Natural England Commissioned Report NECR057

Local Record Centres Business Model Review

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Foreword

Natural England commission a range of reports from external contractors to provide evidence and advice to assist us in delivering our duties. The views in this report are those of the authors and do not necessarily represent those of Natural England.

Background

Natural England commissioned the review of Local Record Centre (LRC) business models to understand the costs associated with maintaining species and habitat datasets collated for a geographical area.

LRCs are run in partnership on a not-for-profit basis to collect, manage and disseminate information relating to wildlife, wildlife sites and habitats, typically at a county-scale.

In addition to the normal costs of running any organisation a fundamental requirement of an LRC is to maintain and update the collation of species and habitat data which have been collected within their area. These overheads may or may not be explicitly underwritten within the LRC funding agreements. Where they are not underwritten the LRC needs to attempt to recoup these either through providing products which are charged for and/or through the use of volunteer staff time to assist with the digitisation of the sources. As a result LRCs are often focused on uses which will provide a financial return and may be restrictive over the use of their data holdings by other users (due to the risk of their core business being undermined).

The overall requirement for this piece of work was to gain additional insight into the scale of the basic overheads and also the uses and services that this information underpins. Part of the purpose of the work was to identify uses beyond those to which data is already being applied to.

This work forms one element of the Defra Fund for Local Biodiversity Recording, a three year project to develop the national network of local biological recording.

Natural England will be using the report as one piece of evidence in its review of the overall biodiversity programme and to support its advice to Defra on developing the national network of biodiversity recording.

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Further information
This report can be downloaded from the Natural England website: **www.naturalengland.org.uk**. For information on Natural England publications contact the Natural England Enquiry Service on 0845 600 3078 or e-mail **enquiries@naturalengland.org.uk**.

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LRC Business Model Review

Natural England

Final Report

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1.0 INTRODUCTION

1.1 This report is an investigation into the business model of Local Record Centres (LRCs). The research looks at a selection of established LRCs in England. It considers aspects such as size, income, costs, activities, use of data and perceptions on the sector in which they operate. LRCs collect, collate, manage and disseminate information of known quality relating to the wildlife, wildlife sites and habitats for a defined geographical area to support activities such as strategic planning, development control, conservation management, monitoring and reporting.

1.2 LRCs are run on a not-for-profit basis and receive funding from a number of sources, particularly service level agreements (SLAs) with local authorities and government agencies. They also receive income from servicing data requests typically from consultants working on behalf of developers. Other income comes from project work and sources such as grant funding. There are substantial overheads associated with running an LRC. In addition to the normal costs associated with running any organisation (management, accommodation, equipment, etc) a fundamental requirement is to maintain and update the collation of species and habitat data which have been collected within the area. These overheads may or may not be explicitly underwritten within their funding agreements. Where they are not underwritten the LRC needs to attempt to recoup these either through providing products which are charged for and/or through the use of volunteer staff time to lower costs.

1.3 The LRC business model has essentially two components: core overheads that underpin a range of uses and delivering a service to specific uses. As a result the LRCs are often focused on uses which will provide a financial return and this may restrict the use of their data holdings by other users (due to the risk of their core business being undermined). An aim of this study is to gain additional insight into the scale of the basic overheads and also the uses/services that are currently underpinning this. It is also hoped to identify uses to which the data are not being applied and ideally to identify a 'tipping point' where, if the LRC were adequately resourced, the number of uses to which the data are applied significantly increases due to the financial barriers being removed.

1.4 The NBN Trust Position Statement on Local Record Centres 2004 defines a LRC as "*a not-for-profit service run in partnership for the public benefit, which collects,*

manages and disseminates information of known quality relating to wildlife, wildlife sites and habitats for a defined geographical area."

1.5 The Statement outlines the functions of a LRC, dividing them between essential and enhanced. The essential functions suggest that a LRC has to:

- Build and maintain partnerships with local authorities, statutory agencies, conservation NGOs and voluntary recorders
- Have transparent and accountable governance
- Understand and meet the needs of users
- Provide biodiversity information and products to users
- Liaise as appropriate with the NBN Gateway and related principles
- Manage, capture, protect and archive data – for at least BAP/RDB species, habitats and sites
- Have suitable electronic data management systems, including GIS
- Encourage and support high quality recording
- Ensure quality control through validation and verification
- Network with the majority of voluntary recorders
- Manage and train staff.

1.6 The enhanced functions include: carrying out surveys; having complete/comprehensive data coverage; using GIS systems that can map species to habitats; running voluntary recording programmes; providing public data access/education; integrating data with wider information, interpretation and evaluation; supporting monitoring initiatives (local wildlife sites, BAP, etc); providing enquiry services; creating publications; and offering biodiversity project management, etc.

1.7 The LRC Operation Guide published by the NBN in 1999 states that there is an increasing demand for information to influence sustainability decisions – but this information must be credible, thus it must be:

- As complete as possible
- As accurate as possible
- Well maintained
- Readily accessible
- Up-to-date
- Easy to use.

1.8 In identifying user needs it highlights that, "*many … will not clearly understand their own needs let alone the … products needed to meet them."* It also goes on to say, that it is *"difficult to assess real needs as opposed to perceived needs*."

1.9 The Guide includes a comprehensive schedule of potential data needs. This is included in Appendix 1.

1.10 The research has been generated through a mix of desk-top research, face-to-face and telephone discussions with the LRCs and telephone interviews with data users. The LRCs discussions used semi-structured questionnaires and covered a wide range of topics. Consequently they lasted at least one hour, and sometimes nearly three. This gives scope for a reasonable margin for error. There is also a degree of interpretation applied to the results of these discussions, as the definitions used for different aspects, e.g. local wildlife site monitoring, were very often open to interpretation. Furthermore, in some cases, approximations had to be made in relation to certain figures due to the fluid nature of the data in question. The report's findings should therefore be interpreted in this way. The report offers a generalised picture of the LRC sector. The findings should not necessarily be taken literally and all data should be considered to be close estimations rather than being exactly precise.

2.0 EXISTING RESEARCH

2.1 This section considers the existing research that appertains to this study. It pulls together excerpts from a variety of documents related to:

- Size and cost of running a LRC
- Breakdown of LRC activity
- Uses of LRC data and related income
- Potential uses of data.

2.2 The documents analysed are:

- Running a Local Record Centre – NBN/The Wildlife Trusts – 2001
- Improving Efficiency of Data Collation/Management by Local Record Centres – JNCC – 2007
- Review of Local Record Centres in the UK – Natural England – 2007
- The National Biodiversity Network Southwest Pilot Project – English Nature – 2004
- Cumbria Biological Data Centre Business Plan 2009-2011 – Cumbria Biological Data Network – 2009
- East of England Biodiversity Needs – East of England Biodiversity Forum – 2007
- Biological Records in Essex: The Business Plan – BRIE – 2008
- Biodiversity Data Needs for Local Authorities and National Park Authorities – Association of Local Government Ecologists – 2006
- Data Requirements by Natural England: Species Data – Natural England – 2010
- Validation of Planning Applications – ALGE – 2007
- Developing Methods & Costing Regional Custodianship Service for BAP Priority Habitats – SERC – 2005
- A Regional Custodianship Service for BAP Priority Habitat Inventories – SERC – 2005.

Running Costs & Activity Breakdown

2.3 The information available from existing research assessing LRC staff numbers, funding and activities is limited. The Improving Efficiency of Data Collation/Management by Local Record Centres Study, which focused on improvements to the Recorder software, found that the total manpower resources

available to the Sussex Biological Record Centre are three members of full time staff, one part time (three days a week) and an average of three volunteer days a week. Of this, approximately half the staff's time is spent on data management functions.

Table 1 – Data Management Functions Breakdown

Function	No. days per week	
	Min	Max
Digitisation of raw data from paper (primarily volunteer time)	2	3
Preparation of electronic data for import	1.5	2
Importing electronic data	1	1
Running validation checks and correcting/deleting dubious records	2	4
Running queries and reports off the data for customers and stakeholders	2	2
Total	**8.5**	**12**

Source: JNCC 2007

2.4 The Review of Local Record Centres in the UK in 2007 was a survey of 46 established, two establishing, one inactive and seven prospective LRCs in the UK. There was a wide range of staff numbers at the LRCs, ranging from 0.1 to over nine. The staff numbers were found to be influenced by the LRC's level of funding, its geographic coverage, the state of the LRC's development and the number/quality of enhanced functions offered.

2.5 Interviews with staff found that it was difficult to differentiate between core LRC and advanced functions, as individuals' roles became increasingly blurred over time.

Table 2 – Number of People Working at LRCs Surveyed

LRC Development	Average Number Employed	Range	
		Minimum Employed	Maximum Employed
Established – Staff FTE	2.9	0.1	9.4
Establishing – Staff FTE	2.1	1.2	3.0
Established LRCs – Use of Volunteers	3.2 (14 hours/week total)	N/k	18.0 (75 hours/week total)
Operating Costs, £	91,254 (based on 2.9 FTE staff)	14,800 (based on 0.6 FTE staff)	363,000 (based on 5 FTE staff)

Source: Natural England 2007

2.6 Table 3 shows the average proportion of time spent amongst various activities at the 56 LRCs. The largest amount of time is spent on 'analysis and reporting' the other significant areas include 'data entry' and 'data management'.

Table 3 – LRC Activity Breakdown

Activity	Proportion of Time, percent
Analysis & Reporting	19.0
Data Entry	16.0
Data Management	12.0
Administration	7.5
Business Development	7.0
Volunteer Support/Liaison	6.5
Technical Development	6.0
Other	5.0
Surveying	4.5
Training Volunteers	3.0

Source: Natural England 2007

Note: Not clear why the proportions do not total 100 percent

2.7 Over half the LRCs provided non-core services, the most common activity being the administration of local wildlife sites systems. Other services covered:

- Contextual information on data
- Data interpretation
- Survey work
- Education/awareness-raising
- Consultancy
- Advice
- GIS
- Screening of planning lists
- BAP support
- Marine data management
- Methodology development
- Species identification.

2.8 The LRCs considered that £70-80,000/year was needed (on average) for stability and to provide core services with a complement of 2-3 staff. But again this varied considerably depending on the nature of the LRC and its geographic coverage.

Uses of Data and Related Income

2.9 This Biodiversity Data Needs for Local Authorities and National Park Authorities report assesses nine areas of local authority service for biodiversity information needs:

- Planning policy and development control
- Strategic planning
- Local biodiversity action plans
- Highway maintenance, etc
- Management of local authority-owned land
- Land management (owned by others)
- Hedgerow enquiries
- Community awareness
- Formal education.

2.10 It identifies 17 recommended data products to meet these needs:

- Strategic data audit
- List of important species
- BAP priority habitat map
- BAP priority habitat condition report
- Species distribution map
- Species population level report
- Opportunities map for biodiversity enhancement
- Important factors for predicting biodiversity trends
- Alert map of statutory and non-statutory designated sites
- Site species report
- Specialist site report
- General wildlife site/local wildlife site report
- Public access site map and information
- Latest news
- Hedgerow report
- Ancient woodland inventory
- Veteran tree inventory.

2.11 An internal study by Natural England (Data Requirements by Natural England: Species Data) identified that Species information is one of the underpinning evidence sources for Natural England. It is fundamental to priority setting, targeting action and

assessing environmental outcomes in many of its strategic targets. Natural England's needs range from decadal updates of species distribution trends to detailed site-based information updated annually. Access to current and time series data enable it to interpret change and accurately report on the effectiveness of management actions and policies.

2.12 Species information is used at different scales according to purpose, ranging from 10 sq km mapping to illustrate changes in range, to very fine scale, point data, when dealing with rare species that are part of conservation management programmes. The update frequency for species information depends upon need; the most demanding purposes relate to operational delivery of schemes, agreements, and casework where we need access to up to date, site specific information.

2.13 Different work areas have differing requirements for species information and this will determine the frequency of update and the scale of resolution needed. Table 4 gives a broad idea of the scope of this need.

Table 4 – Natural England Data Needs Summary

Purpose	Scale				Currency		Staff use		
	10 sq km	1 sq km	Site	Point	2 -10 yearly	annually	'Many'	Specialist	'Few'
1. To inform targeting of agri-environment schemes		✓			✓		✓		
2. To support decision on scheme applications			✓	✓		✓	✓		
3. To support monitoring of agri-environment agreements			✓	✓		✓	✓		
4. To support condition assessment of designated sites			✓	✓	✓	✓	✓		
5. To support reporting of Natura 2000 favourable conservation status			✓	✓	✓		✓		
6. To support biodiversity indicators that form part of the UK indicator set		✓			✓	✓		✓	
7. To support European High Nature Value indicators		✓	✓		✓				✓
8. To support delivering and reporting on the England Biodiversity Strategy			✓	✓	✓		✓		
9. To inform policy development of adaptation to climate change	✓	✓			✓			✓	
10. To inform change assessment in the wider countryside.	✓		✓		✓			✓	
11. To support site casework	✓	✓	✓	✓			✓		
12. To support decisions on licence applications		✓	✓	✓					✓

Source: Natural England 2010

2.14 The remit of Natural England encompasses a wide range of environmental and social objectives. Its needs for species information encompass agri-environment schemes, landscape, access as well as protected sites and biodiversity action plans. It now has the potential to deliver environmental outcomes in support of the voluntary sector and will be looking to work closely together to achieve common goals. Better access to current, detailed species information is essential to better targeting and use of public money and thus data access will form a strong element of our objectives for funding.

2.15 One of the main uses of data is to inform planning and development. Income related to this typically comes from a local authority SLA or from developers/consultants. A study of the seven LRCs in south west England (The National Biodiversity Network Southwest Pilot Project) found that income from private sector consultants/developers amounted to £112,000 across the south west. This covered 11 percent of the LRCs' 'running costs' on average.

2.16 The Cumbria Biological Data Centre Business Plan looked at setting charges for data requests. It recognises that this is difficult because the core work of the LRC (collecting and managing data) is the same whether there is one user or many. Thus charges have to take into account:

- Actual time spent providing products/services
- Contribution to management/maintenance of data
- Contribution to sourcing data/supporting recorders.

2.17 The LRC estimated that for every hour spent delivering data services, it needed another three hours work on supporting recorders, data sourcing, data collation and management. Thus based on an average staff member's hourly rate of £25, services should be charged out at £100/hour.

Summary

2.18 There is limited information available from existing research to inform this study. Facts that have been gleaned will be tested in the surveys with the LRCs.

2.19 A 2007 Natural England study found that the typical established LRC had a complement of 2.9 FTE staff and 3.2 volunteers contributing 14 hours/week. The average operating cost was £91,254.

2.20 The same study found that on average 19 percent of time at a typical LRC was spent on ‘Analysis & Reporting’ and 28 percent on ‘Data Entry & Management’.

2.21 There are a wide range of potential uses to which LRC data can be put. There is no information on what uses individual LRCs’ data is used for however. Neither is there information on the income related to it, nor the costs of providing it. The data uses will all have specific data requirements, as outlined in Table 4.

3.0 DATA USER CONSULTATIONS

Introduction

3.1 This section reviews the use of biodiversity information. These have been identified through a series of consultations with representatives of various organisations such as Natural England, NBN Trust, local authorities, statutory agencies and LRCs. Appendix 2 provides a list of consultees. The review considers the types of biodiversity information needed, the legislative drivers and key users of the information. The review considers various uses as identified in the study brief:

- Development of spatial plans and policies
- Development control
- Identification of local sites
- Local sites reporting
- Identification of biodiversity loss and gain through planning
- Targeting habitat creation, restoration and maintenance
- Species recovery programmes
- Regulation – issuing of licences and permits
- Monitoring of agri-environment scheme delivery
- Monitoring of Natura habitats and species
- Monitoring of statutory sites
- Monitoring of local sites
- Reporting on delivery of Biodiversity Action Plans
- Delivery of River Basin Management Plans.

General

3.2 The data users consulted in this section all use biodiversity information to inform their decision making. Consequently LRCs, as a conduit for local data are an important constituent of this evidence base. LRCs are also important as a local outlet for local data users – but they must provide timely, fit-for-purpose services, but the perception is that sometimes this is not the case. Another critical issue which makes appraising the LRC system difficult is sorting out data flows and validation and verification with NBN and national schemes to prevent duplication of effort and errors.

3.3 LRCs are also important in order to tie together and recognise the contribution of volunteer naturalists – a UK resource that is perhaps the best in the world. LRCs

have the potential to harness this resource and, in the future (expand this and), direct the recorders to areas of need.

3.4 Natural England, is a key user of the data and advocate of LRCs, and yet it does recognise that while it is pushing for LRCs to improve themselves and work with the NBN it has to improve its own actions. For example by getting the data it collects into the LRC/NBN system. It has already caused a degree of resentment, by not maximising its efforts in this regard – and needs to lead by example if it is to continue its role as champion of the LRC movement and benefit from LRC data resources. Having said this, it has, for example, prioritised the sharing of its European protected species data and is also trying to improve patchy habitat coverage through habitat inventories, LWS work and targeted surveys, etc. However the LRCs are not always aware of this, and so the resentment remains.

Development of Spatial Plans and Policies

3.5 The 2005 ODPM Good Practice Guide for preparing LDFs, states that local authorities must take account of species and habitat data. LRC data can be used for decision-making at all levels in a local authority: planning, land management, recreation. However local authorities are difficult to liaise with. More often than not, it needs one-to-one workshops with departments to get them to understand what they can do for each other – far more than just a direct mail/telephone survey awareness-raising exercise. Data use extends to use extends to a local authority's project work, e.g. Mersey Forest and the NWDA are working on 'Setting the Score for Growth', and LRC data could help inform this woodland creation scheme. Most local authorities are involved in many partnerships, and LRCs need to ingrain themselves in them, e.g. BAPs, Sustainable Community Strategy, Borough Partnership, Green Infrastructure/ Community Forests.

3.6 One of the key issues affecting LRCs is that there has been a significant growth in the need for habitat data, an area where LRCs have historically been less strong.

3.7 As an example, Warwickshire LRC is working on a project using Phase 1 survey data to create opportunity mapping. This is identifying details such as floodplains, topography detail, contours, etc, then rasterising it, giving it a score for percentage and type of BAP Habitat. This is then used identify connections between areas to help inform the green infrastructure plan and LDF. It is also assessing excavation sites for biological impact; providing appropriate tables and reports for input straight into

monitoring reports. It does the same for any strategic sites assessment needed by the local authority. However this is temporary income, once the LDF Core Strategy is complete, there will be limited need for it. This work relies on having up-to-date habitat information (i.e. less than five years old). With such habitat data, the lack of comprehensive species data (a common complaint) is less of an issue, as explained below.

3.8 A common misconception is that the lack of comprehensive species data can limit the use of a LRC's data resource as a whole. However mapping and predicting biodiversity issues is not a problem if up-to-date habitat data is available, as good interpretation linked to the data, can overcome gaps. To illustrate, if it is known, for example, that protected species have been found in the wider area linked to certain habitats or features. The fact that there is no protected species records in a more localised site, can be interpreted or modelled using LRC knowledge. Based upon the presence of those same habitat/features, the wider data can be used to predict appropriate investigative/mitigation actions irrespective of the lack of such specific protected species records at the site.

3.9 There are believed to be limitless opportunities for LRC data to inform local decision-making; while LRCs may also be involved to exploit their skills in data management and GIS. However it relies on having a good LRC manager that can find a need for the data, through close working with partners

Local Authority Planning Development Control

3.10 The main role of LRC data is seen to be, and always to be, in development control and strategic planning. Local authorities need this local data to inform decision-making. LRCs can provide this data, but one of their main problems is with the NBN Gateway. This is the time it takes for national datasets to get onto the NBN Gateway. Sometimes there is up to five years delay, by which time it is out-of-date, and impacts on the LRC's ability to provide a comprehensive data resource.

3.11 There is an increasing onus on local authorities to have this data, especially as Natural England is pulling back on advising them, and so LRCs have an opportunity to meet this need.

3.12 According to one consultee, to meet this need for data, LRCs should focus on habitat coverage (Phase 1), particularly BAP habitats. This data needs to be updated every

five years. LWS then need to be incorporated into this. Then prioritise species – protected and BAP specifically. LRCs have a significant role in accessing sensitive species data, especially where it is not getting into 'the system' through national schemes and societies.

3.13 If there was no LRC data consultees do not see how local authorities could make decisions adequately and respond to Section 4 of the NERC act. Thus they would not be doing their duty correctly. However there is very little pressure at a national level or from the electorate to enforce these obligations.

3.14 Better use of biodiversity data can help stop/reduce the confrontational aspects of public inquiries, e.g. for the M40. If used correctly, the country can move away from a situation of expensive lengthy public inquiries. The process could be front-loaded. Major development schemes would be better informed, and mitigation measures could be agreed and put in place promptly.

3.15 There are, as previously mentioned, issues with data coverage, it is so driven by where the records are, rather than, necessarily, where the species are. And there is a lack of habitat data. The NBN/LRC business model is dependent on the amateur recording community's effort – and LRCs need to be recognised for this role. Furthermore LRCs can give data a contextual statement, which can often only be done at local level, and which increases its value significantly.

Local Sites Reporting, Identification and Monitoring

3.16 Local authorities have a duty to report on the number of LWS under positive conservation management under NI197. LWS are a key monitor for biodiversity – especially as they also support other targets, e.g. BAP, habitats. This is the first year of the indicator – it was introduced in 2008 for three years. However only 26 of 150 local authorities have included it as a stretch target – which is not a great uptake, but it is early in the life cycle of this indicator, and they are likely to be cautious. If there was better data systems/more knowledge, etc (see below) there would probably be a better uptake.

3.17 One problem is that there are lots of systems being put in place, etc and data management for LWS needs some consistency and a uniform approach. However, the lack of consistency is not surprising given the number of different organisations leading on this type of work, e.g. LRCs, wildlife trusts, local authorities. The amount of

data held/managed is also impacted on by the differing skill levels/knowledge of the management organisation with relation to use of GIS. (Note: Natural England and YHEDN are currently working on a project to set up a standardised data management system for designating, surveying, monitoring LWS).

3.18 There is a lack of consistent data – there is not even a complete LWS layer for many areas; let alone a knowledge of what is happening at the site in question. For some areas, the available data is 10-20 years old. Furthermore they also have an important role to play as they are used to building relationships with a wide range of individual personalities. Many LWS are on private land (maybe only 10 percent have public access) and there is no knowledge of ownership (many are on unregistered land). There is no statutory requirement to protect/maintain them and achieving this depends on building a relationship with landowner and utilising goodwill. A subtle approach is required, which a LRC is well used to delivering given its experience liaising with (some sections of) the amateur recording community. Consequently LRCs could have potentially a very important role given their data management and collation skills and ability to link species data to these sites.

3.19 The lack of data and consistent approach means, for example that when Natural England is asked for such data it often has to provide all the data held (costing time and money) rather than just the key items. It would also be helpful if LRCs had information on LWS site ownerships and habitats, as well as boundaries and citations, etc – as it would enable targeting of management measures and ease action planning.

3.20 A recent Natural England report does include a recommendation that there is a data system that collates wildlife site data at a local level.

Identification of Biodiversity Loss and Gain through Planning

3.21 Local authorities need to monitor the loss/gain of protected species and habitats as part of their Annual Monitoring Reports. Thus they need the baseline data, against which to compare changes from planning applications data.

3.22 Although tracking biodiversity loss/gain is a possible use. One consultee was not sure how well received LRCs undertaking this might be with local authorities that have their own systems (staff) in place to monitor this. Again this is focused on habitat, an area where LRCs need to improve their data holdings.

Targeting Habitat Creation, Restoration and Maintenance

3.23 Although the consultation included the Natural England Marine Data Specialist, there was limited scope identified for use of NBN/LRCs, particularly for information on areas any distance from the coastline. It tends to use its own data sources, e.g. Marine Recorder, MEDIN, DASSH, BODC.

3.24 There are some needs. The Marine & Coastal Access Act is likely to see more marine conservation zones being set up around the UK. These will need data to inform decision-making. Coastal Special Protection Areas require reporting on and managing, and need bird species data; as well as relevant habitat data, e.g. reef, sandbanks, mudflats. For example Natural England has used LRC data to help designate Poole Bay to Lyme Bay as Special Area of Conservation. Although the data needs will be very project driven. LRC data may be useful as a baseline – outlining what one could expect to see/find in an area.

Species Recovery Programmes

3.25 This area of work, requires full resolution point data for key species, which also needs to be linked to habitat data. Although there will always be limited data on restricted species, this still needs to get onto the NBN Gateway. The NBN Gateway is the most efficient way of looking at national/regional trends, even though certain specialists will know more about local distribution, etc. It becomes even more useful to help formalise data availability, particularly useful when integrating a new staff member that is taking on a new specialist area.

3.26 Natural England, a key stakeholder in this area, feels that if this data was not available, it would lead to serious problems with site protection and implementation of legal protection duties. Although Natural England is coping with the data/LRC/NBN Gateway as it is – the view is that all the biodiversity indicators are going in the wrong direction. Decisions continue to be need to be made – and they are underpinned by knowing what is out there and where it is – facilitated by the LRCs and the NBN Gateway.

3.27 For certain activities, such as the national targeting of agri-environment schemes, Natural England requires consistently collected data and will (or can) only use data from national datasets. Data collated as part of local surveys and for development control do not always follow systematic and consistent approaches to the collection and checking of records.

Regulation – Issuing of Licences and Permits

3.28 Two key stakeholders were consulted in relation to this use of data: Natural England and the Environment Agency. Natural England needs appropriate data to inform its species licensing work. Licences are provided to allow surveys, development work, mitigation, etc. Natural England needs the relevant data for protected species.

3.29 For certain protected species the onus is on the developer/consultant to provide appropriate data – either using secondary or primary sources. Natural England will then check that methodology and interpretation is correct. However it is unlikely to double-check the data used.

3.30 There is little use of the NBN Gateway. There is a lack of awareness of it and its usefulness. Where staff have used it, there have been issues with the consistency of data and the differing standards applied between LRCs (and the impact that has on data quality and quantity).

3.31 The Environment Agency's main use of LRC data is proximity screening for the issue of permits. It needs a single GIS layer containing LWS and protected species (updated every six months). Coverage was very patchy, and this was a problem but significant strides have been made lately – although there are still issues in the North East and East Anglia. However the problems of very variable data quality remain across LRC territories, which can thus limit the data's usefulness.

3.32 The LWS boundary needs to be accurate and current, the data must be up-to-date. Ideally the Environment Agency needs standardised key word data across all LWS all over country, e.g. ancient woodland tagged to the LWS, or specific features documented. It needs to know if the LWS will be affected by surface water or water level changes, e.g. does it have rare lichens on it? The Environment Agency system automatically picks up on proximity to LWS, however it does not pick up on key words, although it trains permit issuers to identify these.

3.33 For low risk items, e.g. waste transfer, fishing, water discharge, permits are issued centrally and the NBN Gateway is a very useful tool.

3.34 For higher risk items, e.g. river dredging, regionally based ecologists are used. They will often contact LRCs (and other organisations directly) and so are less reliant on the NBN Gateway. For these projects, the Environment Agency could do with

citations attached to all LWS, or a database of them all in pdf format. Historic information is also very important to high risk decisions. For example, if the project involves reworking flood defences, the Environment Agency may wish to reinstate the old flood plains, thus historic data could help indicate where these were.

3.35 The Environment Agency find that LRCs struggle with allowing them keep their data on their central servers. There is a lack of trust – and LRCs think it will be released to other organisations. This is especially so with those LRCs that have got more limited relationships/trust with their amateur recordering community.

Monitoring of Agri-environment Scheme Delivery

3.36 Natural England needs similar data whether targeting, or reporting against, agri-environment delivery schemes. Basically this is:

- Habitat inventories – particularly agricultural UK BAP habitats
- Species data – especially protected/BAP species.

3.37 For example, Natural England's Evidence Team is keen to use the NBN Gateway (and hence LRC data) as it is the most efficient way of operating. It is currently developing a web based tool – being piloted – to use NBN Gateway data to highlight BAP species/habitats and appropriate management measures needed. This is based on identifying priority species, then understanding how to manage the habitats associated with them – simplifying the system and decision-making. Farmers can earn significant monies for these schemes. But all stakeholders need the baseline information on which to direct their efforts.

3.38 When the data is there, it is good enough. But one of the biggest issues Natural England has in making decisions is the lack of or inaccurate habitat data, and for the agri-environment sector particularly "*unimproved grassland*". It can be poorly mapped, mis-identified, or out-of-date, or not mapped at all.

3.39 At the moment the jury is out on whether they can use the NBN Gateway – and Natural England is relying on local/regional knowledge/links to LRCs/etc and use of national datasets and surveys, e.g. Farmland Bird Conservation Targeting run by RSPB and BTO. To overcome this NBN Gateway could use modelling to predict species distributions.

3.40 The use of NBN Gateway will improve decision-making, knowledge and hopefully outcomes, especially around the management of those rarer species with which advisors may have less familiarity. However although it will provide some efficiency savings, it will not radically save time and money.

Monitoring of Natura Habitats and Species

3.41 The key organisation in this area is Natural England which needs information on the national coverage of habitats and species and thus relies on the NBN Gateway. Specific requirements are for European protected species, this is a legal requirement, and Natural England has to report to the EC annually on their distribution and range. The NBN Gateway is the ideal tool to do this easily. For BAP Reporting this data is needed every three years as Natural England must report on the performance of species action plans.

3.42 The common concerns with data issues, e.g. validation and verification and patchy coverage, have not been found to be an issue. However LRCs may need to get involved in modelling to overcome some of these issues and make their data more useful.

3.43 Natural England is becoming increasingly dependent on voluntary recording due to internal budget cuts, etc. Furthermore this sector provided 70 percent (according to a 1995 survey) of all biodiversity data collected. Using this community (by investing and supporting them) to provide data is far more cost-effective than for Natural England to generate it all itself.

Monitoring of Statutory Sites

3.44 All SSSIs have to be monitored at least every six years, under guidance provided by JNCC. They are assessed based on their designated features – biological and geological. And for indicator species/condition/scope for recovery/etc. There are approximately 4100 SSSI, broken down into 22,000 units – so this is a substantial task, even though they are only monitored every six years. This baseline and background data on species and habitats is also needed in order to designate SSSIs in the first place. Thus having data at the LRCs/NBN Gateway is very helpful.

3.45 Natural England's monitoring team use data from a variety of sources; and it is clear it could make better use of NBN Gateway. The data needed depends on what the SSSI has been designated for – there are very specific needs. If it is notified for an

individual plant species, then the need is to understand the presence/absence, population size, whether the habitat requirements of that species are being met, etc. If notified for being heathland, for example, the data needed includes the amount of bare ground, dwarf shrub cover, heather species present, herbaceous flowering plants present, etc.

3.46 To generate the required data Natural England tends to commission bespoke surveys. However, there is certainly existing data out there that can be mobilised – and which can be a useful indicator, especially for, for example, plants that only have a short flowering window. LRCs could help in terms of mobilising the data – especially species information. They could also direct recording effort to SSSIs to help in this regard.

3.47 Natural England monitors 30 different AONB partnerships. They have a statutory requirement to have a management plan (which must be evidence based), and flora and fauna (which LRCs hold data about) are an integral element of an AONB's designation. There is a recognised data deficit around AONB and National Parks, which has limited the actual degree to which their plans are evidence-based. Furthermore the AONB partnerships do not have the GIS/data capability to manage data themselves – and hence an opportunity for LRCs. The key data needs are:

- Habitat inventory – updated every five years
- Land cover map – produced from aerial photos
- LWS
- Species data – emblematic species, e.g. red squirrel, black grass.

Reporting on Delivery of Biodiversity Action Plans

3.48 For BAP work Natural England need BAP species identification and coverage, how many populations, sites or tetrads, trend data, assessment of outcome against reporting target (maintenance, increasing, decreasing). It also needs habitats information – extent, trend, reporting against targets, extent of creation or restoration. Currently the use of NBN Gateway data is limited for BAP work (as most species are relatively restricted). Even if there was plenty of data available, the likelihood is that Natural England would probably use national datasets or commission surveys to help identify the data needed. (There is a concern over the quality of the validation and verification procedures used for rare species within the LRC system). At the moment Natural England tends to use:

- national inventories

- sample surveys every 10 years
- Countryside Survey
- agri-environment scheme data.

3.49 LRCs could also potentially help private sector companies (from whom there is a growing interest) looking to set up BAPs.

Delivery of River Basin Management Plans

3.50 The Environment Agency states that LRC/NBN Gateway data could be used to inform the Water Framework Directive. It tried this four years ago, but found it to be too expensive, Now there are formal SLAs with the LRCs, it will be able to get hold of the required data and the whole process would be easier.

Climate Change

3.51 Climate change needs reliable time series data. It must be robust. The problem with LRC data is that it is ad hoc – thus not much of it that can be used. The resolution of LRC data can also an issue. It needs to be at precise grid reference level (i.e. 10 to 100m) – tetrad is no good for meaningful spatial ecology applications. Although to overcome this, LRCs could supply recorders with GPS. Furthermore there are concerns about the quality/validation and verification of amateur recorder data.

3.52 Robust monitoring means the need to focus on regular sampling of consistent locations – rather than maintaining a comprehensive database of everything, as LRCs tend to do. This would require the same locations based on habitat – stratified by major biomes to generate a representative sample.

3.53 However some consultees felt LRC data could be used for climate change, for example, one could map butterflies and dragonflies extending their ranges. It could also be used for air quality – overlay base information against ferns and lichens distribution. However it always comes back to the issue, is a lack of records in an area – due to a lack of species there or a lack of recording? So care is needed when using the data. Another thought was that it could, however, be used for climate change analysis in conjunction with relevant modelling tools.

Summary

3.54 A wide range of potential data needs have been identified and discussed. However there are an equally wide range of types of data required to meet these needs,

whether that be in terms of:

- Scale
- Currency
- Species/site/habitat
- Format.

3.55 There are a mixture of uses of the data, some can be serviced locally directly by a LRC; others are applicable at a regional scale, and the appropriate medium is the NBN Gateway. A summary of data needs is shown in Table 5.

Table 5 – Data Needs Summary

Aspect	Data Needs
Local Authority	GIS layer of – in priority order Habitats BAP habitats LWS Protected species
LWS	LWS boundaries LWS habitats LWS species LWS under positive management LWS ownership
Issue of licenses and permits	Up-to-date and accurate GIS layer of LWS and protected species
Climate change	Reliable, robust time series data Exact grid references
SSSI Monitoring	Species data Biological data Geological data Habitat data Management data
Species Recovery Programmes	Full resolution point data on key species Related habitat data Species data from NBN Gateway: European protected species Species BAP reporting
Species Recovery Programmes	Full resolution point data on protected species data
BAP Reporting	BAP species – coverage, populations, trends, outcomes against targets BAP habitats – extent, trend, coverage, creation/restoration, outcomes against targets

Aspect	Data Needs
AONB Monitoring	Habitat inventory (updated every five years) Land cover map Species data – partic for emblematic species, e.g. red squirrel
Species Licensing	Species data: All birds Protected animals and plants
Agri-environment schemes	BAP Habitat inventories – agricultural/semi-natural Protected/BAP species data

Source: BE Group 2010

3.56 As one consultee commented, "*the data is* really *useful, but just not sure for what?*"

4.0 LRC BUSINESS MODELS

Introduction

4.1 This section looks at the operation and structure of a representative sample of established LRCs in England. They were all interviewed, either face-to-face or by telephone, using a semi-structured questionnaire.

4.2 The LRCs that took part in the study are:

- Suffolk Biological Records Centre
- Greenspace Information for Greater London
- Cheshire rECOrd
- Merseyside BioBank
- Kent and Medway Biological Record Centre
- Bristol Regional Environmental Records Centre
- Environmental Record Centre for Cornwall and the Isles of Scilly
- Somerset Environmental Records Centre
- Warwickshire Biological Records Centre
- North and East Yorkshire Environmental Data Centre
- Norfolk Biodiversity Information Service
- Leicestershire Environmental Records Service.

4.3 One of the key aspects needed to achieve this analysis was to separate core from advanced functions – due to the wide range of services LRCs provide. Therefore core services needed to be defined. This was done using the NBN Trust's definition as outlined in Table 6.

Table 6 – LRC Core and Advanced Functions Definition

Core Functions
• Build and maintain partnerships with local authorities, statutory agencies, conservation NGOs and voluntary recorders • Have transparent and accountable governance • Understand and meet the needs of users • Provide biodiversity information and products to users • Liaise as appropriate with the NBN Gateway and related principles • Manage, capture, protect and archive data – for at least BAP/RDB species, habitats and sites • Have suitable electronic data management systems, including GIS • Encourage and support high quality recording • Ensure quality control through validation and verification

• Network with the majority of voluntary recorders • Manage and train staff • Having complete/comprehensive data coverage • Using GIS systems to map species to habitats.
Advanced Functions
This includes carrying out surveys; running voluntary recording programmes; providing public data access/education; integrating data with wider information, interpretation and evaluation; supporting monitoring initiatives (local wildlife sites, BAP, etc), providing enquiry services; creating publications; and offering biodiversity project management, etc.

Source: NBN Trust 2004

4.4 The only divergence from the NBN Trust definition used in this study (and shown in Table 6) is that the functions "*having complete/comprehensive data coverage*" and "*using GIS systems that can map species to habitats*" are shifted from advanced to a core function. Although meeting the former function is probably impossible in practice, most LRCs do try and achieve this. While all the LRCs consulted appear to be very capable in terms of their use of GIS. It was felt having these functions in the core function provided less scope for debate/ambiguity.

4.5 The analysis was based on the financial year 2009/10 where possible. However in some cases the data was provided for a previous year. Furthermore there is a fair degree of movement, e.g. income and staff numbers can change quite regularly due to the scale of project work that can be involved. So, where necessary, on occasion an average situation is used. This fluidity in budget and staff management is just one of the many difficulties LRCs face that make their role more difficult than it might appear.

4.6 Furthermore not all LRCs answered all the questions. Some were not able to; others were concerned about aspects of confidentiality; some disliked the questions; and in some cases the interview just ran out of time.

LRC Size

4.7 Most LRCs operate with a combination of full and part time staff as Table 7 shows. It should be noted that this summary excludes staff on short term (e.g. three months) projects or contracts. The average LRC size is 3-3.5 full time staff and 1-1.4 part time staff, depending upon which average (mode or mean) is preferred.

4.8 One of the unique selling propositions (USP) of LRCs is often perceived to be their ability to mobilise volunteers. This table also includes details on the volunteers that provide operational services to the LRCs, rather than data providers in the amateur

recording community. As it shows, some LRCs do not use volunteers, others do so heavily. For example Bristol and Cheshire are significant beneficiaries of their volunteer resource. The average volunteer contribution across the ten LRCs surveyed is the equivalent of one and half additional staff members. The LRCs that do not use them, or use them sparingly, state that the key constraint is a lack of space to accommodate them.

4.9 Kent calculated that its volunteer input equated to a contribution equivalent to £22,000. This was based on applying an average hourly rate of £6 to their efforts. Applying this to the mean average contribution of 1.4 FTE indicates an benefit of approximately £15,400 to the typical LRC. For Cheshire the benefit is hypothetically £66,000. At Bristol where a range of highly skilled volunteers are used, the impact is potentially considerably greater in size!

Table 7 – LRC Size Summary

LRC	Full Time Staff	Part Time Staff	Total FTE	Number of Volunteers	Volunteer Input, FTE	Approx Turnover, £	Turnover/FTE, £ (excl volunteers)
Kent	3	2	4.4	7	2.0	136,000	30,900
Suffolk	3	0	3.0	0	0	115,000	38,300
Merseyside*	5	1	5.4	4	2.0	112,500	20,800
Somerset	4	1	4.6	1	0.05	130,000	28,300
Warwickshire	1	4	2.5	3	0.5	58,500	23,400
London	6	1	6.4	1	0.2	272,000	42,500
Cornwall	3	1	3.6	8	1.5	125,000	34,700
Bristol	3	1	3.5	30	5.0	145,000	41,400
Cheshire	4	0	4.0	40	6.0	88,500	22,100
North Yorkshire	5	3	5.8	0	0	238,000	41,000
Leicester	2	8	4.9	0	0	N/k	N/k
Norfolk	3	2	3.2	0	0	N/k	N/k
Mean Average	3.5	2.0	4.3	7.8	1.4	142,000	34,600
Mode Average	3	1	-	0	0	-	-

Source: BE Group 2010

*Note: * excludes MEAS balancing payment*

4.10 Table 7 also shows the approximate turnover at each LRC. Again this was difficult to quantify because it is something of a moveable feast. But estimates were provided by

those taking part. The largest LRCs are London and North Yorkshire. The average turnover per staff member varies considerably from £28,800 at Merseyside up to £42,500 at London – the average is £34,600.

LRC Costs

4.11 Staff salaries at the LRCs also vary considerably. Generally the manager is paid in the mid-to-high thirties, but the range is £25,000-50,000 (including on-costs). Operational staff costs range from £18,000-£40,000, but most are in the twenty-somethings. Junior staff, e.g. Assistant Data Officer, generally have a salary package costing £18,000-19,000. Given the nature of individuals involved in the sector. Staff tend to be highly motivated and work longer than average hours. It could be argued that 'whoever' is paying their salaries (i.e. their funding partners) is getting good value for money. However, as one LRC manager stated, who has recently arrived from the private sector, their "*efficiency can be questionable*."

Table 8 – Staff Costs

LRC	Approx Turnover, £	Approx Total Staff Costs, £	Proportion, percent
Kent	136,000	112,000	82.4
Suffolk	115,000	97,500	84.8
Merseyside*	90,000	66,000	73.3
Somerset	130,000	126,500	97.3
Warwickshire**	58,500	58,500	100.0
London	272,000	203,000	74.6
Cornwall	125,000	76,000	60.8
Bristol	145,000	130,500	90.0
Cheshire	88,500	82,500	93.2
North Yorkshire	238,000	n/k	-
Total	**136,000**	**106,000**	**77.9**

Source: BE Group 2010

*Note: *proposed budget for 2011/12 when extensive project work finished. Current figures too difficult to analyse because of extent of project work, staff changes and funding gap*

*Note: ** Warwickshire LRC is integrated with Council's Ecology Unit thus making it very difficult to separate activities and costs - staff have dual roles, accommodation and facilities/equipment are provided by Council, etc*

4.12 Staff costs at LRCs, like at most service organisations, form the bulk of the overall costs. The average total staff cost is just under 80 percent of turnover. The range is however very considerable, from 60 percent to 100 percent. There are so many

factors influencing this calculation – the nature of the SLAs, the amount of project work, the effectiveness of the LRC.

4.13 There is an even division amongst those LRCs surveyed, between those that are independent, those that are hosted by a local authority, and those hosted by a wildlife trust. Although those LRCs that are hosted by another organisation get a variety of in-kind benefits most are provided in lieu of a SLA financial contribution. However in most cases the perception is that the LRC tends to benefit from the hosting relationship – either because what the LRC provides for the in-kind SLA is relatively minimal, or the benefits are intangible but valuable (e.g. financial support, legal advice, management support).

Table 9 – LRC Host and In-kind Benefits Received

LRC	Host	In-kind Benefits	Beneficiary
Kent	Independent	None	-
Suffolk	Local Authority	Admin, finance, HR Some IT Although provided in lieu of payment for SLA	Neutral position
Merseyside	Local Authority	Admin, finance, HR Some IT Ecological/management support Financial support to cover funding gaps	LRC benefits
Somerset	Wildlife Trust	Admin, finance, HR Some IT Although provided in lieu of payment for SLA	LRC benefits
Warwickshire	Local Authority	Part of the LA's Ecology Unit	LRC benefits
London	Wildlife Trust	None	Neutral position
Cornwall	Wildlife Trust	WT provide premises, admin finance, HR, IT support Financial support to cover funding gaps Although provided in lieu of payment for specific project	LRC benefits
Bristol	Local Authority	Admin, finance, HR, IT, legal, premises Ecological/management support	LRC benefits
Cheshire	Independent	LA provide subsidised	LRC benefits (slightly)

LRC	Host	In-kind Benefits	Beneficiary
		rental, free meeting rooms	
North Yorkshire	Independent	Benefit from advantageous rent due to charitable status	-
Leicestershire	Local Authority	Admin, finance, IT, HR, etc	LRC benefits
Norfolk	Local Authority	Admin, finance, IT, HR, etc	LRC benefits

Source: BE Group 2010

Staff Activity

4.14 A major part of the survey was for the LRC manager to complete a staff activity schedule. As one can imagine, individuals found it very difficult to gauge time spent in certain activities, not only for their staff, but also for themselves. This is understandable given the nature of modern work – interruptions, variability – as well as the limitations of memory. Furthermore no manager knows exactly what their staff is up to, all the time! Equally difficult was placing tasks in the activity definitions used in Table 10 – especially where tasks can fall into a couple of the definitions. Consequently there are reasonable margins for error in this analysis. However the option of providing LRC staff with bespoke timesheets did not seem practical. The managers' estimates were also cross checked against other information such as logs of data search enquiries and a general discussion of the nature of the LRCs activities and staff responsibilities. Therefore the estimates are deemed to be reasonable.

4.15 One comment that cropped up more than once is that LRC staff have to spend a lot of time on "*non-fee earning*" activity – sitting on committees or partnerships, or getting involved in studies like this, and so on. Although this could be described as building relationships, this is somewhat tenuous in reality and is rarely a particularly efficient use of time.

4.16 Tables 10 and 11 summarise for each LRC the activities that their combined staff spend their time on. It accounts only for employed staff, and weights each person's activities within each LRC according to their FTE contribution. Table 10 shows this in terms of proportion of overall time, Table 11 in terms of total days FTE input, spent on each activity at each LRC. The average LRC spends approximately 60 percent of its time on core functions – collating and managing biodiversity data and providing data products to stakeholders. Almost 40 percent of their time is taken up by advanced/enhanced/project functions. The average however is generated by a wide

range of figures, Warwickshire undertakes the lowest proportion of project work, only 6.4 percent, compared to Cheshire and Merseyside, where well over half of staff time is spent on non-core activities.

4.17 The lowest proportion of time (about five percent each) is spent in the two activities involving local authority (and other public sector/statutory) partners – servicing data requests for them and building relationships with them. The exception to this is London, but this LRC has upwards of 30 such partners (far more than any of the other LRCs questioned) and consequently the amount of time spent on such work is understandable.

4.18 A similar proportion of time (10 percent) is spent with recording groups (generating data) as with ecological consultants (generating income from the data). While the same is true looking at general management and data management activities (both 15 percent each).

Table 10 – LRC Staff Activity Schedule (by proportion of time)

Activity	Proportion of Time, percent										
	Kent	Suffolk	Merseyside	Somerset	Warwickshire	London	North Yorkshire	Cornwall	Bristol	Cheshire	Average
FTE Days/Week Total Input	22	15	17	28	11.2	37	29	18	17.5	25	22.0
Management, governance, training, business development	17.3	11.7	13.9	21.3	17.0	14.6	15.5	14.7	26.4	18.0	17.0
Enhanced Functions & Project Work	31.4	43.3	57.4	48.4	6.4	44.1	37.9	35.0	32.9	53.0	39.0
Collating and Inputting Data into Electronic Database, including Validation & Verification/NBN Upload/IT management/ etc	21.8	13.3	18.5	9.8	17.8	12.2	16.9	15.3	8.6	7.0	14.1
Building & Maintaining Relationships with Recording Community	9.3	8.3	6.0	8.3	21.9	4.1	5.2	14.7	7.9	15.0	10.1
Responding to Requests for Data – Consultants (incl. Invoicing and Producing Reports)	8.6	10.0	3.7	3.5	29.0	3.5	12.1	12.6	12.9	3.5	9.9
Responding to Requests for Data – LA/SLAs (incl. Invoicing and Producing Reports)	5.9	3.3	0	6.5	4.1	17.6	5.2	4.9	5.0	1.5	5.4
Sourcing Data and Managing Data Agreements /Building Relationships (non Recording Community), i.e. LAs, Regional Agencies	5.7	10.0	0.4	2.2	2.9	4.1	8.3	2.8	6.4	1.0	4.4

Source: BE Group 2010

Note: does not include volunteers time

Table 11 – LRC Staff Activity Schedule (by total time input)

Activity	Days/Week										
	Kent	Suffolk	Merseyside	Somerset	Warwickshire	London	North Yorkshire	Cornwall	Bristol	Cheshire	Average
FTE Days/Week Total Input	22	15	17	28	11.2	37	29	18	17.5	25	22.0
Management, governance, training, business development	3.8	1.8	2.4	6.0	1.9	5.4	4.5	2.6	4.6	4.5	3.8
Enhanced Functions & Project Work	6.9	6.5	9.8	13.6	0.7	16.3	11.0	6.3	5.8	13.3	9.0
Collating and Inputting Data into Electronic Database, including Validation & Verification/NBN Upload/IT management/ etc	4.8	2.0	3.1	2.7	2.0	4.5	4.9	2.8	1.5	1.8	3.0
Building & Maintaining Relationships with Recording Community	2.0	1.2	1.0	2.3	2.5	1.5	1.5	2.6	1.4	3.8	2.0
Responding to Requests for Data – Consultants (incl. Invoicing and Producing Reports)	1.9	1.5	0.6	1.0	3.2	1.3	3.5	2.3	2.3	0.9	1.9
Responding to Requests for Data – LA/SLAs (incl. Invoicing and Producing Reports)	1.3	0.5	0	1.8	0.5	6.5	1.5	0.9	0.9	0.4	1.4
Sourcing Data and Managing Data Agreements /Building Relationships (non Recording Community), i.e. LAs, Regional Agencies	1.3	1.5	0.1	0.6	0.3	1.5	2.4	0.5	1.1	0.3	1.0

Source: BE Group 2010

Note: does not include volunteers time

4.19 Although this schedule excludes the contribution of volunteers, on the whole they tend to be involved in data entry and management. A few LRCs use them on more advanced activities, this includes at Bristol where their varied roles mean they operate almost as additional members of staff.

4.20 One LRC commented that, "*one of the biggest constraints to our activity is the need to protect data, and trying to use it as an income generator. If this was removed, then we could work far more with partners. There always seems to be more to do, and more we could do.*"

Income

4.21 The LRCs have a range of SLAs, mainly with local authorities (but often not with all of them within the area they cover), Natural England, Environment Agency, water companies and occasionally wildlife trusts (although the latter rarely contribute funding, unless in-kind). Other organisations with whom SLAs are held more rarely, include national park authorities, FWAG, Forestry Commission, regional development agencies, biodiversity partnerships and transport/highways agencies.

4.22 Where SLAs are not held with a local authority present within a LRC's area, it is usually because of budgetary constraints within that local authority. Alternatively the local authority is perceived to place a low emphasis on using biodiversity data (especially the case where it has no in-house ecologists) or it has sufficient in-house capability/data to not need the services of a LRC.

4.23 The SLAs with local authorities are varied and for a mix of core and enhanced services. In terms of meeting the core services, the LRCs generally provide regularly updated GIS layers of their biodiversity information. The exception to this is North Yorkshire which has developed an online system which their clients can access independently.

4.24 Often the LRCs do not know how well used these GIS layers (and hence their biodiversity information) are inside the organisations they provide them to. Quite often they find local authorities using an old version of the GIS layer and have to persuade them to update it. There is a reasonable concern that the data is not being used well or comprehensively, especially, within local authorities.

Table 12 – SLA Products Summary

LRC	GIS Layers	Update Frequency	Data Search Requests	Includes Significant Advanced Functions
Kent	Yes	6 monthly	Yes – minimal in practice	No
Suffolk	Yes	Annually	Yes – minimal in practice	No
Merseyside	Yes	Annually	None	No
Somerset	No – are able to, but LAs prefer to request data searches	N/a	Yes	Yes
Warwickshire	Yes – part of the LA Ecology Unit	Continual	Yes – minimal in practice	No
London	Yes	Quarterly	Yes	Typical local authority SLA includes 35 hours of data entry or 14 hours of data provision or a mix of the two
Cornwall	Yes	N/k	Yes – minimal in practice	Yes
Bristol	Yes	N/k	Yes – minimal in practice	Yes
Cheshire	Yes	N/k	Yes – minimal in practice	No
North Yorkshire	Pushing users towards online system	N/a	Yes	No
Leicestershire	Yes	Annually	Yes	Yes
Norfolk	Yes	N/k	Yes	Yes

Source: BE Group 2010

4.25 The individual SLAs with local authorities can range from £2000 to £50,000. Obviously there larger figures tend to apply to a County Council, however the lower figures come from not just small, rural district councils but also relatively large metropolitan borough authorities. There seems to be no clear correlation between the size of the SLA and size of the local authority, the extent of its rural/urban nature or extent of services provided.

4.26 One LRC highlighted that maximising income with local authority partners, and minimising the products and services required in exchange, is all about "*managing expectations*".

4.27 Most SLAs involving the provision of GIS layers usually come in conjunction with an offer of bespoke data searches. However, in reality, there is very little of this work actually undertaken. This is borne out by the interviews with the LRC managers, the activity breakdown (see Tables 10 and 11) and investigation of any activity schedules that were made available by the LRCs. And this fact is true across all the LRCs investigated. Care is needed not to misinterpret this finding because it takes a lot of work in collating and managing data, and setting up work process systems to achieve this state of affairs. Of note is the fact that the data requests that are required linked to local authority SLAs tend to be more involved/complex than standard ecological consultants data search requests (see the analysis below) and thus take slightly longer.

4.28 One of the most comprehensive SLAs is Cornwall's with the County Council. This includes the following activities:

- Provide GIS layers of all key datasets – LWS, geology, habitats, nature reserves, species, etc
- Data search reports, e.g. BAP species within 500m of certain point
- Planning application screening – shared between itself and Cornwall Wildlife Trust
- Wildlife information service – responding to the general public's enquiries about wildlife.

4.29 It is a similar scenario at Bristol:

- Provide GIS layers and databases
- Maintenance of the LWS register
- Analysing and monitoring LWS
- General public enquiries service
- Updating BAP habitats
- Providing support and specialist advice.

4.30 These activities are very complicated to break down between core and enhanced services – and so complicate the income and activity breakdown analyses provided

earlier. They are highlighted to illustrate not only this fact, but also the range of services that can be offered by a LRC to its local authority partners.

4.31 Aside from bespoke project work, another significant source of income for LRCs is that earned for producing data search reports for ecological consultants. Table 13 outlines the scale of this income for all the LRCs involved in this survey. Again there is some margin for error with the total turnover figures and consultants reports income, but hopefully it is reasonably accurate.

4.32 On average, a LRC generates almost 20 percent of its income from this activity. However the range amongst individual LRCs is very wide, from just over six percent at Somerset to over 40 percent at Warwicks. Somerset state there is little income associated with this in its area because it is extremely rural, and thus there is little development taking place. (Note: this LRC is in a state of flux because it has not had a manager for two years, and so may have not focussed on this area of work). The proportion will also be affected by the value of SLAs/project work being undertaken, e.g. Warwickshire did not disclose all this and consequently the importance of consultants' data requests appears artificially high. The proportion will also be affected by the focus of the LRC, the support of its local planning authority partners, extent of SLA/project income and report charges amongst other things.

Table 13 – Income Breakdown Summary

LRC	Approx Turnover, £	SLA Income, £	Consultants Data Request Income, £	Consultants Data Request Income Proportion of Turnover, percent
Kent	136,000	52,200	51,000	37.5
Suffolk	115,000	100,000	10,000	8.7
Merseyside	112,500	32,000	9500	8.4
Somerset	130,000	122,000	8000	6.2
Warwickshire	58,500	N/a	23,700	40.5
London	272,000	200,000 (includes project income)	72,000	26.5
Cornwall	125,000	92,500	26,000	20.8
Bristol	145,000	118,000	28,000	19.3
Cheshire	88,500	33,000	18,000	20.3
North Yorkshire	238,000	24,000 (excludes regional	20,000	8.4

LRC	Approx Turnover, £	SLA Income, £	Consultants Data Request Income, £	Consultants Data Request Income Proportion of Turnover, percent
		functions)		
Leicestershire	N/k	26,000	N/k	N/k
Total	**1,420,500**	**N/a**	**266,200**	**18.7**

Source: BE Group 2010

Efficiencies

4.33 Where appropriate/possible the interviews extended to the scope for efficiency gains at the LRC. Most LRCs perceive themselves to be operating well. There will be scope for efficiency gains as in most organisations, but nothing obvious presented itself. Most of the LRCs seem to have good IT and data management skills which are key to effective performance. Indeed three of the LRCs are developing bespoke software products specifically for the LRC sector. Related to this, three of the LRCs have particular operational enhancement aspirations as outlined in Table 14.

Table 14 – Efficiency Gains Summary

LRC	Scope for Efficiency Gains	Comment	Areas for Enhancement	Commercial Software Development
Kent	No	Have good IT systems and skills	Considering adopting planning screening tool – as used by North Wales LRC	No
Suffolk	No	Have efficient system	Assessing online data portal and data availability systems	No
Merseyside	Not discussed	N/a	N/a	No
Somerset	Not discussed	N/a	N/a	Yes
Warwickshire	Not discussed	N/a	N/a	No
London	No	N/a	N/a	No
Cornwall	Not discussed	N/a	N/a	No
Bristol	Yes	Refine data search output	N/a	No
Cheshire	No	Good IT/data skills	N/a	Yes
North Yorkshire	No	N/a	Looking to achieve ISO9001 with full documentation of all systems and procedures	Yes

Source: BE Group 2010

Ecological Consultants Data Requests

4.34 The survey included an analysis of the time and costs associated with responding to ecological consultants data requests. There is a wide range of average costs for the typical report, from as low as £50 through to £200. These are generally based on an hourly charge, with a one hour minimum charge. Usually there is no charge if there is no (or little) relevant data.

4.35 Warwickshire LRC recognises that it charges too low a price, this is because it is linked to similar services charged by other departments which are all covered under the same Warwickshire County Council charging policy. It will be reviewing this soon to see if it can be increased.

4.36 On examination, the LRCs tended to underestimate the time taken to respond to a data request. Usually they considered just the time taken to run the report off the computer systems. However once the front end – liaising with the client over what exactly they want – and the back end – invoicing, payment tracking – was included, the average times rose by around 50 percent. Some LRCs, Somerset being an example, minimise the initial (front-end) clarification issues by having online request form that standardises the query. Furthermore the time taken reduces the more familiar the ecological consultant is with the LRC's system. To this end, North Yorkshire invite new staff at the consultants that are its clients to visit and shadow the data officer to understand the service's potential and capabilities.

4.37 The average time taken to produce a report is one hour 40 minutes, although the range around this is wide (40 minutes to six hours). Bristol's standard data search includes an option to search its paper records – of which there are nine million. Naturally this can be very time consuming – and some searches can take six hours. No doubt this is one of the reasons why Bristol's substantial cadre of volunteers is so important to it.

Table 15 – Data Request Summary

LRC	Mode Average Cost	Mode Average Time, hours.minutes	Requests/week approx
Kent	200	2.30	6
Suffolk	100	0.40	2
Merseyside	100	1.30	1.5
Somerset	90	1.00	1.5
Warwickshire	50	2.00	10
London	170	1.15	7

LRC	Mode Average Cost	Mode Average Time, hours.minutes	Requests/week approx
Cornwall	150	3.00 Range is 2.00-6.00	4.5
Bristol	210	3.30 Range is 2.00-6.00	3
Cheshire	100	0.40	3.5
North Yorkshire	60	0.40	5-10
Leicestershire	170	3.00	3.5
Norfolk	100	0.30	5-10
Mean Average	125	1.40	4.8

Source: BE Group 2010

*Note: * uses salary cost of individual who services most data requests*

4.38 Correspondingly the labour cost required to service a request is equally varied. It ranges from £1.42 to £12.30. This cost is based purely on the wages and time of the staff member most likely to produce the report – it's a marginal cost. It does not reflect all the other overheads and activities associated with generating the data in the first place. The average cost is £4.85.

4.39 It is difficult to apportion a full cost to producing such a report because of the complexity of LRC activities, income generation and the cost base. However using the average from Table 7, and equating turnover to costs (which is typical of a LRC) the cost of one hour 40 minutes work is approximately £32.80, based on an average of £34,600/person. Adding in the average volunteer contribution raises this to £37.20. However, almost half the time at a LRC is spent on non-fee earning work, so it could be argued that the true cost of one hour 40 minutes spent on producing a report is actually £65-75 on average.

4.40 The time and cost of producing a report will obviously be linked to the quality and quantity of the final output. In order to understand this, a copy of a typical report was provided by each LRC. Naturally there is a wide variation in the style and presentation of the documents. Table 16 summarises for each report what is included. Most are relatively comprehensive, and if certain information is not included, then it is available on request or the recipient is signposted to alternative sources. The most basic output (a species spreadsheet) is provided by Cheshire, the most comprehensive by Bristol.

Table 16 – Consultants Data Reports Summary

LRC	Mode Average Report Cost	Species Spreadsheet	BAP Habitats	LWS	LWS Info/ Citations	Statutory Sites	Statutory Sites Info/ Citations	Map	Context Info	Contact Info
Kent	200	✓	✓	✓	Available	✓	Available	✓	✓	✓
Suffolk	100	✓	X	✓	✓	X	X	✓	X	X
Merseyside	100	✓	✓	✓	✓	X	X	✓	X	X
Somerset	90	✓	X	✓	X	✓	X	✓	✓	X
Warwickshire	50	✓	X	✓	✓	✓	✓	✓	✓	✓
London	170	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cornwall	150	✓	✓	✓	Available	✓	Available	✓	✓	✓
Bristol	210	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cheshire	100	✓	X	X	X	X	X	X	X	X
Leicestershire	170	✓	✓	✓	X	✓	X	✓	✓	X
Norfolk	100	✓	✓	✓	✓	✓	✓	✓	✓	X

Source: BE Group 2010

Data Input

4.41 Table 17 outlines the size of the LRCs' databases, the number of records input last year (although this can be extremely variable given the size and nature of datasets that can be received/processed).

4.42 The greatest proportion of data is believed to come from the amateur recording community. Although there are no definitive statistics to corroborate this.

Table 17 – LRC Data Holdings

LRC	Digitized Species Records, million	Approx Records Added 2009/10	Proportion from Amateur Recording Community, percent	Substantial Backlog of Paper Records
Kent	3.0	1.5 million	60	Yes
Suffolk	1.5	100,000	75	No
Merseyside	0.7	80,000	50	No
Somerset	0.5	100-200,000	n/k	Yes
Warwickshire	0.3	n/k	n/k	Yes
London	1.5	135,000	33	Yes
Cornwall	3.0	200-250,000	90	No
Bristol	1.3	73,000	n/k	Yes
Cheshire	1.4	60,000	95	No
North Yorkshire	Not disclosed	Not disclosed	Not disclosed	Yes
Leicestershire	0.5	N/k	N/k	Yes
Norfolk	N/k	N/k	N/k	No

Source: BE Group 2010

4.43 Six of the LRCs have a substantial archive of paper records. Most are not prioritising making any headway on this. North Yorkshire refused to divulge information about its digitized database, as it felt this was likely to misrepresent its performance. North Yorkshire's approach is to target species records that will not enter the 'system' through national schemes and societies, thus it prioritises its data entry efforts. Any data search product it provides will incorporate both its own data holdings and that of the NBN Gateway. It does not want to duplicate efforts and put the same record into the 'system' twice. This is one of the reasons it has a large backlog of paper records. It has however filtered and prioritised them to add relevant and important data.

4.44 All the LRCs with backlogs state that they have filtered and prioritised which records to digitize based on usefulness to their stakeholders.

Species v LWS/Habitats Focus

4.45 The LRCs were asked to give an indication of the proportion of time they spent on collating and managing data related to species, LWS and habitats. As Table 18 shows, of those that answered the question, the majority of time is focused on species data.

Table 18 – Species/Sites/Habitats Activity

LRC	Species	LWS	Habitats
Warwickshire	80	10	10
Bristol	50	23	27
Suffolk	80	10	10
Cornwall	55	20	25
Merseyside	100	0	0

Source: BE Group 2010

Uses of LRC Data

4.46 The survey included an assessment of the uses to which each LRC's data is put. The uses tested are those identified in the introduction to section 3.0 and shown in Table 19 below. Against each of these uses, the LRC commented on whether its data was used for this, either through a SLA or project work. There was some variation in response, but broadly:

- SLA – data used and contributes to specific SLA
- Project – data used and contributes to specific project
- No – no knowledge of data being used, except through NBN Gateway
- Yes – data used, but typically no substantial income against it.

Table 19 – LRC Data Uses Summary

Use	Cheshire	Bristol	Cornwall	North Yorkshire	London	Somerset	Suffolk
Frequent Uses							
Development of spatial plans and policies	SLA	SLA	SLA	SLA	SLA	SLA/ Project	SLA
Development control	SLA	SLA	SLA	SLA	SLA	SLA	SLA
Identification of local sites	SLA	SLA	SLA	Project	SLA	Yes	Yes
Local sites reporting	SLA	SLA	Project	Project	Project	No	Yes
Monitoring of local sites	No	Project	SLA/ Project	Project	Project	SLA	Yes
Reporting on delivery of	SLA/	SLA	SLA	Yes	Yes	Project	Yes

Use	Cheshire	Bristol	Cornwall	North Yorkshire	London	Somerset	Suffolk
Biodiversity Action Plans	Project						
Infrequent Uses							
Identification of biodiversity loss and gain through planning	SLA	No	Project	No	Yes	No	Yes
Targeting habitat creation, restoration and maintenance	SLA	Project	Yes	Project	Yes	No	Yes
Species recovery programmes	SLA	No	No	Project	No	No	No
Regulation – issuing of licences and permits	No	No	Yes	No	No	No	No
Monitoring of agri-environment scheme delivery	No	No	Yes	No	No	SLA	No
Monitoring of Natura habitats and species	No	No	No	No	No	No	No
Monitoring of statutory sites	No	No	No	No	Yes	No	No
Delivery of River Basin Management Plans	SLA	No	No	SLA	Yes	No	No
Climate change	No	No	Yes	Yes	No	No	No
Other							
General public enquiries service	No	SLA	SLA	No	No	No	No
General public recording initiatives	Project	No	No	No	No	No	No
Species studies	No	No	Project	Project	No	SLA	No
Mapping habitats/ habitat inventories, etc	No	No	Project	Project	No	SLA	No
Living Landscape conservation plan	No	Project	No	No	No	No	No
Amateur recorder initiatives	No	Project	No	No	No	No	No

Source: BE Group 2010

4.47 This table is only a guide, as it gives no indication of the depth and breadth to which a LRC's data is put against any of the uses outlined in Table 19. There are quite clearly some 'frequent uses' that apply to most of the LRCs, as well as 'infrequent uses' that generate limited income. The items included under 'other' are project work. Amongst the LRCs surveyed there is obviously a wide variety of project work, and uses to

which data has been put historically. However this analysis concentrates primarily on the year 2009/10, so older project examples are not included.

4.48 What is clear is that the LRCs do not always know what the data that is being requested is being used for; or how it is being used. There also seems to be great variation in how partners interact with the LRCs, and how they use them.

4.49 There are a range of other common uses of the data/projects that the LRCs undertake, some of which are included in SLAs, others as part of specifically funded projects.

Summary

4.50 Based on the LRCs surveyed in this report, the average size is 3.5 full time staff and 2.0 part time. On average, they benefit from the input of 1.4 FTE volunteers, a considerable input. Operating costs average at approximately £136,000. However around all these averages there are wide variations.

4.51 Assessing staff activity was difficult and there is a wide margin for error. However, looking at all employed staff across all the LRCs, it found almost 40 percent of time was spent on project work or advanced functions in the pursuit of additional income. Of the remaining 60 percent of the time spent on the core LRC service, nearly 15 percent goes into data collation and management; 10 percent into responding to consultants data requests; 5 percent was related to SLA work.

4.52 Income is generated by a mixture of SLAs with local authorities and national/regional agencies; data reports for consultants; and project work. Due to the complexity of most SLAs, which often include both core and advanced functions, it is not possible to itemise income specifically. However on average consultants provide 20 percent of their income. With some LRCs the extent of SLA income is equivalent to that from consultants, at others it is three times as much. Project work can be minimal, or it can be the primary area of turnover, e.g. Merseyside.

4.53 As there is a wide variation in income, so there is in terms of services provided against a SLA or the form of a consultants data report. However, there is actually relatively little time spent servicing SLA enquiries. For consultants requests, the average report cost is £125, which takes one hour 40 minutes to produce.

4.54 The LRCs hold a substantial stock of data. The majority of this is sourced from the amateur recording community. However most LRCs have a substantial backlog of paper records.

4.55 There are a range of uses to which LRC data is put. Some are common across most LRCs. Some are provided indirectly through the NBN Gateway. There are also a number of typical project activities that are run by LRCs.

5.0 CONCLUSIONS

5.1 This report aims to fill a gap in existing research about the costs, income and activities at a typical LRC. Pulling the findings together to identify significant relationships and conclusions. The previous research correlates broadly with the findings of this report, insomuch as they can be compared as they are based on different assumptions.

5.2 There has been an apparent increase in size and income of the LRCs since 2007's Review of Local Record Centres in the UK. However this study is based on only twelve established LRCs, whereas the earlier work looked at 46 LRCs, many of which were not established and this would naturally lower the overall averages. As with the earlier report, this study has found it difficult to define staff activities and break down income against tasks. However it is clear from both that a significant amount of LRC time is spent on non-fee earning activity, which requires fee-earning activity to subsidise it.

5.3 There are a wide variety of uses to which LRC data can be put. Some of these can be met directly by the LRC, and thus there might be an opportunity for income; others are most readily serviced via the NBN Gateway. However different data uses need different types and quality of records, and so in some ways the LRC is limited by the nature of data provided to it.

Table 20 – Data Needs Summary

Purpose	Information							Format				
	LWS boundaries	Priority habitats	Protected/priority species	LWS habitats	LWS species	LWS management status	LWS ownership	Spreadsheet	Report	GIS	NBN Gateway	Interactive map
1. To inform local authority planning decisions	✓	✓	✓	(✓)	(✓)			✓	✓	✓	(✓)	(✓)
2. Species management			✓		✓					✓	✓	✓
3. To inform NI 197 reporting		✓	✓	✓	✓	✓	✓			✓		
4. To inform reporting on biodiversity loss and gain through planning	N/A requires information from planning consents and monitoring											
5. To inform targeting of agri-		✓	✓							✓	✓	

Purpose	Information							Format				
	LWS boundaries	Priority habitats	Protected/priority species	LWS habitats	LWS species	LWS management status	LWS ownership	Spreadsheet	Report	GIS	NBN Gateway	Interactive map
environment schemes												
6. To support decision on scheme applications		✓	✓							✓	✓	✓
7. To support monitoring of agri-environment agreements			✓							✓	✓	✓
8. To support condition assessment of designated sites			✓							✓	✓	✓
9. To support reporting of Natura 2000 favourable conservation status		✓	✓							✓	✓	✓
10. To support biodiversity indicators that form part of the UK indicator set												
11. To support European High Nature Value indicators		✓	✓							✓	✓	
12. To support delivering and reporting on the England Biodiversity Strategy		✓	✓							✓	✓	✓
13. To inform policy development of adaptation to climate change		✓	✓							✓	(✓)	
14. To inform change assessment in the wider countryside		(✓)	✓									
15. To support site casework		(✓)	✓	(✓)	(✓)					✓	✓	
16. To support decisions on licence and permits applications	✓		✓							✓	✓	✓
17. Climate change monitoring	N/A requires long-term monitoring data											

Source: Natural England 2010

5.4 One of the USPs of LRCs is their ability to harness the contribution of the UK's amateur recording community. They collate data which Natural England (and other organisations) can use for its decision-making purposes – it is a cost-effective means of gathering such data. However, although the LRCs provide data to Natural England (albeit for some funding), the fact that Natural England generally does not share its data with the LRCs is a bone of contention. This undermines relationships and needs to be addressed. There is also a significant degree of suspicion about the growing role of the NBN Gateway and what this implies for the LRCs. The LRCs' view is that Natural England funding is relatively minimal compared to their other sources. And so, to protect themselves, the LRCs may stop providing data to the NBN Gateway. This is partly down to a lack of understanding of what the NBN Gateway is trying to achieve. Better and clearer communication is required.

5.5 It is perceived that Natural England and local authorities could not perform their statutory duties to best effect without the contribution of data through the LRCs. However more research is needed to understand the contribution of data from the LRCs, as compared from other sources, particularly national schemes and societies. There seems to be unnecessary duplication of records and hence effort. (Quite often the same records enter the system. They are provided by the recorder to both the national scheme/society and to the LRC. At a later date the national scheme/society shares them with the NBN Gateway). The North Yorkshire model appears most efficient, only targeting the collation of records that are unlikely to 'get into the system'; but making sure local users access data from the NBN Gateway, as well as its own holdings. However this relies on scheme/society data being shared relatively promptly – and the perception is that this is not the case. The targeted records tend to include protected and sensitive species, e.g. bats, badgers, newts, etc. Furthermore, and while on the subject of the NBN Gateway, Natural England also needs to promote NBN Gateway and the benefits of LRCs internally amongst its staff – some of those consulted were not really fully knowledgeable of this resource.

5.6 The analysis of the LRCs shows what a wide variation there is between them, whether this is in terms of size, skills, income, relationships with partners or activities. That makes identifying standard solutions for them difficult.

5.7 Having said this, another one of the obvious USPs of LRCs is their ability to harness the efforts of volunteers. This adds to the impact of their efforts, and reduces their costs. This aspect of their work should be encouraged. Although it is recognised some LRCs lack the space or the need for them. There is a financial benefit of volunteer help, but also an intangible benefit – the capacity building element with those people the LRCs work with. This capacity building also applies to the amateur recording community that the LRCs deal with. This is a benefit that is difficult to quantify and value.

5.8 The average LRC in this study was found to be running on £136,000. Staff wages for the 4.3 FTE staff form approximately 80 percent of their costs. The value-for-money of hiring staff in this sector is perceived to be high, as they work long hours and are highly motivated. When selling their services to local authorities, this value-for-money could be highlighted.

5.9 There is a wide variation in the activities of LRCs, but on average they spend 40 percent of their time on enhanced functions/project work. This is work against which income can be directly generated. Surprisingly, a relatively little amount of time is spent servicing the needs of SLA partners and ecological consultants – especially considering their relative importance in terms of income. Almost half the time at an average LRC is spent on non-fee earning work – building and maintaining data holdings and relationships with stakeholders in the environmental sector, which forms the foundation on which the services offered to SLA partners and ecological consultants are based. Any charging estimate a LRC provides should recognise this element of non-fee earning time that contributes to its ability to provide any data required.

5.10 One of the LRCs' key sources of income is providing data to local authorities for planning purposes. Generally this is provided under a SLA. Although this is a substantial contributor of income, actually only very little time (five percent) is spent providing data and responding to requests the majority of the fee should therefore be paying for the comprehensive and time-consuming data collection and management processes that underpin this. The SLA income can thus be considered to be contributing substantially to resourcing the 50 percent of LRC time that is not directly fee earning.

5.11 There is a vast difference between the SLAs with local authorities: the income attached to them, the services required of the LRC, and the consequent contribution of the SLA to supporting the underpinning data management activities. Much of this decision appears to be outside the LRC's control, and depends on the attitude and aspiration of the local authority in question. However the LRC can influence this by building relationships, managing expectations, understanding needs, selling its skills, working efficiently, etc.

5.12 A concern is that many LRCs are not sure how well their data is being used within their partner local authorities. And this is surprisingly also true of LRCs that are perceived to be best practice models. For example, some local authorities use old versions of the data provided or do not use the data well. And generally there is a degree of resignation within LRCs about what they can do to improve this. This findings supports two perceptions, that LRCs are not always that 'close' to their users and that local authorities are very difficult to engage with (because of their size, lack of decision-makers, etc).

5.13 To some degree, these perceptions are also true of how LRCs interact with regional and statutory agencies, including Natural England. There are a wide range of uses, and users, of the LRCs data across England; but there is a lack of consistency. For example FWAG has a SLA with Somerset, but not with other south west LRCs consulted. Cornwall runs a wildlife inquiry service for the County Council, but this doesn't happen in the Lake District, another popular tourist area. The Forestry Commission has a SLA with London, but not with all LRCs by any means. So much appears to be built on local, or personal, relationships; or on specific local projects or data holdings. This again makes it difficult to identify standard applications and solutions. However with a better understanding, and practical examples of what is possible, then LRC services might be broadened.

5.14 The average income generated from ecological data requests is almost 20 percent of total turnover. The average time taken to respond to a request is one hour 40 minutes, which includes confirming the request, running the report and sorting out invoicing, etc. However for some LRCs the time taken is much longer. The direct labour cost to provide the typical report which generates an average income of £125 is only £5. However the opportunity cost of this time is nearer £40. Costing in all staff activities and time, to allow for data collation and management, takes the 'true' cost up to £65-75 (on average). There is also a reasonably wide variation in the quality and extent of the reports provided for this fee. Some LRCs are probably providing too little, others too much. Similarly some LRCs should raise their charges, and obviously this would immediately increase their income.

5.15 There is a wide variation amongst LRCs in terms of how many digitized species records they have, from 0.3 to 3.0 million. The same is true of the annual data entry numbers. By their own estimates around 50-90 percent of the records come from the amateur recording community (This compares to 70 percent outlined in the 2007 Review of Local Record Centres in the UK). Over half have a substantial backlog of paper records – with little impact being made on reducing them. Although most of the LRCs have filtered them to make sure priority records have been digitized.

5.16 One of the questions set in the brief was, "*if the LRC was adequately resourced would the number of uses to which the data be applied significantly increase?"* Probably not with the data users, but perhaps with the data providers. It is hard to sell one's services, probably more so for LRCs which are more likely to have

environmental and database/GIS skills, rather than sales and marketing expertise. Local authorities, where there is probably most scope to expand the range of services offered, are difficult to engage with and understand. Consequently any slack in the system would probably be spent with recorders and recording groups.

Impact of Funding Changes

5.17 If there was slightly reduced funding to LRCs then they would probably make ends meet to survive. However they need a certain level of funding to retain a critical mass that allows them to keep core skills to enable them to perform efficiently, particularly with regards their IT personnel - GIS/database/etc. As long as this critical mass is maintained there should not be a problem. However it is not clear what level of income ensures a critical mass can be achieved for each of the LRCs.

5.18 With reduced funding the LRCs will need to prioritise their work. Taking each aspect of work in turn, collating and managing data is the raison d'être, however there seems to be duplication between the LRCs and national schemes and societies. The LRCs should focus on protected and priority species that are not getting onto the NBN Gateway system. However this means that the throughflow of data from the national schemes and societies needs to be speeded up. The LRCs could then access both their own data and NBN Gateway data when responding to data requests from clients.

5.19 The LRCs will need to review their project work to ensure its profitability and that it closely complements core functions, e.g. collating data on priority species or updating habitat information; or that it enables the retention of key staff/achieve critical mass. However this is easier said than done!

5.20 Servicing ecological consultants data requests and local authority (and other) SLAs work is standardised and scalable. LRCs should look to expand this area if possible, as any gains should be extremely cost effective. The report production linked to this work needs to be efficiently automated; the onus to interrogate the system placed as far as possible with the client; and the client managed to ensure a fair product is being provided for the cost/price. LRCs need to assess their data reports to make sure the price is reflective of the product, and that the output/process is streamlined and aligned to meet the clients' needs.

5.21 As the NBN Gateway improves and expands, the need for LRCs to produce bespoke products should reduce. But that is dependent on key datasets getting onto the system. However LRCs have a role to play in harnessing the amateur recording sector's efforts; using volunteers; linking species data to habitats; and providing a local context to the information (which may not be apparent from the NBN Gateway).

5.22 If it was Natural England that reduced its funding, combined with the inherent resistance to the NBN Gateway, it is unlikely that the LRCs would support this concept. However, if in actual fact, sharing data was easy-to-do and the benefits of doing so, irrespective of the money, were obvious – then the funding would probably be irrelevant. The LRCs are interested in conservation – if the NBN Gateway achieved conservation – then this common aim one would think should be sufficient to encourage participation.

5.23 If the LRCs had their funding raised unconditionally, then, as discussed above, the impact would probably be more work with recorders and recording groups.

5.24 Whether funding increases or decreases, more can be achieved with LRCs. The regional reviews have worked on trying to get the LRCs to help themselves, with Natural England facilitating with external advice and funding. The same approach should be taken individually with the LRCs, through some form of mentoring. This should be aimed at sorting out their specific problems. Allied to this, there needs to be more work on prioritising LRCs activity and understanding data flows; and a sharing of best practice – and this could be achieved simply by getting LRCs talking to each other, but with formal goals and objectives.

5.25 Hopefully ALERC will recognise these issues and help overcome the leadership vacuum that exists which allows LRCs to meander in their own very varied directions.

Appendix 1 – NBN LRC Operation Guide Data Needs

Data Uses – General

Business Need	Activity	Examples of Types of Organisations Leading on this Activity
1.Development and monitoring policy	Preparing organisation's own strategies and plans (including NC audits)	Local Authority, Wildlife Trust, English Nature, Environment Agency
	Monitoring effectiveness of plans	Local Authority, Wildlife Trust, English Nature, Environment Agency
	Preparing and monitoring Biodiversity Action Plans (national and local)	Wildlife Trust, Local Authority, English Nature, RSPB, Environment Agency And Others
	Local Plans, developing policies, preparation of land allocations/plotting constraints	Local Authority
	Planning future recording activities	Wildlife Trust, Local Authority, English Nature, RSPB, Environment Agency and Recorders
2.Governing others' activities	Responding to planning applications, PDOs, water abstraction	Local Authority, English Nature, Environment Agency
	Compliance/mitigation monitoring	Local Authority, English Nature, Environment Agency
	Preparing management agreements with owners of statutorily designated sites/	English Nature/Local Authority
	Preventing criminal activities against protected species	Police
3.Identifying important wildlife areas	Developing and monitoring criteria for site identification	English Nature, Wildlife Trust, Local Authority, MAFF/WOAD, SOAEFD
	Identifying sites	English Nature, Wildlife Trust, Local Authority, MAFF/WOAD, SOAEFD
4.Managing property	Planning management of own property	Local Authority, NT/NTS, Wildlife Trust, RSPB, English Nature and other Local Authority Managers
	Monitoring success of management	Local Authority, NT/NTS, Wildlife Trust, RSPB, English Nature and other Local Authority Managers
5.Influencing others' policies	Commenting on other organisation's policies, e.g. statutory	Wildlife Trust, RSPB, English Nature

Business Need	Activity	Examples of Types of Organisations Leading on this Activity
	conservation agencies, local authority plans	
	Preparing and monitoring Biodiversity Action Plans	Wildlife Trust, RSPB, English Nature, RSPB, Environment Agency FWAG
6.Influencing/advising others' activities	Commenting on planning applications	Wildlife Trust, RSPB, English Nature
	Monitoring other organisations' activities	Wildlife Trust, RSPB, English Nature/Local Authority
	Management advice for others' property	Wildlife Trust, RSPB, English Nature/FWAG
	Educating others, including schools, communities, LA21	Local Authority, Wildlife Trust, NT/NTS, Universities, Museums
	Interpreting wildlife for the public	Wildlife Trust, English Nature, NT/NTS, Local Authority, Museums
	Providing information for others (without a need to influence)	Local Authority, Consultants, Museums, FWAG
7.Improving knowledge and understanding of biodiversity	Recording and survey	Recorders, Museums
	Research into species, habitats, sites and their relationships	Universities

Source: NBN LRC Operation Guide 1999

Note: English Nature now Natural England

Data Uses – Local Authority

Local Authority	Activity	Details
1. Developing and monitoring policy	Preparing organisation's own strategies and plans (including NC audits)	Land management, management of roadside verges
	Monitoring effectiveness of plans	Monitoring the implementation of Local Plan
	Local Plans, developing policies, preparation of land allocations/plotting constraints	Preparation of Local Plan, development of policies and identification of allocation of land
	Preparing and monitoring Biodiversity Action Plans (national and local)	Input to BAP work as part of partnership and integrate into own strategies
	Planning future recording activities	Work done
2. Governing others' activities	Responding to planning applications, PDOs, water abstraction	Planning and development control activity
	Compliance/mitigation monitoring	Monitoring implementation of planning permissions and conditions
	Preparing management agreements with owners of statutorily designated sites	N/A
	Preventing criminal activities against protected species	N/A
3. Identifying important wildlife areas	Developing and monitoring criteria for site identification	Criteria for Wildlife Sites - for use in local plans (with other partners)
	Identifying sites	Identification of Wildlife Sites (with other partners)
4. Managing property	Preparing management plans for own property	Management of council property
	Monitoring success of management	Monitoring effectiveness of management
5. Influencing others' policies	Commenting on other organisation's policies, e.g. statutory conservation agencies, local authority plans	N/A
	Preparing and monitoring Biodiversity Action Plans	Involvement in BAPs as a means of influencing other plans
6. Influencing others' activities	Commenting on planning applications	N/A

Local Authority	Activity	Details
	Monitoring other organisations' activities	N/A
	Management advice for others' property	Development of plans for LNRs
	Educating others, including schools, communities, LA21	Especially through schools e.g. school grounds project
	Interpreting wildlife for the public	Through LNRs and ranger service
	Providing information for others (without a need to influence)	N/A
7. Improving knowledge & understanding of wildlife	Recording and survey	N/A
	Research into species, habitats, sites and their relationships	N/A

Source: NBN LRC Operation Guide 1999

Note: English Nature now Natural England

Appendix 2 – Consultees

Natural England

Faye McCormack
Andrew M Thompson
Ben McCarthy
Debbie Russell
Helen Lancaster
Ian Saunders
Jim Foster
Edel McGurk
Gavin Measure
Keith Porter
Ollie Grafton
Roger Catchpole
Sarah Escott
Steve Preston
Richard Alexander
Toby Mitchell-Jones
Chris Pirie

Other

Christine Bennett – Merseyside Environmental Advisory Service
Dan Jones – Yorkshire & Humber Environmental Data Network
Dave Lowe – Warwickshire Biological Records Centre
Marina Flamanck – Environment Agency
Geoff Johnson – NBN Trust
Tim Corner – Bristol Regional Environmental Records Centre
Eric Fletcher – rECOrd
Jo Nightingale – Somerset Environmental Records Centre
Simon Pickles – Yorkshire & Humber Environmental Data Network
Martin Horlock – Norfolk Biodiversity Information Service
Gary Lewis – Environmental & Record Centre for Cornwall & Isles of Scilly
Mandy Rudd – Greenspace Information for Greater London
Martin Sanford – Suffolk Biological Records Centre
Gareth Davies – Merseyside BioBank
Hannah Cook – Kent & Medway Biological Record Centre
Sue Timms – Leicestershire and Rutland Environmental Records Centre
Steve Wilkinson – Joint Nature Conservation Committee