Developed services

- Enhanced mapping (natural capital / carbon / connectivity etc.)
- Putting trust in data (data standards / quality assurance)
- Support for surveys and data gathering
- Maintaining metadata
- Linking local policies.

Why Local Environmental Records Centres?

- Our members employ approximately 130 staff in England, with each team focused on delivering services to well-established local networks of partners and clients to inform their activities and decisions at a county or regional level.
- ALERC's accreditation system, which was set up with support from national partners including statutory agencies, and local government, requires members to demonstrate impartiality in their policies and services. This is vital to the success of developing nature recovery targets, areas for investment within our landscape, through mechanisms such as Environmental Land Management Schemes (ELMS) or Biodiversity Net Gain (BNG). LERC products and services can support delivery and monitoring at a local level, and their reach within communities, local projects and initiatives can provide additional value.
- ALERC members work to national data standards and collaborate across boundaries to deliver services to partners in different regions. This is key to many areas of the Nature Recovery Network (NRN), where administrative boundaries do not sync directly with the biodiversity landscape.
- LERCs are members of, or work closely with, key local partnerships such as Local Nature Partnerships (LNPs) and Local Wildlife Sites partnerships.

The LERC not for profit business model allows for all funds gained to be invested back into the development and provision of local biodiversity services.

Cover photo; Peatlands © Centre for Environmental Data and Recording

Introduction

This document sets out a role for Local Environmental Records Centres (LERCs) in key aspects of the biodiversity net gain process as currently defined. The intended audience for this document includes LERCs, Natural England, Defra and other organisations the Association of Local Environmental Records Centres (ALERC) would like to collaborate with on net gain delivery. Once the projects are more clearly defined ALERC will develop a separate document that sets out our offer to developers and consultants (LERC client base).

LERCs are 'not-for-profit' organisations that collect, collate and manage information on the natural environment for a defined geographic area. LERCs support and collaborate with a network of experts to ensure information is robust, and make information products and services accessible to a range of audiences including decision-makers, the public, and researchers.¹

LERCs collaborate at a UK-level via the co-ordination of ALERC. ALERC is a social enterprise, employs a member of staff, has a Board of Directors drawn from the ALERC membership and aims 'to provide a central voice for the views and concerns of the Records Centre community, whilst building a support-based network of knowledge and advice to meet the needs of its members.'²

To become an accredited member of the ALERC, LERCs must demonstrate that they are an impartial source of data and information. The LERC network works to national standards and collaborate across county boundaries where this is required for the purpose of service delivery. The provision of data and information-related services to inform and monitor net gain in their area fits well with these commitments. It would also be pertinent for the information, monitoring and reporting requirements of biodiversity net gain to be strongly supported in any related policies, best practice guidance and standards.

The following table describes how LERCs can lead on the delivery of data and information services for the key stages of delivering biodiversity net gain. There will be costs associated with initiating some services that we will need to seek external funding for, for example the development of a database to manage the offset registry and associated reporting. However, once the systems are in place, it is anticipated that LERCs will cover the costs of further development and maintenance along with the generation of new data through charging a competitive rate for biodiversity net gain-related services. It is worth considering trialling the following ideas and reviewing the outputs to ensure they meet the requirements of all stakeholders.

Current Services

Context Setting

LNRSs in any area should use data already collected for that area to help plan future surveys and help answer questions about incoming data, such as what priority habitats are already known to exist, which ones are under surveyed, what species are present with specialist requirements and so on. Using this information to highlight data requirements and plan future surveys can save time and costs by ensuring data gathering is appropriate, valid and verifiable. Local knowledge/context held by LERCs can also help inform prioritisation, or the hierarchy within which new potential habitats should be targeted within a landscape.

Building a Baseline

The volume, accuracy and precision of habitat data can be very variable for different localities. It can also be disparate and available only in from different places and in different formats. Some of it may not even be available digitally.

^{1,2} Association of Local Environmental Records Centres website: <http://www.alerc.org.uk/>

LERCs are in an ideal position to be build a digital habitat baseline for a local area, whether that means starting from scratch by searching for available sources of data, or by augmenting a known dataset with data from other sources and newly digitised data. LERCs also have knowledge and experience of digital formats and standards and techniques for manipulating digital maps and are therefore able to combine data sets into single layers where necessary. A baseline may benefit from older data where there is not recent data present or where it is important to show habitat change or stability. In these cases, legacy data might be sought which could even require digitisation from paper sources. LERCs are experienced in turning information stored on paper into easily accessible, shareable and useable digital data.

Green Infrastructure Mapping

According to some definitions, Green Infrastructure is “a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services’ in both rural and urban settings”. This is not the same as habitat and is designated and classified in a different way. It can be important for LNRs, especially where people’s access to green space is a consideration.

LERCs can use existing data or they can extract data from digital maps to create greenspace maps.

Species Data

Whilst it is expected that LNRs will be highly dependent on habitat and land use mapping, they can also benefit from the use of species data as well. This can be particularly important for protected species or species of conservation concern and also species that are indicative of particular habitats.

Data Visualisation

Displaying data in a clear and easily digestible way, whether that’s through maps, charts or other means, is a very important method for understanding the biodiversity of an area. LERCs already provide data visualisations for local partners and are therefore well placed to do the same for LNRs.

Data Visualisation

A key element of an LNRs is to “bring a broad range of groups of people together - from farmers to businesses to local communities - to identify and agree priorities for restoring nature”. LERCs are already working with a wide range of partners, including local communities, and are well placed to facilitate such discussions. This has happened in the case studies above, where the LERC was able to bring stakeholders together to input and comment on the work, making it more robust and providing greater credibility.

Developed Services

Data Visualisation

Using data to calculate and map aspects such as habitat connectivity or biodiversity opportunity is an important step towards the development of the NRN and an LNRS. LERCs either have direct experience of this or have access to expertise in it through partners or fellow LERCs and are able to employ industry recognised decision support tools, data modelling frameworks, and bespoke coding and programming to deliver:

- Ecological network mapping
- Habitat connectivity mapping
- Biodiversity opportunity area mapping
- Habitat suitability mapping
- Modelling, e.g. access to greenspace.

Case Study:

[Mapping the Hampshire Ecological Network](#)

ALERC member, Hampshire Biodiversity Information Centre (HBIC), was contracted by Natural England in 2015 to produce a detailed ecological network map for Hampshire on behalf of the LNP. The resulting map represents the hierarchy of international, national and locally designated sites of importance for biodiversity, plus other priority habitats and, importantly, areas identified for habitat restoration or creation.

PDF maps and GIS layers for each local planning authority in Hampshire, which display the location of the hierarchical components of the ecological network and provide a 2km buffer (beyond Local Planning Authority boundaries), were made available. GIS layers provided the associated attributes describing each polygon in terms of its designation type. These layers are easily updated on an annual basis so changes in the environment are represented. A full set of [metadata](#) can be found online.

Putting trust in data

It is of paramount importance that trust is held in the data that underpins LNRSs. This means that they must have a “known verification status” i.e. are categorised on whether they have passed through a verification process, what the process was and what the result was. LERCs routinely enable species records to achieve a verification status and can use similar processes for habitat records. Some are already doing so and providing greater trust in data as a result.

This is done by:

- Comparing different datasets collected through different methodologies, particularly national datasets versus local ones.
- Comparing habitat datasets with records of species associated specific habitats.
- Comparing habitat datasets to recent aerial photographs - a relatively quick and cost effective approach that adds some confidence to habitat datasets.
- Ground truthing. This is on the ground observation of habitats to verify their correct classification and is most cost effectively used on a sample of each classified habitat.

Trust in data is also gained when data are validated. This means making sure they conform to conventions and standards and are readable and understood by humans and computer programs. LERCs regularly ensure species records are valid and can do the same for habitat records by:

- Ensuring they comply with known standards as and when these are published.
- Running queries and updates to ensure specific parts of a record, e.g. dates or spatial coordinates, are correctly formatted and within limits.
- Data are without gaps or overlaps.

Being part of a national movement means that LERCs work together to share best practice in data management and can ensure political boundaries are no impediment to the production of reliable ecological maps by:

- Working with neighbouring LERCs to make cross boundary mapping seamless.
- Acquiring data from neighbouring LERCs where needed, e.g. to buffer beyond a county boundary.
- Providing training and support from one LERC to another.

Support for surveys and data gathering

Where existing data are not available or not recent enough to be included in an LNRS, new data may need to be gathered. LERCs can assist with this in various ways and to varying degrees by:

- Completing surveys themselves
- Organising training events for potential new surveyors or current surveyors looking to develop their surveying competencies or learn to use how to use apps in the field
- Contacting and contracting known surveyors
- Facilitating access to land by holding and managing complex information about land ownership and by gaining permission from land owners to survey specific sites
- Promoting the need for funding of surveys through new and existing policies, for example the National Planning Policy Framework which requires local authorities to access up to date environmental information
- Digitisation of field data collected on paper.

Maintaining Metadata

Metadata and continuous monitoring data should be generated as part of the development and continuation of LNRS and should be stored and used in reporting. LERCs manage this by:

- Keeping a meta database of all the data used in an LNRS, including information on where it is available from, when it was last updated and what classification system it uses etc.
- Keeping a meta database of what habitat or species monitoring activity has been carried out, when and who by etc.

Linking Local Policies

Acting as a repository of accessible LNRS maps and information, LERCs are ideally placed to share this information for other policies through existing partnership agreements or through the formation of new ones with:

- Local Planning Authorities for work on local plans & GI strategies.
- Parish councils for work on parish or neighbourhood plans.
- Landowners to inform Environmental Land Management Schemes.
- Catchment Partnerships.

Work with your LERC

Discuss the data needs for the LNRS in your area with your LERC. If your organisation is responsible for delivering part of an LNRS or coordinating the delivery of the whole project, you will have questions about how your work will be underpinned by robust data. You may be a:

- Local authority team member or representative
- National Park Authority team member
- Wildlife Trust team member
- Local Nature Partnership team member or representative
- Natural England team member
- Conservation organisation team member
- A landowner
- An individual stakeholder or member of a group not listed above, e.g. a local community group.

Find your LERC using our [interactive map](#) and get in contact to discuss your data needs.