Review of Local Records Centres in the UK

NATURAL ENGLAND

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Review of Local Records Centres in the UK

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A report prepared for Natural England on behalf of Scottish Natural Heritage, Countryside Council for Wales, Environment and Heritage Service (NI), National Biodiversity Network and National Federation for Biological Recording.

A summary of the findings covered by this report, as well as Natural England's views on this research, can be found within Natural England Research Information Note RIN004 - Review of Local Records Centres in the UK.

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Acknowledgments

Summary

Local Records Centres (LRCs) are organisations that have the common objectives of collecting, collating and disseminating a range of environmental information for a given geographical area. Collectively they maintain upwards of 30 million individual species and habitat records, so they are a highly important link in biodiversity data flow, the information they provide being used by a variety of data users. However, LRC coverage of the UK is incomplete, with an estimated 14% of the country by area without an existing LRC.

Therefore JUST ECOLOGY were contracted by English Nature, on behalf of the Statutory Agencies, National Biodiversity Network (NBN) and National Federation for Biological Recording (NFBR), to conduct a review of LRCs in the UK to assess the factors preventing or supporting the establishment of LRCs. A selection of 58 organisations were included, who were interviewed using a standard questionnaire. The review covered three main themes: LRC sustainability; the ability of LRCs to work within the NBN; and their capacity to conform to the NBN Data Exchange Principles. The main findings are summarised below:

- **LRC models:** Though LRCs operated under a range of different legal and managerial circumstances, no single LRC model was found to be inherently better. Instead success was linked to good long-term management and high quality staff. The use of data sharing partnerships, where responsibility for the management of biodiversity data was shared among a range of organisations, was also identified as often occurring.

- **Data from the voluntary sector:** On average 70% of species records maintained at LRCs came from the voluntary sector. However, not all voluntary groups submitted records to LRCs; 67% of established LRCs could name voluntary groups that they did not work with but would have liked to. The obstacles to this were predominantly the volunteers themselves and lack of resources. Good communication was identified as the key factor in ensuring that this 'missing' information was submitted.

- **Service provision to the voluntary sector:** In return for records submitted LRCs offered a wide range of services to volunteers, though 87% of LRCs felt that they needed to offer more. Lack of resources was stated as the main reason why this was not possible.

- **Data from the non-voluntary sector:** Whilst only 16% of species records came from the non-voluntary sector, they submitted a greater proportion of habitat records (43% compared with 17% for the voluntary sector). The remaining 14% of species records and 40% of habitat records were probably generated internally, though the exact reason for the discrepancy is unclear. The LRCs may have had another source that was not accounted for in the questionnaire. 76% of LRCs could name non-volunteer organisations that they did not work with but would have liked to. The main obstacles to this were that the organisations did not want to get involved, together with lack of resources on the part of LRCs (and presumably also on the part of such organisations) to enable joint working.

- **LRC and National Schemes and Societies (NSSs):** Some potential problems were identified regarding data flow between LRCs and NSSs (in the 81% of cases where any occurred), as it often became unclear who the data custodian was, which meant that different levels of access could be applied to the data. However, the importance of having this information held by both NSSs and LRCs was recognised, as it ensured that biological information was used at both a national and local level. Furthermore NSSs allowed for more expert data verification than could be provided by most LRCs alone. Local representatives of NSSs and local natural history societies were often used by LRCs to verify records.

- **Organisational networks:** The importance of LRC networking, both with each other and with other organisations, was recognised. 93% of LRCs felt the need to network with other LRCs, as it offered them a greater level of stability, a forum within which to discuss problems, and combined political power. 74% of LRCs also felt the need to network with other organisations, as it allowed for a range of benefits, such as data exchange, economies of scale, sharing of ideas and to plan conservation efforts.

- **LRCs and the NBN:** Only 26% of LRCs were providing data to the NBN Gateway, the most commonly stated reason for not providing data being that LRCs did not have the resources to do this. Another obstacle identified was software bugs within Recorder 2002 and 6. Moreover, only 35% of LRCs used data available via the NBN Gateway, the most frequent reason being that they did not have time to do so, and also concerns regarding its usefulness to them as they generally felt they had the best datasets for the county. 55% of LRCs felt that the NBN concept both helped and hindered; the majority of the rest felt it helped; only one LRC felt that the NBN was of no benefit at all to LRCs. In general LRCs liked the principle of national data collation and provision and found the NBN guidance and standards useful, but viewed the NBN as competition for data and a threat to funding for LRCs.

- **Validation and verification:** Only one LRC did not validate the data submitted by volunteers. 93% used county recorders from the voluntary sector to verify data for specific taxa.

- **Staffing requirements:** The staffing levels of LRCs varied considerably, depending upon the products and services they provided. The average was approximately 3 FTE staff members. The majority of staff time was spent on analysis and reporting, data entry and data management. Volunteer time was also important, with an average contribution of 14 hours per week given by volunteers toward the running of the LRC.

- **Staff recruitment and retention:** 26% of LRCs had problems recruiting staff, mostly due to staff pay and conditions and the lack of suitable candidates. 28% of LRCs also felt that they had problems retaining staff, though this increased as the number of FTE staff increased. The most frequent problem for existing LRC staff was staff conditions and the lack of a defined career structure.

- **Enhanced functions:** 54% of LRCs provided one or more enhanced functions, as defined by the NBN Position Statement on Local Records Centres.

- **Other data suppliers:** 39% of LRCs were in competition with other data suppliers, mainly recording groups and conservation organisations, who sometimes also ran a charged enquiry service. More comprehensive data, and better quality of service, was thought to distinguish LRCs from these competitors.

- **Risks in support arrangements:** Funding insecurity and lack of funding were the main risks in LRC support arrangements. The average operating cost was £91,200 per annum, though this varied enormously. The majority of funding came from local authorities, statutory agencies, wildlife trusts and LRC enquiry charges. No LRC had funding security for more than 3 years into the future.

- **Funding requirement:** £70-80k was identified as the basic funding requirement for an LRC supporting 2-3 staff members. In order to fulfil an average LRC vision an average budget of £110-120k and 3-4 staff would be required. However, the budget needed to meet the visions of LRCs varied greatly, as it was dependant upon the geographical area covered and the range of services offered.

- **Resource related performance:** 57% of LRCs said that they could not meet all user needs with their current structure and resources, so they were unable to perform some essential roles.

- **Predicted changes in demand:** 81% of LRCs expected an increased demand for biodiversity data, mainly due to: BAP and climate change monitoring; the Strategic Environmental Assessment Act; Planning Policy Statement 9; Local Development Framework; Farm Environmental Plan and Higher Level Stewardship requirements.

- **Statutory requirements:** At least eleven LRCs felt that it would be beneficial to make the establishment and funding of LRCs with defined basic functions a statutory requirement.

- **Changes required if funding was dependent upon open access to data at the finest geographical resolution:** The LRCs would need better core funding, assured safeguards for the protection of confidential data and permission from the recorders to release the data. They felt that this increased core funding would have to come from mainly governmental organisations.

- **Changes required for open data access:** 77% of LRCs stated that improved financial security and funding was the single most important factor to enable open access and LRC sustainability.

The report makes comparisons with the NBN Position Statement on LRCs. This indicated some discrepancies between the vision of the NBN for LRCs and that of the LRCs themselves. Important discrepancies include:

- 24% of LRCs were not partnership led, though the NBN Position Statement states that they should be.
- The NBN Position Statement states that LRCs should ensure impartiality, though in a few cases this was questionable.
- Some overlap of LRC boundaries existed, though the NBN Position Statement stated that there should be none.
- The NBN Position Statement states that LRCs should be user led, though in some cases this did not occur.
- Not all LRCs could meet the demands of providing basic biodiversity information services and responding to data requests, despite these being essential functions of the NBN Position Statement.
- Not all LRCs held habitat datasets, though the NBN Position Statement states that they should hold or have access to all that are available.
- The NBN Position Statement states that LRCs should have metadata on their data holdings, though 17% had none.
- 12% of LRCs did not use GIS, though the NBN Position Statement states that they should use it to help with their operations.
- 60% of existing LRCs lacked sufficient staff to carry out the essential functions given in the NBN Position Statement.

The report also assesses each LRC against three essential LRC functions from the NBN Position Statement, namely:

- Responding to data requests within the requirements of the Environmental Information Regulations.
- Data scope including records of fauna, flora, habitats and sites of wildlife importance.
- Documented validation and verification procedures.

These have been summarised in maps illustrating the coverage of qualifying LRCs. These indicate that only 27% of the UK (by area) was covered by LRCs that met the criteria defining a fully functional LRC on all three components.

The report also attempts to summarise the statutory information requirements of local authorities and statutory agencies, using planning, policy and public service agreement documents. The current status of LRC fulfilment of these functions is discussed, as far as possible. This indicated a gap of unknown size where this information is not being made available to local authorities and statutory agencies by LRCs.

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1 Introduction

1.1   Local Records Centres (LRCs) are organisations that have the common objectives of collecting, collating and disseminating a range of environmental information for a given geographical area, usually a county or another administrative area. LRCs in the UK operate under a diverse array of set ups and fulfil a diverse range of functions and services in addition to their basic objectives.

1.2   Though many parts of the UK have well established LRCs, others still lack full functionality, are in development phases or are absent altogether. Where they exist and function successfully they are a highly important link in biodiversity data flow, and are often critical in the provision of species and habitat data. They also provide local context for biodiversity information and mechanisms for dissemination that National Schemes and Societies (NSSs), who usually hold large national datasets for specific taxa, cannot provide. This local context is important as it allows features of local importance to be recognised and highlighted, and allows for relationships with local data providers and users to be developed.

1.3   The information provided by LRCs is utilised by a variety of data users, including local authorities and developers for planning purposes, local authorities and conservation groups for the maintenance and enhancement of biodiversity, and by statutory agencies for policy and monitoring purposes. As a result there is a recognised need for LRCs to provide services not only to various sectors of government, but also to a range of other parties.

1.4   It is an objective of the National Biodiversity Network (NBN) Trust that 'LRCs should be incorporated as important, interconnecting foci for the collection, collation and provision of regional or sub-regional biodiversity information'. Scottish Natural Heritage (SNH) maintains the position that if there is a demonstrated need for an LRC by stakeholders they will support the creation of one. English Nature's position (taken forward into Natural England), is to participate in the establishment of an effective network of LRCs. Though there has been good progress towards the goal of adequate LRC coverage, it has not yet been achieved and it has been recognised that progress has been slow. Furthermore, the diversity of LRC operations and range of issues faced by individual LRCs is also recognised, and these require full review before future resources can be allocated to the situation.

1.5   As a result of this, JUST ECOLOGY, working with exeGesIS, was contracted by English Nature (now part of Natural England), on behalf of the Statutory Agencies, NBN and NFBR, to conduct a review of LRCs in the UK. This was undertaken between February and May 2006 by interviewing LRCs and other stakeholders where no LRC existed. These interviews formed the basis for an analysis of LRC sustainability, their ability to work within the National Biodiversity Network (NBN) and their capacity to conform to the NBN Data Exchange Principles. Additional analysis was also conducted within March 2007 to further investigate specific points, as requested by the project steering group.

2 Methodology

Local Record Centre selection and interview arrangements

2.1   A list of most LRCs in England, Scotland, Wales and Northern Ireland was made by the Project Steering Group (see Appendix 1 for a full list of Steering Group members). Where no LRC existed the Project Steering Group selected representatives from potential key stakeholders (hereby included in 'LRCs'). The list was then split between JUST ECOLOGY and exeGesIS, with JUST ECOLOGY covering the 44 English LRCs and exeGesIS covering the 17 others. The statutory agencies (English Nature, Scottish Natural Heritage, Countryside Council for Wales, Environment and Heritage Service) wrote to each of these organisations to ensure their support for the project. Unfortunately, three of the selected LRCs could not take part in the study, either because they did not want to, or because a mutually agreeable time for interview could not be arranged. Those LRCs that were involved in this work are listed in Appendix 2.

2.2   JUST ECOLOGY and exeGesIS then arranged interviews with the LRCs. The LRCs were informed of the purpose and likely duration of the interview, and in most cases were sent a copy of the questionnaire in advance to prepare with. Any other queries relating to the purpose of the study were also answered at this point.

Questionnaire design

2.3   A detailed brief for the interviews was provided by the Project Steering Group. This was used as a basis for the questionnaire, with questions designed by JUST ECOLOGY and exeGesIS. A final draft of this was tested in the interview with the Environmental Record Centre for Cornwall and the Isles of Scilly (ERCCIS), in agreement with the LRC, to refine the structure of the final questionnaire. This was then finalised with the Steering Group and sent out to all of the LRCs. The final questionnaire can be found in Appendix 3.

2.4   Though the questionnaire was completed as a single entity, with continuous numbering to allow for the design of one database only, in practice three versions were used for existing LRCs, prospective LRCs, and areas where there was no LRC.

Interviews

2.5   Most interviews were conducted in person at each LRC. However, there were inevitably a few occasions where this was not possible, either because of the cost of reaching these LRCs, or because a suitable date could not be found. In these instances the interviews were conducted by telephone, though sometimes a questionnaire was already completed in advance by the LRC. Most "in person" interviews were also recorded on a Dictaphone to ensure that as much relevant information as possible could be captured. LRCs were informed that the recordings would remain confidential and only used by JUST ECOLOGY during data entry.

2.6   To ensure consistency throughout, the interviews were conducted by a limited number of people within JUST ECOLOGY and exeGesIS. In total six interviewers were used, with two individuals conducting the bulk of the interviews. Interviewers took care to talk around the questions, in order to capture non-quantifiable information not directly addressed by the questionnaire. Supporting documents such as annual reports and marketing leaflets were also collated and provided as part of the final output. Interviewers communicated with each other throughout the project to resolve any issues and clarify questions within the questionnaire.

Review of Local Record Centre responses

2.7   ExeGesIS created an Access database to contain the information and facilitate data analysis. The interviewers entered the information for each of their interviews into this database. Summary reports were created for each question.

2.8   Once the interviews had been conducted, the database was used to automatically generate reports for each LRC, which were sent out to the interviewees for checking. This resulted in some changes, though not all were able to respond within the deadline. In some cases interviewees responded to provide information not available at the time of the interview; in others it was to clarify certain points of fact, particularly where the database could not contain the information in the format in which it was originally given.

Analysis and reporting

2.9   The following results sections broadly follow the format of the questionnaire (see Appendix 3), though there are exceptions where it was felt that individual questions were better reported out of order. A comparison of the LRC responses with the NBN Position Statement on LRCs was carried out using the findings and some additional analysis.

3 Results

Basic factual information

Local Record Centre status

3.1   As is shown in Table 1, the majority of interviewees classified themselves as established full LRCs. Two interviewees considered themselves to be an LRC in an early stage of development and one was currently inactive. In total nine potential or actual stakeholders were interviewed, of which seven were representing planned LRCs.

Table 1 Q.10: LRC status

LRC type	England	Scotland	Wales	Northern Ireland	UK
Established LRC	36	8	1	1	46
Establishing LRC			2		2
Currently inactive LRC		1			1
Prospective LRC	7				7
No LRC		2			2
All interviewees	43	11	3	1	58

3.2   The classification of the majority of LRCs as established does not accurately reflect the variations in capacity and development status of record centres across the UK. Figure 1 summarises the analysis of LRC status undertaken in Chapter 4. This shows that whilst the majority of the UK has LRC coverage, only a minority of these can be considered to be fully functional.

Assessment of LRC status

☐ - not included in review
⊟ - proposed / in development
⊞ - established – unable to provide core functions
⊠ - established – basic function
▦ - established – fully functional
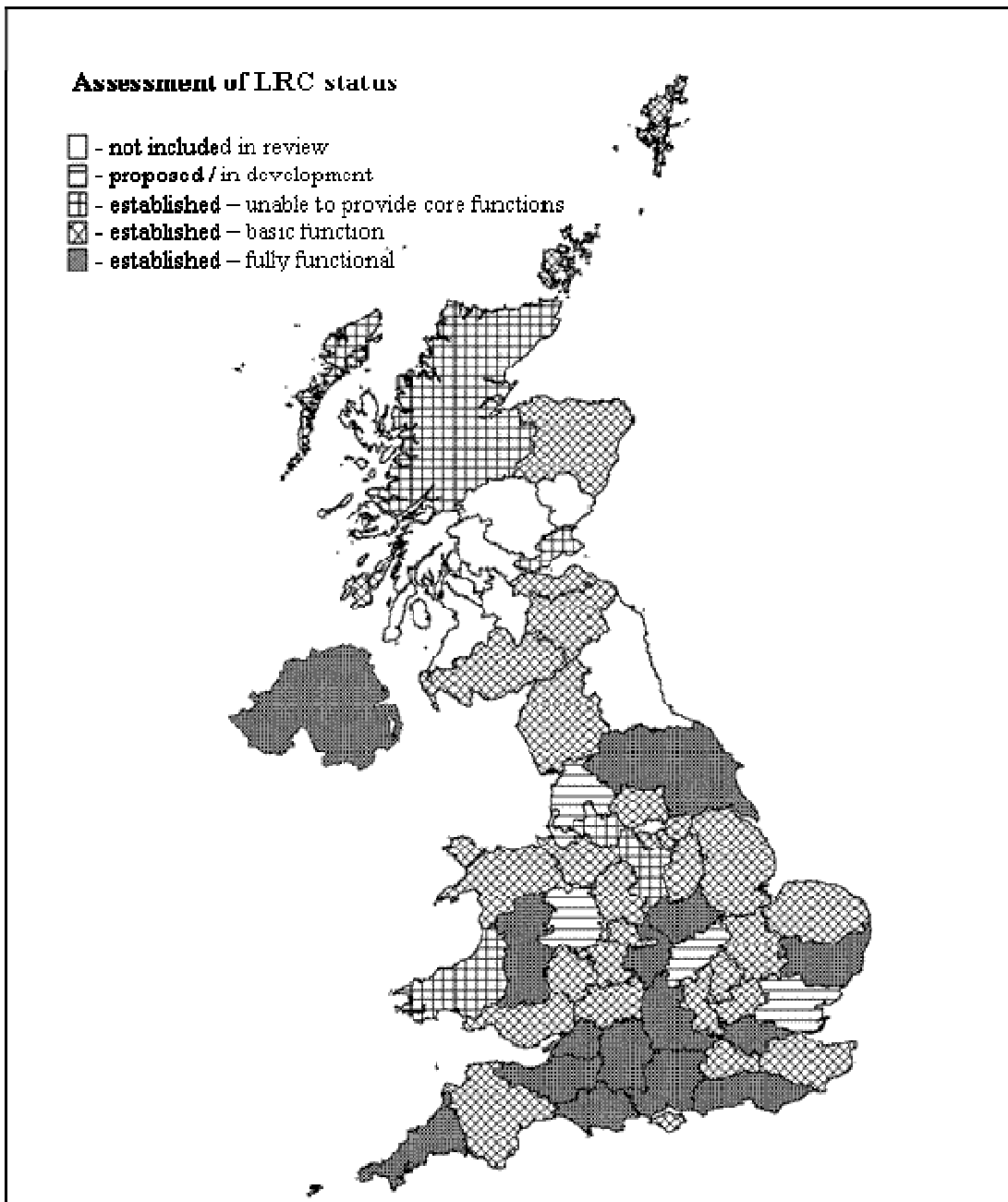
Figure 1 Assessment of LRC status across the UK

3.3   LRCs had a number of different operating structures including limited companies, local authorities, wildlife trusts and partnerships. Table 2 shows that the most common arrangement for the LRCs interviewed was to exist as part of a local authority. It should be noted that some LRCs fitted into more than one of these categories, i.e. an LRC could be hosted by a local authority but managed by a partnership.

Table 2 Q.25: What is the legal status of your LRC (all LRCs) (n=58)?

Legal status	England (n=35)	Northern Ireland (n=1)	Scotland (n=9)	Wales (n=3)	UK (n=48)
Local authority (part of or hosted by)	13		4		17
Charity	5		4		9
Limited company	4		2	3	9
Wildlife trust (or trading company)	9				9
Partnership	5		1		6
Other	4				4
Museum service (part of or hosted by)	2	1			3
Not for profit organisation			1	1	2
Voluntary recording group			1		1

3.4   Although local authorities controlled or hosted the largest number of LRCs, within this arrangement there was a wide variety of LRC effectiveness, activity and stability. In the majority of cases, LRCs directly managed by local authorities were extremely effective, proactive and much more stable than many non-local authority LRCs. However the reverse also seemed to be true in some noteworthy cases. Even in some of the more stable local authority LRCs some stagnant datasets were being used to meet Local Authority requirements, no matter how out of date or inconsistent that data might be.

3.5   Local authorities could exert significant control over other LRCs (such as independent or Wildlife Trust hosted) through funding and positions on LRC steering groups. However, this control was less direct than when the LRC was local authority hosted.

3.6   Table 3 shows that the majority of existing LRCs were managed by a steering group, usually composed of partner organisations. Table 4 shows that all prospective LRCs were intended to be managed as part of a local authority but governed by a steering group. It is worth noting that, in addition to their overall management, the management of some LRCs is determined by SLA requirements. It can be seen that some LRCs had more than one type of management, though some are mutually exclusive.

Table 3 Q.29: What is the management structure of your LRC (existing LRCs only)? (Percentages are calculated from the total number of LRCs.)

LRC broad supervision	England (n=35)	Northern Ireland (n=1)	Scotland (n=9)	Wales (n=3)	UK (n=48)
Steering group (usually made up of partners)	25 (71%)	1 (100%)	4 (44%)	1 (33%)	31 (65%)
Managed by local authority	6 (17%)		6 (67%)		12 (25%)
Managed by wildlife trust	9 (26%)		1 (11%)		10 (21%)
Managed by museums service	6 (17%)	1 (100%)			7 (15%)

Table continued…

LRC broad supervision	England (n=35)	Northern Ireland (n=1)	Scotland (n=9)	Wales (n=3)	UK (n=48)
Board of directors	1 (3%)		1 (11%)	3 (100%)	5 (10%)
Board of trustees	3 (9%)				3 (6%)

Table 4 Q.29: What is the management structure of your LRC (prospective LRCs only)? (All prospective LRCs interviewed were in England. Percentages are calculated as in Table 3.)

LRC broad supervision	England (n=5)
Steering group (usually made up of partners)	4 (80%)
Managed by local authority	4 (80%)
Managed by wildlife trust	0
Board of directors	0
Managed by museums service	0
Board of trustees	0

3.7 The review suggests that there was no one LRC status and management model that was consistently better, but that the success of an LRC was more closely linked to good long term management and high quality staff, though dependence on key staff could be a concern (see Table 43).

3.8 This review found some LRCs operated through existing or planned data sharing partnerships. These were either: a) where organisations, each with its own remit, connected to an LRC to ensure data flow; b) or where different organisations combined to produce the complete LRC package. An example of the former was Hampshire Biodiversity Information Centre, which managed all habitat data and some of the species data for the county, but had links with a strong network of local specialist groups who managed and distributed their own data. An example of the latter was a planned LRC for Derbyshire, which will be formed from the Derbyshire Wildlife Trust, Peak District National Park Authority and Derby Museum and Art Gallery.

Table 5 An example of a strong network of local specialist groups

Derbyshire Wildlife Trust	The point of contact for the LRC. Manage sites for areas outside the National Park and habitat data.
Peak District National Park Authority	Manage sites and some species data for the National Park area.
Derby Museum and Art Gallery	Manage species data for Derbyshire.

3.9 The planned Lancashire Biodiversity Network intends to operate as a series of hubs. Each hub would be an organisation with a stake in biodiversity data management, including the recorders, main statutory bodies, the county council and the wildlife trust. This would then be coordinated through the county councils IT network, with one permanent member of staff at the county council responsible for facilitating the data flow. Several LRCs were considering this type of relationship, but Lancashire is making use of a pre-existing system to achieve it.

3.10 Taking partnership working one step further was the Highland Biological Recording Group, who raised the idea of having an LRC with a data mobilisation manifesto, rather than the traditional data management manifesto. In this model they would mobilise data on the NBN Gateway, which would then be the query mechanism, freeing them from the necessity of many other LRC duties.

This would allow the LRC to spend more of its time servicing the needs of biological recorders in making data flow to the NBN efficient. However, it would mean that interpretation could not be provided for the data – which, if not provided by the LRC, would be provided by another organisation locally. There were questions over how this would be funded, if the direct link to the data users was lacking. However, the Highlands were a different situation from the rest of the UK, having different development pressures (for example, comparatively low pressure for housing, but higher pressure for windfarms) and subsequently different requirements for biodiversity data.

Local Record Centre objectives

3.11   Table 6 shows that 11 (24%) of established LRCs had a formally agreed constitution, with a further seven (15%) planned. Both of the establishing LRCs had a formally agreed constitution.

Table 6 Qs.26 & 27: Does your LRC have a formally agreed constitution? If not, is one planned?

LRC Type	Country	Yes	No	Planned	unknown	Total
Established	England	8	16	6	6	36
	Northern Ireland	1				1
	Scotland	1	6	1		8
	Wales	1				1
Established UK Total		11	22	7	6	46
Establishing (Wales only)		2				2
Inactive (Scotland only)					1	1

3.12   The written objectives of the LRCs vary but six major broad objectives could be determined, as shown in Table 7.

Table 7 Q.28: What are the written objectives of your LRC (established, establishing, inactive and prospective LRCs)?

Broad objective	Frequency	% of LRCs
Collect, collate and manage biodiversity information	26	46
Provide access to biodiversity information	25	45
Promote biological recording	9	16
Strategic planning (incl. development control, wildlife sites, etc.)	7	13
Based on NBN guidance/other professional guidance	3	5
Provide analysis/interpretation of biodiversity information	1	2

3.13   Table 7 shows that 16% of existing and prospective LRCs stated promoting biological recording as a broad objective. It is likely that this figure would have been higher if they were asked about encouraging recording specifically. Table 19 illustrates this, as 70% of existing and prospective LRCs encouraged participation in NSS surveys or intended to.

3.14   Building recording capacity was an enhanced service listed in the NBN Position Statement on LRCs (NBN Trust, 2004) and was undoubtedly very important from a conservation of biodiversity perspective. It also ties in with local authority commitments to life-long learning, which local authority based LRCs may have been required to encourage. Conversely, some LRCs struggled

to establish relationships with recording groups, often due to time limitations or personnel issues, and therefore found it hard to obtain records from these groups.

3.15   It was notable how the objectives varied in complexity, precision and suspected usability. Some LRCs seemed to struggle to think of the objectives when questioned, whereas others produced a long list from one of their supporting documents. Very often the former had a very simple 'one-stop-shop' attitude, which is in essence accurate but not very clear in actually defining the role of the LRC. A few LRCs gave very brief and clear mission statements that summarised their overall objectives.

Local Record Centre coverage

3.16   195,875 km² (79%) of the UK was covered by an LRC that classed themselves as an existing LRC. The category "Existing LRC" includes all organisations that classified themselves as established, establishing or inactive. 22,749 km² (9%) of the UK was not covered by a LRC, though 13,655 km² of this (6% of the UK) was covered by an LRC that classed themselves as a prospective LRC. This is discussed in greater detail in Chapter 4.

3.17   Recorders were often uncertain of LRC boundaries, which presented a problem in making sure that data are submitted to the correct one. rECOrd and others were making moves to resolve this by accepting all data records and then passing data on to the relevant LRC.

Local Record Centre data holdings

3.18   It was very difficult to assess total LRC data holdings accurately; electronic species records are easily countable whereas habitat information is measured by area and data held in paper format is difficult to quantify. It is possible that some LRCs excluded paper records from their data holdings, as they are not easily interrogated.

3.19   The average data holdings for established LRCs was approximately 700,000 individual records. The maximum held at any one LRC was over 9 million, with an overall total within the established LRCs interviewed of over 30 million.

3.20   This is discussed further in Section 4.27.

Relationships with local data providers

3.21   The overwhelming data flow theme that was discussed repeatedly during interviews was the importance of good communication at all levels of data flow. This benefited the recorders, as they felt that they were getting a better level of service; benefited the LRC as they increased the amount of data flow; and benefited the NBN as more data became available. The importance of this cannot be understated, as it is key to ensuring that data flow is as effective as possible and that the NBN and LRCs remained viable in the long term.

Local Record Centre volunteer data sources

3.22   Table 8 shows the proportion of species and habitat records received by LRCs from the voluntary sector. The proportion of species records has been weighted against the estimated total species data holdings of each LRC. However, it was not possible to do this for the proportions of habitat records, as the total habitat data holdings were less easy to estimate and measure, so the average figures are derived by directly averaging the unweighted percentages. As a result the figures for the proportion of habitat data received from the voluntary sector are likely to be less accurate than that of the proportion of species data, and may over- or under-estimate the actual proportions.

Table 8 Qs.37 & 38: What proportion of your species and habitat records came from the voluntary sector over the last year (established, establishing and inactive LRCs)?

Record type		England (n=32)	Northern Ireland (n=1)	Scotland (n=8)	Wales (n=2)	UK (n=43)
Species	Average	74.84	100	69.05	40.01	75.00
	Minimum	5	100	10	40	5
	Maximum	99	100	100	50	100
Habitat	Average	1	0	12.5	0	3.07
	Minimum	0	0	0	0	0
	Maximum	10	0	80	0	80

3.23   Table 8 shows that the proportion of species records received by LRCs from the voluntary sector varies greatly, from 5 to 100%, with an average of 75%. The figures for habitat records ranged from 0 to 80%, but the average was much lower than for species data. Hence it was clear, even with the potential errors within the habitat data, that the majority of species data came from the voluntary sector but the majority of habitat data came from elsewhere.

3.24   59% of existing LRCs had written agreements with volunteers (either individual volunteers or volunteer groups) over the supply and use of data, whilst a further 20% planned to introduce them within the following year. 11% of existing LRCs stated that they were not planning introducing this sort of agreement within the following year.

3.25   67% of established LRCs stated that they would like to work with volunteer groups or organisations that they did not. This was particularly true for bird and mammal groups, as shown in Table 9. With regard to birds, much of this was due to a desire to have access to BTO data, as the BTO did not regularly provide their data to LRCs. Most of the mammal groups that LRCs wished to work with are badger or bat groups, who believed that the data they held was too sensitive to be released and often charged for access to it. A complete list of the volunteer groups that LRCs would like to work with is provided in Appendix 4.

Table 9 Q.40: Which volunteer groups would you like to work with but currently do not (established, establishing and inactive LRCs)?

Type of volunteer organisation	England (n=30)	Scotland (n=6)	Wales (n=2)	UK (n=38)
Special interest groups (birds)	13	7	2	22
Special interest groups (mammals)	15	2		17
Special interest groups (general)	9	2		11
Special interest groups (invertebrates)	5	4		9
Special interest groups (plants)	3	4	2	9
Individual recorders	4			4
National Trust / National Trust for Scotland	2	1	1	4
Special interest groups (reptiles and amphibians)	3			3
Anglers	2			2
Special interest groups (fungi)	1	1		2

Table continued…

Type of volunteer organisation	England (n=30)	Scotland (n=6)	Wales (n=2)	UK (n=38)
Wildlife Trust groups	1	1		2
Museums			1	1
Ramblers	1			1
Universities	1			1

3.26 Table 10 shows the obstacles to working with volunteer groups. Issues with volunteers were the obstacle to working with volunteer groups that LRCs were most concerned about. This occurred particularly at the recorder/LRC level, where certain recorders would refuse to associate with an LRC, which could result in datasets being withheld. Often this could be based upon personality clashes: it was interesting to hear words such as 'competition' and 'suspicion' being used to describe some volunteer attitudes towards LRCs. Sometimes this could be rectified given a significant level of commitment to resolving the issues – though this is something that LRCs could rarely afford given their already tight budgets. There were also off-the-record occurrences of LRC staff members who created rifts between the recorders and the LRC, through bad management, poor people skills, etc.

Table 10 Q.41: What are the obstacles to working with volunteer groups that you would like to work with but currently do not (established, establishing and inactive LRCs) (n=49)?

Obstacle	Frequency
Issues with volunteers	35
Resources	17
Confidentiality/data sensitivity	6
Data incompatibility (including LRC reluctance to accept paper data)	6
LRC issues	6
No local representative for organisation	5
Arrangements in progress	2

Ensuring record submission from volunteers

3.27 89% of established LRCs knew that not all biodiversity data collected within their area was submitted to the LRC. Data that didn't go to the LRC often went to a wide range of locations, including NSSs, county recorders and local specialist groups. In the latter two cases the information was often verified and then passed on to the LRC. This also often happened where there were local representatives of NSSs. However, some records submitted direct to NSSs were still missed (see Section 3.35).

3.28 Table 11 shows that 80% of existing and prospective LRCs intended to ensure the submission of data to them through good communication. One also mentioned that a financial incentive for the recorders might also increase the likelihood of data being submitted to the LRC, though at least five other LRCs offered other support (see Section 3.29). The value of investing effort in acquiring certain information was questioned as the usefulness of the information was not known; an example being the BBC Springwatch survey.

Table 11 Q.68: How will you ensure that all records come to your LRC in the future (established, establishing, inactive and prospective LRCs)?

Method	Frequency	%
Communication	45	80
Formal agreements	11	20
Demonstrating the value of the LRC	7	13
Support	5	9
Prioritisation of volunteer groups	4	7
Technical development	4	7
Financial incentive?	1	2

Services provided to volunteers

3.29   Table 12 shows the facilities offered to volunteers by LRCs. Note that these services were each offered by over 50% of established LRCs. Nevertheless, 87% of existing LRCs stated that they felt the need to do more for volunteers to maintain their support. When asked what the obstacles to this were, 93% stated lack of resources, as shown in Table 13.

Table 12 Q.53: Do you provide any of the following services for volunteers (established, establishing, inactive and prospective LRCs)?

Service	Established	Establishing	Prospective
Provision of local contacts	42 (91%)	2 (100%)	5 (71%)
Training/ Technical advice on recording	40 (87%)	2 (100%)	5 (71%)
Meetings with volunteers	31 (67%)	2 (100%)	5 (71%)
Forums or conferences	30 (65%)	2 (100%)	5 (71%)
Other published material	29 (63%)	1 (50%)	4 (57%)
Meeting space	28 (61%)	2 (100%)	3 (43%)
Use of other office facilities	28 (61%)	2 (100%)	4 (57%)
Newsletter	24 (52%)	2 (100%)	4 (57%)
Other	23 (50%)	1 (50%)	3 (43%)

Table 13 Q.55: What are the obstacles to doing more for volunteers to maintain their support (established, establishing and inactive LRCs) (n=42)?

Obstacle	Frequency
Time/staff shortage	34
Resources (unspecified)	14
Finances	10

Table continued…

Obstacle	Frequency
Equipment/facilities	8
All resource issues	39
Politics	4
Lack of interest from recorders	2
Recorders too far away.	2
Record centre in the early stages of establishing relationships	1
Would lead to confusion	1

Local Record Centre non-volunteer data sources

3.30   Table 14 shows the non-volunteer organisations that existing LRCs had worked closely with in the previous year, though this is thought to be incomplete as some LRCs had not prepared complete answers to this question. The counts are the number of individual relationships, rather than the number of organisations that work with all LRCs, which means that there will have been instances of an LRC working with more than one organisation or vice versa.

Table 14 Q.42: Which non-volunteer organisations (e.g. EN, SNH, CCW, Defra, local authorities, etc.) have you worked closely with over the last year (established, establishing and inactive LRCs)? (Voluntary organisations may be included here where the LRC has worked closely with paid staff members, such as wildlife trusts, the RSPB, National Trust and Wildfowl and Wetlands Trust)

Non-volunteer organisation	England (n=36)	Scotland (n=9)	Wales (n=3)	Northern Ireland (n=1)	UK (n=49)
Local authorities	76	8	7		91
Statutory agencies	-	-	-	-	47
English Nature	34				-
Scottish Natural Heritage		9			-
Countryside Council for Wales			3		-
Environment and Heritage Service				1	-
Other	28	2			30
Environment Agency	23		2		25
Wildlife trusts	15	1			16
Utilities companies	13				13
Defra RDS	12				12
FWAG	9				9
Consultancies	7	1			8
Forestry Commission	2	4	2		8
Museums	7				7

Table continued…

Non-volunteer organisation	England (n=36)	Scotland (n=9)	Wales (n=3)	Northern Ireland (n=1)	UK (n=49)
National Park Authorities	5		1		6
RSPB	3	3			6
LBAP groups	2	1	1		4
AONBs	3				3
Businesses	3				3
National Trust / National Trust for Scotland	2	1			3
Universities	3				3
Highways Agency	2				2
Other LRCs	2				2
SEPA		2			2
Department for Agriculture and Rural Development				1	1
MoD	1				1
NBN	1				1
NFBR	1				1
Plantlife	1				1
Police	1				1
Wildfowl and Wetlands Trust	1				1

3.31   Table 15 shows that the proportion of species and habitat records received by LRCs from the non-voluntary sector varied greatly. As in Table 8 the proportion of species records has been weighted against the estimated total species holdings of each LRC, though again it was not possible to do this for habitat records. However, it is clear that a larger proportion of habitat records came from the non-voluntary sector than the voluntary sector. The reverse was true for species records.

Table 15 Qs.44 & 45: What proportion of species and habitat records came from the non-voluntary sector over the last year (established, establishing and inactive LRCs)?

Record type	Average	Minimum	Maximum
Species	14.40	0	90
Habitat	43.07	0	100

3.32   76% of LRCs stated that they would like to work with non-volunteer organisations that they currently did not work with. Table 16 shows that Defra and the Forestry Commission were the two mostly commonly named non-volunteer organisations that LRCs would most like to work with. The Environment Agency, local authorities and the National Trust also featured frequently in responses to this question.

Table 16 Q.48: Which organisations would you like to work with but currently do not (established, establishing and inactive LRCs)? (This excludes those organisations that were mentioned only once. CEDaR did not identify organisations that they would like to work with but currently do not, so Northern Ireland is therefore excluded)

Organisation	England (n=36)	Scotland (n=9)	Wales (n=3)	UK (n=49)
Defra	19 (53%)			19 (39%)
Forestry Commission	11 (31%)	2 (22%)		13 (27%)
Environment Agency	12 (33%)			12 (24%)
Local authorities	8 (22%)	2 (22%)		10 (20%)
National Trust	6 (17%)	1 (11%)	1 (33%)	8 (16%)
Utilities companies	3 (8%)		3 (100%)	6 (12%)
English Nature	5 (14%)			5 (10%)
SEPA		5 (56%)		5 (10%)
Colleges/universities	1 (3%)	3 (33%)		4 (8%)
British Waterways	3 (8%)			3 (6%)
Consultants	2 (6%)	1 (11%)		3 (6%)
National Park Authorities	2 (6%)	1 (11%)		3 (6%)
RSPB	3 (8%)			3 (6%)
Businesses	2 (6%)			2 (4%)
Defence Estates/MoD	2 (6%)			2 (4%)
Highways Agency	2 (6%)			2 (4%)
LBAP groups		2 (22%)		2 (4%)
NBN		1 (11%)	1 (33%)	2 (4%)
Countryside Agency	1 (3%)			1 (2%)
Scottish Executive		1 (11%)		1 (2%)

3.33   Table 17 shows that the two biggest obstacles to working with non-volunteer organisations were that the organisation could not or would not get involved, and that the LRCs themselves lacked the resources to establish the relationship.

Table 17 Q.49: What are the obstacles to working with the organisations that you currently do not (established, establishing and inactive LRCs) (n=49)?

Obstacle	Frequency
Organisation can't/won't get involved, e.g. no funding to support additional work	27
Resource issues	23
Too little information on who to deal with, what the benefits will be, etc.	6

Table continued…

Obstacle	Frequency
Currently making arrangements	5
Confidentiality	3
Don't know	3
Internal LRC problems	3
Database incompatibility	2

3.34   Where there was no LRC, biodiversity data went to a wide variety of voluntary and non-voluntary organisations.

Data flow between Local Record Centres and National Schemes and Societies

3.35   There were significant problems ensuring that data flow from recorders through to the NBN via LRCs was effective. One of these was the complexity of sharing data between LRCs and NSSs. Table 18 shows that overall, a greater number of LRCs provided at least some data to NSSs (71%) than received data in return (57%). However, this does not equate to overall data flow, as it does not indicate the quantity of data flowing in each direction.

Table 18 Matrix showing data flow from NSSs to LRCs (Q.69) and LRCs to NSSs (Q.71) (established, establishing, inactive and prospective LRCs)

		LRC to NSS (Q.69)			Total
		No	**Unknown**	**Yes**	
NSS to LRC (Q.71)	**No**	7 (12%)	-	13 (22%)	20 (35%)
	Unknown	-	4 (7%)	1 (2%)	5 (9%)
	Yes	6 (10%)	-	27 (47%)	33 (57%)
Total		13 (22%)	4 (7%)	41 (71%)	58 (100%)

3.36   Table 18 also shows that more LRCs provided data to NSSs without any return (22%) than vice versa (10%). This may indicate that NSSs had no data to provide to any LRCs or that LRCs were happier to provide data without reciprocation. It was not generally a function of NSSs to forward biodiversity data to the LRCs. Judging from the comments made by LRCs, the most common arrangement for data flow directly between these organisations was both ways by request only.

3.37   Sharing of data between LRCs and NSSs risked data duplication, as the same data was being held within the LRC and the NSS. This had advantages and disadvantages. It was beneficial as the data could be used at each scale: by LRCs to add to the local picture of total biodiversity and by NSSs to create a national overview for a particular taxon. This was recognised by some LRCs when asked whether they duplicated what NSSs provide, who responded that they did not as LRCs were able to add local context to data.

3.38   Table 19 shows that 70% of existing or prospective LRCs did or would actively encourage volunteer participation in NSS surveys.

Table 19 Q.73: Does your LRC actively encourage local volunteer participation in national schemes and societies surveys?

LRC type	England	Northern Ireland	Scotland	Wales	UK
Established (n=46)	23 (50%)	1 (2%)	6 (13%)	1 (2%)	31 (67%)
Establishing (n=2)	-	-	-	0 (0%)	0 (0%)
Inactive (n=1)	-	-	1 (100%)	-	1 (100%)
Prospective (n=7)	7 (100%)	-	-	-	7 (100%)
All LRCs (n=56)	30 (54%)	1 (2%)	7 (13%)	1 (2%)	39 (70%)

Links to other networks and scales

Local Record Centre networks

3.39   93% of established LRCs felt the need to operate as part of a wider network of LRCs. The reasons for this were wide ranging, but most the frequently cited were:

- it allows for common standards;
- data exchange;
- political strength – it's easier to deal with larger organisations at a regional level;
- problem solving; and
- regional/national contexts.

3.40   LRC networking offered LRCs a greater level of stability, a forum within which to discuss problems and combined political power. This was demonstrated by LRCs in one area making a group decision not to provide data to one organisation that was unwilling to pay. If only one LRC had agreed to this data supply it would have created a precedent that would have affected them all. Regional LRC networks also allowed them to approach funding bodies as a consortium.

Wider networks

3.41   74% of established LRCs felt the need to operate as part of a wider network of organisations, not limited to other LRCs. Again, the reasons given for operating as part of a wider regional network of organisations were wide ranging, but most the frequently cited were:

- data exchange;
- direct link to SLA holders;
- economies of scale;
- to promote a greater understanding;
- sharing of ideas;
- LBAP involvement;
- lobbying the development sector; and
- to plan conservation efforts.

3.42   96% of established LRCs felt that they had a role in supporting the provision of biodiversity information on a wider geographic scale. The reason for this in every case was for the purposes of conservation and biodiversity monitoring.

3.43   80% of established LRCs said that they needed to link to NSSs, for the following reasons:

- data exchange;

- to facilitate verification;
- so that the NSSs can provide the bigger picture; and
- to avoid duplication.

3.44   Two of the three LRCs that said they didn't feel a need to link to NSSs said that this was because the recorders linked to the NSSs on their behalf.

3.45   Though not included in the formal interview, some LRCs expressed confusion over the remit of the NFBR. These LRCs felt that the NFBR could have done more to represent the needs of LRCs and the recording community as a whole. Recorders were well represented by organisations such as the British Naturalists Association and NSSs, but LRCs were fairly poorly represented. However, the LRC technical forum, the recently established Association of Local Environmental Record Centres and LRCs working together regionally may resolve this issue.

Relationship with the NBN

Providing access to data via the NBN Gateway

3.46   Table 20 shows that only 26% of established LRCs were providing data to the NBN Gateway. The main reason for this appears to be that they did not have the resources to do this, as shown in Table 21, though a host of other reasons were also cited.

Table 20 Q.87: Do you use the NBN Gateway as a way of providing access to data?

LRC type	England	Northern Ireland	Scotland	Wales	UK
Established (n=46)	10 (22%)	0 (0%)	2 (4%)	0 (0%)	12 (26%)
Establishing (n=2)	-	-	-	1 (50%)	1 (50%)
Inactive (n=1)	-	-	1 (100%)	-	1 (100%)
Prospective (n=7)	5 (71%)	-	-	-	5 (71%)
All LRCs (n=56)	15 (27%)	0 (0%)	3 (5%)	1 (2%)	19 (34%)

Table 21 Q.88: What factors are restricting your LRC from uploading data to the NBN Gateway as a way of providing access (established, establishing, inactive and prospective LRCs)?

Reason	Frequency	% of LRCs
Resources[1]	33	70
Data flow issues	10	21
Concerns over NBN Gateway operation	8	17
Data incompatibility	7	15
Concerns over NBN Gateway data quality/completeness	6	13
Prefer to provide data locally	6	13
Can't see any benefit	3	6

Table continued…

Reason	Frequency	% of LRCs
Intellectual property rights / confidentiality	3	6
Lack of or poor communication from the NBN	3	6
Limitations due to data providers	2	4
LRC data holdings limited	2	4
NBN Gateway and LRC have conflicting remits	2	4
Recorder 2000/6 software bugs	2	4
Gateway use of datasets: LRC data holdings are much broader	1	2
Is the role of the NSSs	1	2
LRC data unverified	1	2
Other work priorities	1	2
Technical difficulties	1	2

[1] Resource issues were wide ranging and included lack of time to learn how to use the NBN Gateway, lack of time to upload data, lack of IT infrastructure to be able to manage data on the NBN Gateway, etc.

3.47   Concerns were raised over how sensitive data, often badger and bat data, could be restricted within larger datasets when exporting from Recorder. It was not possible to restrict detailed access to information on the NBN Gateway based on geographical area, which was suggested as a requirement by some LRCs concerned about giving access to large datasets for single site queries.

3.48   Other concerns were that problems could occur if data were supplied to the NBN Gateway by both the LRC and NSS, as record duplication could make it appear as though there was double the number of records. Furthermore, each organisation could provide the data with different restrictions, which would interfere with the objectives of each. It was apparent that custodianship of these duplicated datasets needed to be more clearly defined, though this is a problem not just limited to use of the NBN Gateway.

Use of data on the NBN Gateway

3.49   As shown in Table 22, only 35% of established LRCs used data available via the NBN Gateway, but that all prospective LRCs intended to use it. However, this did not take into account how much they used it, and very few LRCs used it regularly. 16% of LRCs did not have time to use the NBN Gateway, whilst many said that they could access better information via local specialists and that the data resolution on the Gateway was not high enough (see Table 23). Many were perhaps, unaware of the information available or believed that there was nothing of interest on it.

Table 22 Q.92: Do you make use of species data available through the NBN Gateway? (Four of the established LRCs chose not to answer this question)

LRC type	England	Northern Ireland	Scotland	Wales	UK
Established (n=46)	11 (24%)	0 (0%)	5 (11%)	0 (0%)	16 (35%)
Establishing (n=2)	-	-	-	1 (50%)	1 (50%)
Inactive (n=1)	-	-	1 (100%)	-	1 (100%)
Prospective (n=7)	7 (100)	-	-	-	7 (100%)
All LRCs (n=56)	18 (32%)	0 (0%)	6 (11%)	1 (2%)	25 (47%)

Table 23 Q.93: Why do you not use the NBN Gateway and what alternative mechanisms do you use (established, establishing, inactive and prospective LRCs)?

Reason	Frequency	% of LRCs
Limited time	9	16
Better information available from local specialists	8	14
Data resolution not high enough	8	14
Doesn't add to LRC data	7	13
Data not trusted	3	5
Lack of data on Gateway	3	5
Difficulty using Gateway	2	4
Format unsuitable	2	4
Unclear how it works	2	4
Couldn't access data - couldn't afford charge imposed by BTO	1	2
LRC offered to take part as a trial, but NBN declines	1	2
No internet connection	1	2
Not in remit	1	2

3.50   One thing that could perhaps be highlighted by the NBN themselves, once the LRCs have an adequate understanding of the NBN Gateway, is the potential for using the NBN Gateway as an advertisement. Two LRCs commented that it would be more appropriate for the NBN to take the role of providing metadata on the biodiversity information available, without actually providing access. By placing their data on the NBN Gateway, freely accessible at low resolution, LRCs would advertise and demonstrate the potential usefulness of the data they held to data users. Dataset metadata were the perfect place to state the actual data holdings and their potential use. It also allowed potential data users (including the LRCs themselves) to know where individual datasets were held.

Overall impression of the NBN

3.51   Table 24 shows that the majority (55%) of existing and prospective LRCs felt that the NBN both helped and hindered. It is noticeable that a greater number of establishing and prospective LRCs thought that the concept helped than did the established LRCs. Only one LRC (an established one) said that they thought the NBN concept hindered.

Table 24 Q.94: Does the NBN concept help or hinder? (Note that not all LRCs answered this question)

LRC type	NBN Helps	NBN Hinders	NBN Helps & Hinders
Established	14 (30%)	1 (2%)	27 (57%)
Establishing	1 (50%)	0	1 (50%)
Inactive	0	0	1 (100%)
Prospective	4 (57%)	0	2 (29%)
All LRCs	19 (34%)	1 (2%)	31 (55%)

3.52   The reasons for this are given in Table 25, which shows that the guidance and standards provided by the NBN, as well as the ability to make data available through the Gateway are the things that LRCs considered to be most useful (both cited by 41% of the LRCs). It also shows that LRCs viewed the NBN Gateway as competition for data, especially national datasets, and a potential threat to LRC funding (cited by 30% of LRCs). This concern was neatly summarised by a comment from one LRC:

'The NBN allows users to get the impression that there is a source of information that can answer everything without LRC input or without charge. This reinforces the popular misconception among semi-informed that information is a free public good which materialises without effort or investment.'

3.53   Table 25 also shows that LRCs felt fairly strongly that the NBN had not integrated effectively with the LRC network already in place.

Table 25 Q.95: How does the NBN help or hinder (established, establishing, inactive and prospective LRCs)?

Helps	Frequency	% of LRCs
Data collation and provision	23	41
Guidance and standards	23	41
Concept	12	21
Platform for promoting data and suppliers	9	16
Platform for promoting recording and data use	7	13
Development of Recorder 6	2	4
Funding for specific projects	2	4
Technical support	2	4
Has forced LRCs to talk	1	2
Identification of gaps in data	1	2

Table continued…

Hinders	Frequency	% of LRCs
Competition for data and funding	17	30
Does not integrate properly with the LRC network	13	23
Creates confusion	10	18
Lacks local context	8	14
Doesn't provide necessary data	6	11
Lack of trust	4	7
Data is not up to date	3	5
Provides little to recorders	3	5
Problems with Gateway administration	1	2

3.54   Though it had not formed part of the formal interview, eight LRCs (14%) perceived communication problems with the NBN. This was to some extent included in the 18% of LRCs that felt that the NBN created confusion (see Table 25). One LRC commented that they were so far removed from the NBN that all they saw was the newsletter. At least two others had offered part of their functions to act as demonstrations for the NBN, with little or no response from the NBN. There was sometimes a feeling that LRCs had been side-tracked by the NBN whilst they ensured the support of the NSSs. Some LRCs also felt that they had been poorly informed about the NBN. Unfortunately LRCs often did not have the time or resources to give to fully understanding the NBN.

3.55   Similarly, some LRCs felt that the NBN was too focussed on getting data on the NBN Gateway, leaving little support for the data providers. They felt that there should be more reciprocation, though this did not have to involve the flow of data back to the LRC, and could include support, training, etc. They felt that they had more support in the past through the development of NBN guidance, but that the focus had shifted away from this.

3.56   Table 26 shows that 54% of established LRCs used NBN guidance or agreements. Many of these LRCs already had the systems in place, so their use of these publications would be limited. However, all of the prospective LRCs used NBN guidance or agreements, indicating that they were highly useful when setting up LRCs. NBN guidance documents were sometimes modified or simplified for specific use within the LRC.

Table 26 Q.90: Do you use any of the NBN guidance or agreements?

LRC type	Frequency	% of LRCs
Established	25	54
Establishing	1	50
Inactive	1	100
Prospective	7	100

Data content, coverage and quality

Provision of data to Local Record Centres

3.57 Table 27 shows that LRCs mainly had data exchange agreements with special interest groups, local authorities and wildlife trusts. However, LRCs may have exchanged data with other users without a formal data exchange agreement.

Table 27 Q.98: With which data providers do you have a data exchange agreement (established, establishing, inactive and prospective LRCs) (n=56)?

Data provider	Frequency
Special interest groups	47
Local authorities	17
Wildlife trusts	13
Statutory agencies	9
Environment Agency / SEPA	5
Individuals	5
National Trust / National Trust for Scotland	3
Defra	2
Other charities	2
Consultancies	1
Educational institutions	1
Forestry Commission	1
Museums	1
Other LRC	1
Utilities	1

3.58 89% of established LRCs were aware of at least one dataset that they did not have access to. The types of dataset are listed in Table 28, which shows that the majority of these datasets were held by special interest groups: general interest, bird, invertebrate, mammal and plant groups.

Table 28 Q.100: What types of datasets are you aware of but do not have access to (established, establishing and inactive LRCs) (n=49)?

Dataset type	Frequency
General	36
Bird	27
Invertebrate	15
Mammal	15
Plant	13

Table continued…

Dataset type	Frequency
Environment Agency / SEPA	6
Consultancy	5
Defra	4
Marine/aquatic	4
Statutory agency	4
Educational Institution	3
Forestry Commission	2
Local authority	2
Fungi	1
Herpetological	1
Museum	1

3.59 It was a general concern for most LRCs that Defra did not submit data to LRCs. The LRCs appeared to be unaware of reasons for this, such as data being collected for specific projects and Defra having strict agreements with landowners over the use of the data.

3.60 LRCs were aware of some consultancy datasets that they did not have access to. There is potential for LRCs to set up arrangements with planning authorities to pass the data on when planning applications were made, and this already took place in a very small minority of (local authority hosted) LRCs. However, this would only be a partial fix, as it was not always necessary for developers to submit all of the biodiversity information on a site.

3.61 Though not captured by the formal interview, a small number of LRCs also expressed their suspicions that certain of the larger consultancies were building their own databases of biological information and not sharing the information with the LRC. This may potentially cause two problems:

- This data could not be used for purposes not related to the work for which it was obtained.
- The main reason for doing this must have been to save money by not having to request LRC data, but this meant that the data used would not be complete or up to date. Only by combining all available biodiversity data could all conservation concerns be taken into account.

Validation and verification

3.62 All LRCs validated at least some of the data submitted by volunteers, with the exception of one LRC still in the process of establishing.

3.63 Table 29 shows that 93% of existing or prospective LRCs had or intended to have arrangements with county recorders for specific taxa to facilitate record verification, which meant that the data were often passed on by the county recorder to the LRC and relevant NSS. Where there was no suitably experienced volunteer recorder in the area it often fell to the LRC staff or was left unverified, though rare or new species to an area may be scrutinised more closely. National experts were used rarely for this work, unless they were particularly active in the area, probably because they would otherwise have been inundated with records to verify. This must mean that, even where local specialists were used, records often went unverified for obscure taxa (Siphonaptera, Collembola, etc.). Attitudes to these unverified records varied; some were entered

on the database under the reasoning that some data are better than none at all, whereas others were not entered at all.

Table 29 Q.105: Do you involve local representatives/experts of national schemes and societies in data verification?

LRC type	No.	% of LRCs
Established	44	96
Establishing	2	100
Inactive	1	100
Prospective	4	57
All LRCs	52	93

3.64   Table 29 also shows that only 57% of prospective LRCs intended to use experts from NSSs in data verification, which may mean that they had either overlooked this side of verification or had not got to a stage of development where they had considered it.

3.65   Validation and verification is discussed in more detail in Section 4.28.

Data management systems

3.66   Table 30 shows that the most frequent data repository software used by LRCs was Recorder 2002, which 43% of LRCs used as a main data repository.

Table 30 Q.109: What software do you use as the main data repository (established, establishing, inactive and prospective LRCs)?

Software	Frequency	% of LRCs
Recorder 2002	24	43
Recorder 3.x	12	21
Recorder 6	11	20
MapInfo	10	18
ArcGIS	7	13
Access	6	11
Mapmate	3	5
Marine Recorder	2	4
Recorder 2000	2	4
Recorder 3.x (upgrading soon)	2	4
(Planning to use Recorder 6)	1	2
Access (cetacean data)	1	2
Currently devising own new database.	1	2
Erecords (and internal database)	1	2

Table continued…

Software	Frequency	% of LRCs
MapInfo (sites and habitats)	1	2
Original format	1	2
Other (Lotus approach - own designed, in house)	1	2
Recorder 3.x (soon to be v6)	1	2
Self designed Paradox database	1	2

3.67   The list of software used by LRCs other than their main data repository was almost identical, as shown in Table 31. This may indicate that it was hard for LRCs to determine a main data repository, as they tended to use a number of them or used different ones for different purposes.

Table 31 Q.110: What software do you use other than as the main data repository (established, establishing, inactive and prospective LRCs)?

Software	Frequency	% of LRCs
Recorder 2002	24	43
Recorder 3.x	12	21
Recorder 6	11	20
MapInfo	10	18
Access	6	11
ArcGIS	6	11
Mapmate	3	5
Marine Recorder	2	4
Recorder 2000	2	4
Recorder 3.x (upgrading soon)	2	4
(Planning to use Recorder 6)	1	2
Access (cetacean data)	1	2
ArcInfo	1	2
Currently devising own new database.	1	2
Erecords (and internal database)	1	2
MapInfo (sites and habitats)	1	2
Original format	1	2
Other (Lotus approach - own designed, in house)	1	2
Recorder 3.x (soon to be v6)	1	2
Self designed Paradox database	1	2

3.68   Table 32 shows that the most frequently used systems to query data and produce reports were MapInfo (45%), Access (39%) and Recorder 2002 (34%).

Table 32 Q.111: What systems do you use to query and produce reports (established, establishing, inactive and prospective LRCs)?

Software	Frequency	% of LRCs
MapInfo	25	45
Access	22	39
Recorder 2002	19	34
ArcGIS	16	29
Recorder 3.x	15	27
Excel	14	25
Recorder 6	8	14
Dmap	6	11
Mapmate	6	11
Other	2	4
Cobra (bird recording)	1	2
Geo Conservation	1	2
MapInfo/Access application	1	2
Marine Recorder	1	2
MS Office	1	2
Paper	1	2
Posgress QL	1	2
Recorder 2000	1	2
Recorder 6 (planning)	1	2
Self designed Paradox database	1	2
Word	1	2

3.69 Table 33 shows that when asked what IT infrastructure LRCs needed the most frequent response was general improvements, which was mentioned 26 times. Improvements to Recorder software also featured highly, as issues with Recorder were mentioned on 16 occasions. LRC thoughts on providing better data management services were very similar, though online submission of data, field IT equipment, Recorder satellite networks and specific solutions to problems were also mentioned.

Table 33 Q.115: What software / IT infrastructure do you need to help you operate more effectively (established, establishing and inactive LRCs) (n=49)?

Requirement	Frequency
General infrastructure	26
Recorder upgrade/developments	16

Table continued…

Requirement	Frequency
Web interrogation of data	15
Server	13
IT support	10
GIS	9
OS data / species dictionary	7
Automated reporting	3
Other database	2
Website	2
Paper document management systems	1

Policies and operation of Local Record Centres

Use of staff resources

3.70 Table 34 shows the large range of FTE staff at the LRCs interviewed, from 0.1 staff members to over 9. This most likely depended upon funding, the geographical area covered, the state of LRC development and the number and quantity of enhanced functions offered. When interviewees split their job between LRC and non-LRC duties it could be difficult for them to estimate FTE LRC staff time, as the roles became blurred.

Table 34 Q.32 What is the FTE (Full Time Equivalent) of people working at the LRC at present (n=49)?

LRC type	Average FTE	Minimum FTE	Maximum FTE
Established	2.87	0.1	9.4
Establishing	2.10	1.2	3
Inactive	0	0	0

3.71 Figure 2 shows that analysis and reporting took up the most time for established LRCs, averaging at 19% of all staff time. Data entry and management also took up large proportions of staff time (16% and 12% respectively). However, the individual figures varied, as one LRC spent all staff time on data entry, whilst another spent almost all staff time on analysis and reporting.
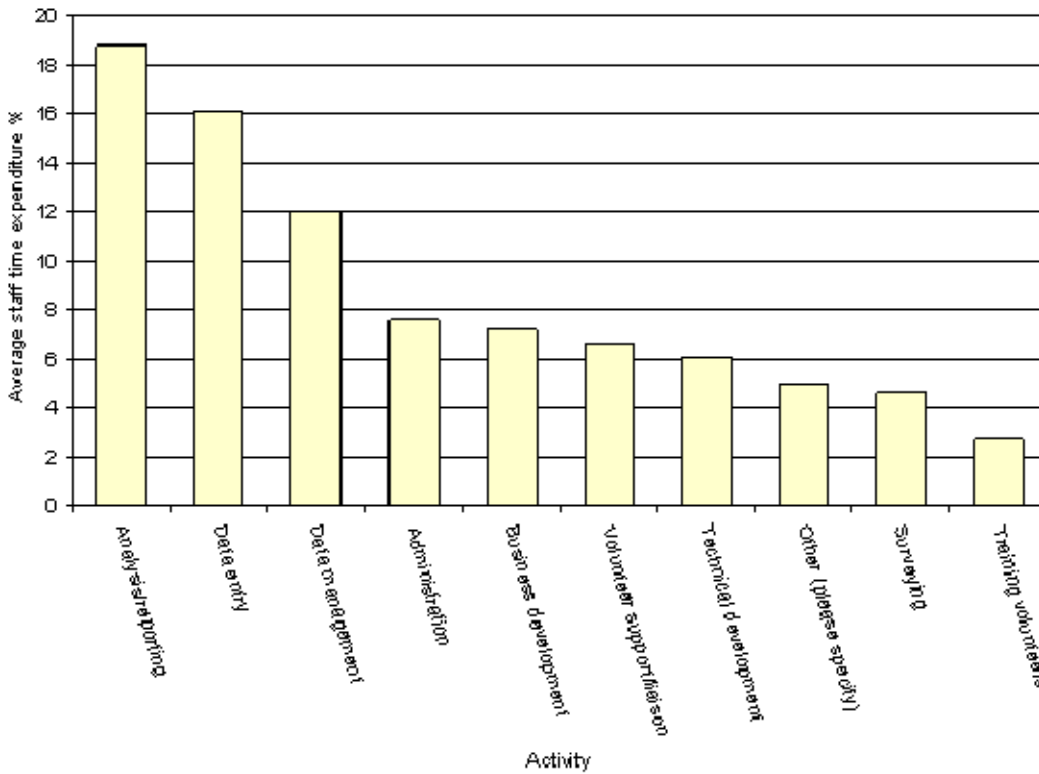
Figure 2 Graph showing paid staff time spent on a variety of activities (established, establishing and inactive LRCs) (n=49).

3.72 Many LRCs felt that they spent disproportionately large amounts of time chasing funding or promoting their existence. This distracted them from their core work of managing data, supporting recorders and promoting recording. Despite these factors forming an important part of the NBN Position Statement on LRCs, importance of this core work was not always recognised by funding bodies, as it did not lead directly to a useable product. There was a disinclination of funding bodies to support any LRC activity that did not directly lead to a required service.

3.73 On average 3.2 volunteers helped out at each established LRC, though the maximum number was very high at 18 volunteers. These volunteers contributed on average approximately 14 hours each week, though the maximum was 75 hours – equivalent to about 10 working days each week.

Enhanced functions

3.74 54% of established LRCs provided advice or other ecological support in addition to the provision of information. Table 35 shows that the range of services provided was broad, but that administration of the wildlife sites system (including any other definition of locally important sites, for example County Wildlife Sites, Sites of Importance for Nature Conservation, Sites of Nature Conservation Interest, etc.) was the most frequently cited.

Table 35 Q.127: What other advice or ecological support do you provide (established, establishing and inactive LRCs)?

Service	Frequency	% of LRCs
Administration of wildlife sites system	10	20
Contextual information on data supplied	8	16

Table continued…

Service	Frequency	% of LRCs
Data interpretation	8	16
Survey	7	14
Educational / awareness raising work	6	12
Consultancy service / other projects	4	8
Recommendation / advice	4	8
GIS / digitising services	3	6
Screening of planning lists	3	6
BAP support	1	2
Marine data management	1	2
Methodology development	1	2
Species ID	1	2

3.75   The provision and range of enhanced services on offer often depended upon the local situation. For example, there was no need for an LRC to offer biodiversity data interpretation services if the local wildlife trust or county ecologist already did this – in many cases the LRCs established links with the relevant organisations.

Marketing

3.76   52% of established LRCs carried out some form of marketing activity. Table 36 shows that the two most frequent forms of marketing activity were leaflets, bookmarks or mail shots and personal contact through meetings, workshops, etc., which were used by 36% of LRCs.

Table 36 Q.131: What sort of marketing activity do you carry out (established, establishing, inactive and prospective LRCs)?

Activity	Frequency	% of LRCs
Leaflets/bookmarks/mail shots	20	36
Personal contact	20	36
Website	13	23
Newsletters	11	20
Press releases	9	16
Other	6	11
Posters/displays	6	11
Publications	4	7
Re-branding	2	4
Questionnaires	1	2

Staff Conditions

3.77   Staff conditions were analysed against LRC status, with key results as follows:

- All established LRCs provided a pension for their staff, with the exception of 5 (10%), which were all charities (66% of all charitable LRCs).
- Most established LRCs could provide salary security to staff, though there were two exceptions, as only 56% of charitable LRCs and 89% of local authority LRCs could provide this.
- 79% of established LRCs conducted regular formal appraisals by line managers for staff.
- All LRCs provided training for staff members, except for one which was local authority based.

3.78   As can be seen from Table 37, the breakdown of established LRCs with links to other career structures was more varied. It shows that local authority based LRCs were most likely to have links to other career structures, but that even here it was less than half of them (47%). No charitable LRC had links with other career structures.

Table 37 Q.144: Do you have links with other career structures (established, establishing, inactive and prospective LRCs)?

Legal status	Frequency	% of total
Local authority	9	47
Partnership	1	20
Limited company	1	11
Wildlife trust	1	11
Charity	0	0

3.79   26% of established LRCs stated that they had problems in recruiting staff. Table 38 shows that the main obstacles to recruiting staff were staff conditions (salary, lack of career structure, length of contact, etc.) and the lack of candidates with the required combination of technical and management skills.

Table 38 Q.149: Do you have problems in recruiting staff (established, establishing and inactive LRCs) (n=49)? (Some LRCs gave more than one problem with recruiting staff)

Obstacle	Frequency
Staff conditions	21
Lack of suitable candidates	19
Unappealing location	2
Advertising costs	1

3.80   28% of established LRCs said that they had problems retaining staff. Table 39 shows that the biggest problems that LRCs had with retaining staff were poor salaries and lack of security. Often, LRC work was used as training by staff to get to a proficient level, whereupon they moved elsewhere. Staff with IT skills could obtain larger salaries in the commercial jobs market. The number of FTE staff at each LRC was related to whether they felt they had problems retaining staff, as is shown in Figure 3. The LRCs suggested that LRC accreditation and staffing structure could be a possible solution to this.

Table 39 Q.152: What are the problems you have with retaining staff (established, establishing and inactive LRCs) (n=49)? (Some LRCs gave more than one problem with retaining staff)

Problem	Frequency
Poor salaries	6
Poor security	6
Lack of career structure	5
Short-term contracts	3
Morale issues / politics	2
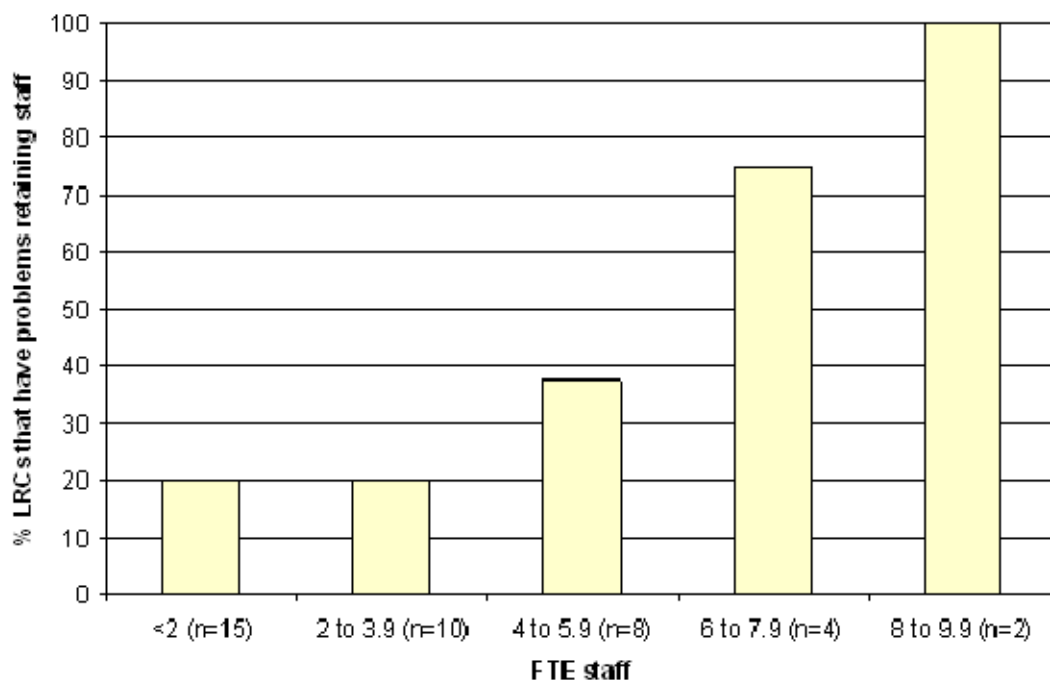
Figure 3 Number of FTE staff against problems retaining staff (established, establishing and inactive LRCs) (n=49).

Key benefits provided by Local Record Centres

3.81   Table 40 shows that the most frequently cited benefit of having an LRC was to be a central comprehensive data resource.

Table 40 Q.155: What do you see as the main benefits of your LRC (established, establishing, inactive and prospective LRCs) (n=59)?

Benefit	Frequency
Central comprehensive data resource	57
Benefits to wildlife	32
Facilitating data flow	29
Data quality/standard	27

Table continued…

Benefit	Frequency
Education and research	25
Cost effective	18
Local knowledge	8
Impartiality	5

3.82   39% of established LRCs stated that they were in competition with other data suppliers within their geographical area. Table 41 shows that the competition was mainly from recording groups, many of whom also ran a charged enquiry service, and conservation organisations, of which nine out of ten were wildlife trusts. The LRCs believed that their better data and quality of service set them apart from their competitors, as shown in Table 42.

Table 41 Q.167: What other information suppliers are you competing with in your geographic area (established, establishing, inactive and prospective LRCs) (n=59)?

Competition	Frequency
Recording group	24
Conservation organisations	10
Local authorities	4
Consultancies	3
NBN Gateway	3
Other LRCs	2

Table 42 Q.168: What are the unique qualities of your LRC versus other comparable data sources (established, establishing, inactive and prospective LRCs) (n=59)?

Quality	Frequency
Higher quality, more comprehensive data	28
Quality of service	22
Wider range of outputs	6
Context	3
Impartiality	2

Viability of Local Record Centres

LRC sustainability

3.83   Many LRCs indicated that they led a precarious existence, due to:

- Insufficient funding commitment from prospective partners.
- Supporting organisations reducing or removing funding[1].
- Prospective partners failing to appreciate the legislative requirements or need for the services an LRC would provide.

- Prospective partners failing to agree on priorities and/or ways of moving forward.
- Concerns from a small number of local naturalists or consultants that their interests will be compromised, failure to engage with these issues or for the majority view of local naturalists to be asserted.
- General lack of interest from other parties that should have been more involved.
- Lack of internal management.

[1]This may be because the LRC did not fulfil the requirements for funding, though no instances of this were encountered in this review.

3.84   Table 43 shows the perceived threats to LRCs in order of importance. Funding was the main concern, both the low level and the lack of security. Also of great concern was the reliance on key members of staff.

Table 43 Q.187: What are the risks in your support arrangements (established, establishing, inactive and prospective LRCs)? (The first number in each cell is the number of times the threat was cited, whilst the percentage in brackets is the proportion of LRCs that cited the threat) (Some LRCs cited more than one threat that fell into the same category)

Threat	England (n=43)	Northern Ireland (n=1)	Scotland (n=9)	Wales (n=3)	UK (n=56)
Funding insecurity	27 (60%)	1 (100%)	3 (33%)	2 (67%)	33 (57%)
Lack of funding	14 (33%)		4 (22%)	1 (33%)	19 (30%)
Reliance on key staff members	9 (21%)		5 (56%)	1 (33%)	15 (27%)
Staff sourcing problems, incl. volunteers	7 (16%)		1 (11%)	1 (33%)	9 (16%)
Instability from umbrella org / partners	7 (16%)				7 (13%)
National policy changes	6 (12%)				6 (9%)
Non-core work	3 (5%)		1 (11%)		4 (5%)
Data provider withdrawal	2 (5%)				2 (4%)
Competition for consultancy work	2 (2%)				2 (2%)
Intellectual property rights	1 (2%)				1 (2%)
Lack of understanding from users	1 (2%)				1 (2%)
NBN	1 (2%)				1 (2%)

3.85   Five prospective LRCs stated that there had been previous but failed attempts to establish an LRC in their area. In all cases this was due at least in part to lack of funding, though one encountered distrust from the recording community.

Financial viability

3.86   Probably the biggest concern of all LRCs was funding insecurity (see Table 3.50 and Table 3.43). This related not just to the amount of funding, but also to the duration of the funding provided to the LRC. Some LRCs endeavoured to supplement their Service Level Agreement or grant funding by carrying out contracts or investing money. However, this may not have been appropriate to all LRCs, as some may not have been set up in a way that would allow this.

3.87   The average operating costs for an established LRC was £91,254 per annum for 2.9 FTE staff. However, one (a volunteer natural history society based LRC) managed to survive on £1,000 per annum and 0.1 FTE staff, whilst the highest funded LRC had an annual budget of £363,000 and 5 FTE staff. The non-volunteer based LRC with the lowest level of funding received £14,800 per annum and 0.6 FTE staff.

3.88   Table 44 shows the sources of LRC funding. This highlights the differences in the funding even from the same organisations from LRC to LRC. This means that individual funding bodies may provide one level of funding to one LRC and another level (or none) to another LRC. This appears to be totally unrelated to data provision, the area covered or any other measure, but may instead be due to local branches of the funding bodies having different budgetary or other priorities.

Table 44 Q.178: Which organisations provided financial support (established, establishing, inactive and prospective LRCs)? (F = Frequency of support; A = Average of total funding)

Income %		LRC type			All LRCs
		Established	Establishing	Prospective	
Data requests / project income[2]	F	30		2	32
	A	13		22	13
Defra	F	1			1
	A	0			0
Educational institutions	F	2		1	3
	A	5		0	3
Environment Agency / SEPA	F	13	2	2	17
	A	7	7	17	8
Forestry Commission	F	3	2		5
	A	6	25		13
FWAG	F	2			2
	A	1			1
Highways Agency	F	1			1
	A	6			6
HLF and other grants	F	7		3	10
	A	30		32	31
Investments	F	1			1
	A	4			4
Local authorities	F	66	7	7	80
	A	18	6	23	17

Table continued…

		LRC type			
Museums	F	3			3
	A	33			33
National Trust / National Trust for Scotland	F	1			1
	A	2			2
Private sector / utilities	F	9			9
	A	2			2
RSPB	F	3			3
	A	4			4
Special interest groups	F	2			2
	A	6			6
Statutory agencies	F	27	2	4	33
	A	22	35	13	22
Wildlife Trusts	F	26		1	27
	A	12		17	12

[2] Some LRCs mentioned ethics in pricing for enquiries, indicating that they had a sliding scale for commercial enquiries. For those enquiries leading to potentially detrimental developments they imposed higher charges than for standard data searches.

3.89   The threat of budget cuts at the local authority level decrease the stability of LRCs. At best budget cuts could lead to a reduction of LRC funding; at worst they could mean that local authority-run LRCs were abandoned, as they were seen to be dispensable.

3.90   Though it did not form part of the formal interview, the LRCs noted the increasing use of biodiversity data by Defra generally, the RDS and FWAG, without specific funding support. Though it may be argued that Defra fund LRCs indirectly through the statutory agencies and there could be concerns over double funding if Defra funding was available directly, it was believed that statutory agency funding did not generally cover Defra data requirements as well.

3.91   The situation of Defra funding was expected to change in England as the RDS and English Nature become part of Natural England, though this provided additional worries for LRCs (mentioned by 7%). Because of the combined staff base and remit in Natural England, many LRCs expected an increase in demand for biodiversity data. This would stretch any funding agreements that they had with English Nature, so they expected these to be re-negotiated to cover the requirements of Natural England. The greatest risk perceived was any delay in funding whilst this was being negotiated.

3.92   Because of the way that funding was arranged, no LRC had funding security for more than three years into the future, the average being 1.27 years. It also meant that four (57%) prospective LRCs were not confident that they would be able to achieve funding security.

Meeting existing needs

3.93   57% of established LRCs stated that they could not meet all existing user needs from their structure and resources. This meant that they were unable to perform a range of essential roles, such as data entry, dealing with enquiries, support for recorders and LRC development. Enhanced services were also an issue, as those that did not result in a direct income needed to be funded somehow or abandoned.

3.94   In addition, LRCs were concerned that funding bodies were very focussed upon their own particular needs, without concern for the core work of the LRC. English Nature funding often required significant amounts of work that took a disproportionately long length of time, such as habitat or site data capture in GIS. However, LRCs were often financially insecure and therefore more likely to agree to less than favourable terms in order to obtain funding. It needs to be appreciated that the required outputs for funding should be realistic.

Staffing concerns

3.95   Table 45 shows that over 40% of LRCs felt they did not have all the database and GIS skills that they needed. 26% of LRCs did not have all of the management skills that they needed. However, though these LRCs did not have all the skills they needed, they often stated that they had learnt to cope with what skills they had.

Table 45 Established LRCs needing more database (Q.188), GIS (Q.189) and management (Q190) skills

Skills needed	Frequency	% of LRCs
Database	22	48
GIS	19	41
Management	12	26

Ideal position

Future planning

3.96   Table 46 shows that 72% of established LRCs had some sort of forward plan. Not surprisingly the proportion of prospective LRCs with such a plan was higher (86%).

Table 46 Do you have a forward plan, business plan and/or strategy for development?

LRC type	Yes	% of LRC
Established	33	72
Establishing	2	100
Inactive	0	0
Prospective	6	86
All LRCs	41	73

3.97   LRCs were asked what level of resources they would need to meet basic requirements. (see Table 47). Care should be taken with the analysis of financial data, as it was not always possible to include grants and in-kind services, which could be significant in some cases, and initial set up costs for new LRCs were included. However, the analysis clearly shows that £70-80k was the basic funding requirement for an LRC supporting 2-3 staff members.

Table 47 Q.202 & Q.203: What size budget and FTE staff would meet your basic requirements?

LRC type	Average budget required £	Maximum budget required £	Average FTE staff required	Maximum FTE staff required
Established	76,579	300,000	2.68	8.5
Establishing	40,030	80,000	2	2
Prospective	40,000	125,000	0.71	2

3.98   An average budget of £110-120k would have been enough to fulfil LRC visions, supporting 3-4 staff members (see Table 48).

Table 48 Q.200 & Q.201: What size budget and FTE staff would meet your vision?

LRC type	Average budget required £	Maximum budget required £	Average FTE staff required	Maximum FTE staff required
Established	118,539	500,000	3.53	14
Establishing	100,000	100,000	3	3
Prospective	61,714	180,000	2.86	6

3.99   However, it should be noted that the funding requirements of LRCs shown in Table 47 and Table 48 depended largely on the area covered by the LRC and the quantity of biodiversity information required for that area, with some LRCs requiring significantly more than the average figures quoted.

Biodiversity data demand

3.100 Most of the LRCs felt that the last few years had seen a substantial increase in the demand for biodiversity data, and 81% expected this trend to continue (see Table 49). Many reasons were given for this, including:

- BAP and climate change monitoring;
- the Strategic Environmental Assessment Act;
- Planning Policy Statement 9;
- Local Development Framework; and
- Farm Environmental Plan and Higher Level Stewardship requirements.

3.101 Table 43 implies that all LRCs had concerns about how this might be achieved, since 100% predicted risks in their current arrangements. This in turn led to a requirement for the establishment of new LRCs where none existed and for the development of existing LRCs to meet the demands.

Table 49 Q.205: How do you think future demand with change (established, establishing, inactive and prospective LRCs) (n=59)?

Change in demand	Frequency cited[3]	% of LRCs citing
Increased demand for biodiversity data	77	81
Better access to data	13	21
Increased demand for data interpretation	4	7
Increased LRC data holding	3	6
Working with NBN	3	6
Networking with other LRCs	3	4
More non-core work from clients	2	4
Increased promotion of LRC	2	2
Increased support for local authorities	1	2

[3] Some LRCs mentioned more than one change in demand that fell into a single category, particularly with regard to demand for biodiversity data. This provided additional information to help judge how important the LRCs felt it was.

3.102 However, there is no statutory requirement for LRCs, so the requirement is almost entirely LBAP and planning driven. This has definite shortcomings, as fulfilling the biodiversity data requirements for planning does not necessitate all LRC functionality, e.g. managing data, supporting recorders or promoting recording. There is therefore a considerable risk that in some areas the LRC remit would become solely to fulfil planning requirements, without the other important services that LRCs provide – a concern expressed by the LRCs. A particular concern was the wording of Key Principle 1 in PPS9, which states that:

'Development plan policies and planning decisions should be based upon up-to-date information about the environmental characteristics of their areas'.

3.103 This implies that it is not an actual requirement for planning departments to use biodiversity information or that this is up to date. The LRCs felt that making the establishment of LRCs with defined basic requirements a statutory requirement would eliminate this risk.

Blocks to achieving an ideal position

Open access provision of data at the finest geographical resolution

3.104 When asked about changes needed if funding was dependent on the provision of data at the finest geographical resolution, four main themes were identified from the LRC responses:

- Many LRCs felt the need for better core funding in order to cover the costs of doing this. Work was driven by SLA holders and partners, who generally had different requirements, and may need persuading to allow the LRC to provide data in this way. Other LRCs specifically mentioned resources, both staff based and technological, which was funding dependant.
- Assuming that the access was uncharged, some LRCs believed that the level of core funding from national and local government would have to greatly increase. Following the SW pilot project the LRCs concluded that they would need to obtain 90% of their core funding from local and national government and statutory agencies on a sustainable basis. If this happened they could cope with uncharged free access at the highest resolution.

- Safeguards need to be incorporated for the protection of confidential data. This would be needed to convince recorders that their data are secure.
- Even if all this was in place, the LRCs would often have to gain permission for release of this data at this level from the recorders. In many cases the LRCs suspected that recorders would be initially suspicious of this, some of whom would withdraw their data. This would create a large amount of administrative work in addition to the work required to ensure the quality of the data was high enough, particularly if the point of access was the NBN Gateway.

The key players and how would they need to change

3.105 The majority of LRC responses related in some way to increased funding from government and key data users, including local authorities, Defra RDS, Office of the Deputy Prime Minister, Environment Agency, Forestry Commission and the National Trust / National Trust for Scotland. The continued support received from English Nature upon restructuring as Natural England was also seen as important within England (though note that many LRCs felt that this funding should increase, as they expect to see an increased workload as a result of an increase in data requirements).

3.106 In parallel with this, many LRCs felt that these organisations needed to change their attitudes regarding where their data was managed (in-house or out-sourced), what level of support they would generally provide, the use of biodiversity data in decision making, and their requirements for funding (i.e. whether it was viewed simply in terms of value for money or as providing a public service).

3.107 LRCs also noted that Defra wanted a consistent biodiversity dataset across Great Britain. In order to achieve a consistent dataset there would have to be national funding for core LRC services, including funding for capacity building and encouraging recording at the local level. If all funding came from national government it would alleviate the potential for double funding.

3.108 One LRC made the following comment: that the Ordnance Survey, Meterological Office and British Geological Survey should make their data free or affordable for use in LRCs, etc. At least one LRC was currently unable to afford Ordnance Survey base map tiles for GIS work and did not have them provided under a local authority or statutory agency licence.

Moving towards open access and Local Record Centre sustainability

3.109 Table 50 shows very clearly that the majority (77%) of LRCs cited improved financial security and better resources as the most important item to be addressed to ensure open access and LRC sustainability.

Table 50 Q.209: What is the single most important aspect that would help move towards open access and sustainability for LRCs (established, establishing and inactive LRCs)?

Important aspect	Frequency	Frequency %
Improved financial security / resourcing	36	77
Changes to data supply agreements / recorder attitudes	3	6
Continued/improved commitment from data users	2	4
Make LRC function statutory	2	4
Association of Local Environmental Record Centres	1	2
Improved software	1	2
Staffing	1	2
Stronger environmental legislation	1	2

3.110 Table 50 shows that only two LRCs stated that LRCs becoming a statutory requirement was the most important aspect that would help move towards open access and sustainability. However, although the question 'Should LRCs be a statutory requirement?' was not directly asked in the questionnaire, from the discussions with the LRCs it seems that only two having this concern might be an under representation of the opinion. Being a statutory requirement would offer a much more stable environment for LRCs to operate within and ensure that the statutory requirement for biodiversity data was adequately fulfilled.

4 Comparison of questionnaire findings with the NBN Position Statement on Local Record Centres

Local Record Centres within the NBN

4.1   A significant part of the NBN Position Statement on LRCs is summarised neatly in the bullet points in part 3 (NBN Trust, 2004). These state that LRCs:

- represent the local delivery of the NBN vision;
- promote NBN standards;
- link professionals with volunteers and data providers with data users;
- disseminate biodiversity information held by local organisations throughout the NBN;
- are custodians of key NBN datasets; and
- make biodiversity information accessible to users both through direct communication and through the gateway.

4.2   Since all but one point related directly to the NBN, these bullet points assume that NBN principles should be a high priority for LRCs, and indeed many LRCs would like to have been able to assign this high priority. However, Chapter 3 has shown that LRCs spend most of their time providing products and chasing future funding.

4.3   For the majority (77%) of LRCs in the UK, ensuring that they are properly funded (or funded at all) was their biggest concern (see Table 50). It would seem that none would be able to aspire to the NBN-focussed 'ideal' LRC until much of the concern about financial viability is lifted.

4.4   Another key part of the NBN Position Statement that was not being fulfilled was that data users should also contribute to the overall data holdings. Whilst it was less of a concern to existing LRCs than financial security, the fact that certain organisations had data holdings that were not contributed to LRCs was an issue that was mentioned frequently (see Table 16).

4.5   This was often due to restrictions on the data: in the case of Defra they had confidentiality agreements with landowners; in the case of consultants the data usually belonged to the client who did not wish to release the data. However, this was a position not always appreciated by LRC staff, as shown in Table 17. This would need to be resolved in order to ensure that data users really were contributing data.

4.6   Table 28 shows that consultancy datasets were mentioned only five times as datasets that LRCs were aware of but did not have access to. However, this did not correspond with the frequency of comments made about the reluctance of environmental consultancies to provide them with biodiversity data. (Whilst this was an important influence on data flow and completeness, it was likely and understandable that LRCs may have been highlighting the issue because consultancy staff were conducting the interviews.) It was not articulated as to whether the reluctance to allow data to be used lay with environmental consultancies themselves or the contracting bodies.

Essential functions

4.7 The following key points illustrate where there were differences between the LRCs and the NBN Position Statement.

Partnership

4.8 The NBN Position Statement states that LRCs should be partnership led. 76% of the LRCs included in this study were partnership led (a partnership was defined here as a steering group, board of directors or board of trustees; see Table 4). However, it was noticeable that those that weren't seemed to struggle much more for survival. This was most noticeable with the one inactive LRC, which was part of the local authority. In this instance responsibility for the LRC had been removed from the job description of the person who had originally managed it. As a result it was no one's responsibility at the time of the interview. It appeared that partnerships provided much more stable support for LRCs, most likely due to the shared responsibility for keeping the LRC active.

Impartiality

4.9 The NBN Position Statement states that LRC constitutions and documented policies should ensure impartiality, though in a few cases the impartiality of a particular LRC was questionable. The results indicate that 8% of LRC staff provided some subjective interpretation of data (see 'Recommendation / advice', Table 35). 'Data interpretation' was also a grey area, as this could be subjective interpretation or the supply of contextual information. In some instances managing the LRC was often only part of the respondents' job and it may have been difficult to separate the roles. Reassuringly, although not asked directly, three of the respondents specifically said that they aimed to remain impartial.

Non overlapping

4.10 The NBN Position Statement states that LRCs should not overlap with other LRCs, though this did occur. Most of the overlaps between LRCs were small areas of uncertainty along administrative boundaries, where data sharing took place. In other cases the LRCs had different remits; the Humber Environmental Data Centre (HEDC) overlaps with a number of other LRCs, but have a very specific remit of providing environmental data to industry within the region. HEDC was planned with the full support of the LRCs that covered the region. In all cases of overlap attempts were being made to resolve any outstanding issues.

User led

4.11 The NBN Position Statement states that LRCs should primarily exist to meet the needs of their users, though this was not always the case. Some LRCs had become stagnant and were not fully meeting the requirements of their funders or the recorders. In some cases the LRCs were barely functioning, where there was a noticeable lack of interest from key players, such as local authorities and statutory agencies, who had allowed the LRC to decline. The funders and users may not have been aware that the biodiversity data available was out of date or the dangers of this.

Services

4.12 The NBN Position Statement states that LRCs should be capable of offering at least basic biodiversity information services to their users. This was generally the case, all but one of the established LRCs could offer these services to local authorities, etc. In the one case where this did not happen it was mainly due to little desire from the users, as discussed in the previous point. Some LRCs stated that they lacked the funding required to demonstrate how useful they could be.

Data requests

4.13   The NBN Position Statement states that LRCs should be capable of responding to minimum requirement data requests within a reasonable time period. However, some LRCs commented that they struggled to meet the demands of the data requests submitted to them, due to staffing and resource shortages. In some cases they added that data requests were the highest priority, so other functions suffered as a result. This is discussed in more detail in Section 4.26.

Data capture service

4.14   This varied considerably. Some LRCs seemed to perform this function adequately, sometimes to the detriment of other functions, whereas others had a large backlog. 2% of established LRCs stated that they did not spend any time on data entry. This appeared to depend upon the requirements for funding and the stage of LRC development.

Data scope

4.15   The NBN Position Statement states that the scope of an LRCs data holdings should include species and habitat records, as well as sites of wildlife importance. However, 31% of established LRCs held species data but not habitat data. In some of these cases habitat data was managed by another organisation, which may have been performing certain LRC functions. However, this was different from the more important question of how many LRCs have management of habitat data within their remit, which cannot be assessed from these results. This and the following two sections are discussed in greater detail in Section 4.27.

Data coverage – species

4.16   The NBN Position Statement states that LRCs should aim to hold or have access to all available species data. 90% of existing LRCs were aware of species or habitat datasets within their geographic area that they did not have access to. It was very likely that almost every LRC lacked access to some important species data, due to the peculiarities of working with volunteer recorders and professional organisations. Some LRCs also had a backlog of data to catalogue, as discussed earlier, which would result in the data being unavailable.

4.17   Table 28 shows that it was mainly species datasets that LRCs were aware of but did not have access to. Some local special interest groups, notably those dealing with mammals, birds and herptiles, provided data directly to the users rather than to the LRC, sometimes at a cost. There were datasets that could have been utilised that most LRCs did not have access to, for example consultancy and Defra datasets. The description of this essential service in the NBN Position Statement needed an accurate definition of what 'available data' actually means.

Data coverage – habitats

4.18   The NBN Position Statement states that LRCs should aim to hold or have access to all available habitat data. There was considerable variation in the coverage of habitat data within the LRCs. Some had complete and up to date (and even electronic) geographical coverage, or were at least very close to achieving this. Others had habitat coverage of areas of conservation importance. However, even here they were likely to lack some datasets due to restrictions on their use, as with the consultancy and Defra datasets discussed in the previous point.

4.19   Other LRCs had most of the available habitat information, though this may have been old and limited in coverage, whilst some had no habitat coverage at all. In these instances, LRCs appeared to have little interest in habitat data, their main concern being species data.

Metadata

4.20   The NBN Position Statement states that LRCs should know what data it holds and describe this in a publicly available location. One of the surprising things about this project was that LRCs seemed uncertain of what was meant by metadata. The interviewers were instructed to make

clear that this was a written summary of data holdings, though it is likely that some of the LRCs that answered positively actually meant that they could create a list of data holdings if it were required. Nevertheless, eight (17%) of the existing LRCs responded that they held no metadata.

GIS

4.21   The NBN Position Statement states that LRCs should use GIS to help it capture, manage, manipulate, analyse and display data. 88% of existing or prospective LRCs used or intend to use GIS to help with data management. A limitation on the use of GIS was the required skill level; some LRCs did not have the staff base to deal with GIS.

4.22   Though it did not form part of the standard interview questionnaire, some commented that they did not have access to Ordnance Survey (OS) data and that it cost too much for them to purchase. As the use of GIS was an essential function, basic OS coverage should have been provided by partner organisations, though this was likely to be a particular problem where the LRC was managed independently and had no source of OS data. If this proves too expensive for LRCs and partner organisations then there is a question over the wisdom of having this as an essential service.

Staff resources

4.23   The NBN Position Statement states that LRCs should employ and arrange training of staff as necessary to undertake the other essential functions, with an FTE of no less than two. 60% of existing LRCs lacked sufficient staff to carry out what they considered to be their basic functions (see Table 51). Whilst LRC basic requirements might not equate to the essential functions in the NBN Position Statement, it was obvious that these LRCs were likely to lack the staff resources to carry out all of the essential functions. This was usually due to insufficient funding for additional or more highly trained staff.

Table 51 Qs.32 & 203: Do you have enough staff to meet your basic requirements? (Not all LRCs gave a response for question 203, so these have been removed from the analysis)

LRC type	No. of LRCs	No. lacking staff	% not meeting requirements
Established	40	24	60
Establishing	2	1	50
Inactive	1	1	100
All existing	43	26	60.47

Enhanced functions

4.24   Enhanced functions were often highly important or even essential to the areas that LRCs cover. Table 35 gives a list of some of the types of enhanced services provided by LRCs. Significant additional research is required to produce a complete list of the types of enhanced services, including those not in the NBN Position Statement.

Detailed assessment of LRCs against three essential functions

4.25   The following section provides an assessment of the status of individual LRCs against three key components of NBN Position Statement. These are based on a review of the interview responses provided by LRCs against a set of criteria defined for each component. LRCs were given the opportunity to validate the results. The validation occurred in May/June 2007 and responses may reflect the status at the time of validation rather than when the original interviews were conducted.

4.26   Assessment of LRCs' ability to respond to data requests:

- The NBN Position Statement states that LRCs should be capable of offering at least basic biodiversity information services and should develop, maintain and promote a suite of basic information products for its core users.
- The interpretation as to the extent to which the Environment Information Regulations (2004) applies to LRCs varies. Those that are part of local authorities are more likely to be classed as public authorities than independent LRCs. However, the NBN Position Statement states that all LRCs should be able to supply data within the requirements of the EIR.
- Under EIR, public authorities should be able to supply environmental information to anyone who requests it. It also establishes a 20 day response time during which the data should be supplied, though this can exceptionally be extended to 40 days when a particularly large request is made. Charges can be made to cover the costs of doing this, though a schedule of charges per unit of work should be made available.

1 - LRC not able to respond to data requests.

2 - LRC provides ad-hoc response to data requests or policies may be unclear.

3 - LRC responds to data requests and has basic policies. Services to SLA holders may be restricted.

4 - LRC responds fully to data requests within specific periods with clear policies on charging, confidential data etc. LRC provides basic suite of products to core users.

5 - As 4 above plus the LRC is fully integrated into the NBN Gateway and is able to participate as an internet linked node in the NBN.

□ - not included in review
目 - 1
⊞ - 2
⊠ - 3
▨ - 4
■ - 5
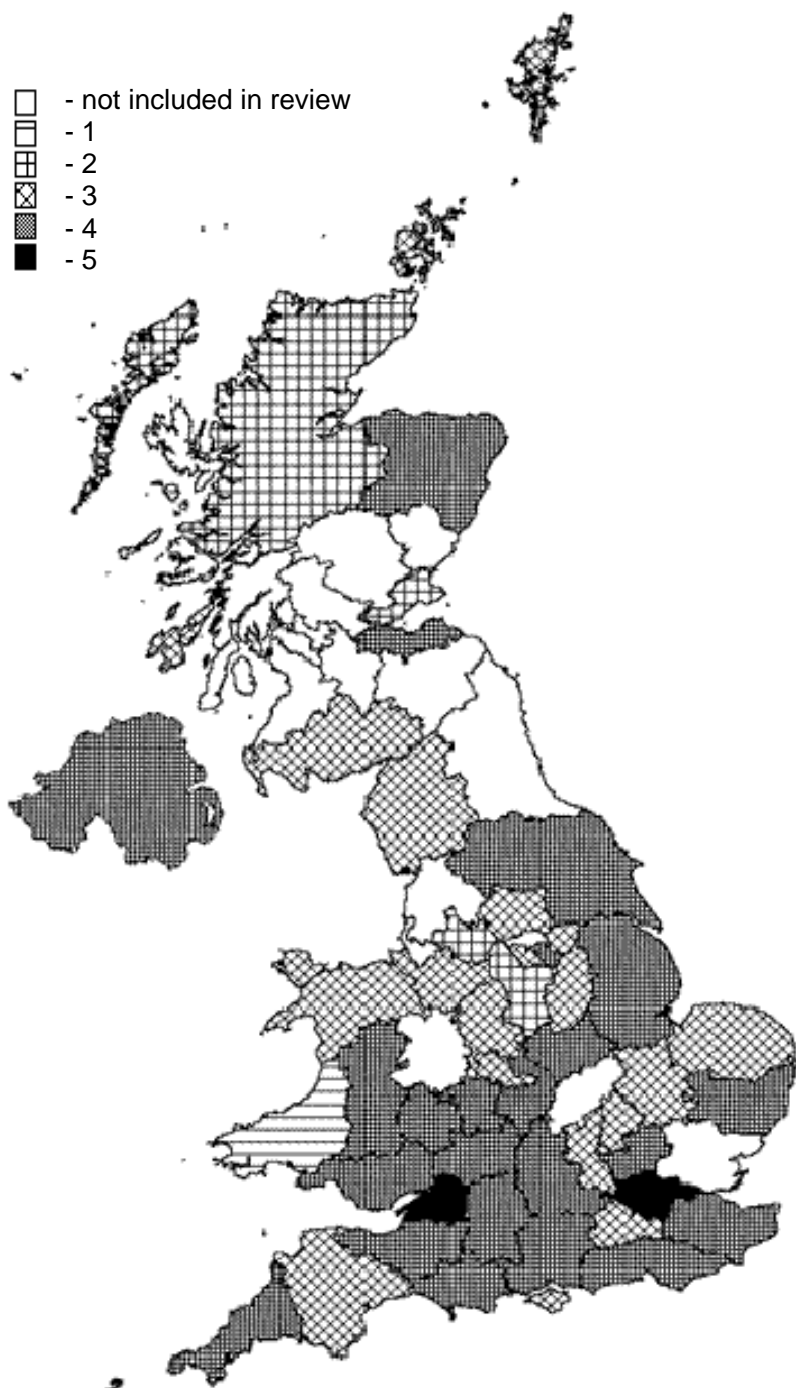
Figure 4 Assessment of LRCs' ability to respond to data requests

- The above assessment (Figure 4) shows that almost all of established LRCs (98%) are able to respond to data requests and have basic policies on data release. Against a more strict criteria, which includes having clear service standards and being able to provide a basic suite

of products to core users, only just over half (54%) of established LRCs were assessed to provide this level of service.

- As discussed in Section 3.70, the majority of paid staff time was spent on analysis and reporting, which may include responding to data requests. This proportion varied from LRC to LRC, but two LRCs stated that they spent no time on analysis and reporting. In one instance the LRC was still in the establishing phase, so most of its paid staff time went into business development. In the other instance all paid staff time went into data entry.

- Also included in the EIR is a requirement to allow public access to data. The majority of LRCs provided or intended to provide pubic access to the data they managed. This could either be through arranged access to data or by responding to a data request from the public.

- Of the LRCs interviewed 23 responded that they provided or intended to provide access to data via the internet, either through their own website or the NBN Gateway. Two LRCs considered themselves to be moving towards integration with the NBN Gateway. In both cases this was expressed at the time of validation as a result of work undertaken since the original interviews.

4.27   Assessment of LRCs' data holdings:

- The NBN Position Statement states that LRCs should have fauna, flora, habitats and sites of wildlife importance within the scope of their data holdings. This can be split into species records, covering fauna and flora, and habitat and site data, as in some cases the latter may be difficult to separate.

1 - LRC holds limited species data.

2 - LRC holds species data with significant gaps.

3 - LRC holds reasonable amount of species data, with some important gaps, habitat data not comprehensive.

4 - LRC holds most species, habitat and site data, but is not fully comprehensive.

5 - LRC holds or has access to all available species, habitat and site data.

Figure 5 Assessment of LRCs' data holdings

- The above assessment (Figure 5) shows that all established LRCs have at least reasonable data holdings for species data.   Less that half (46%) of established LRCs hold most species, habitat and site data for their geographic area.

- As discussed in Section 3.22 two thirds of established LRCs stated that there were volunteer groups or organisations that they would like to work with but currently did not.

- Overall the habitat data holdings of LRCs are less comprehensive than for species data. In some cases it was not always within a LRCs remit to hold habitat data, particularly where there was another organisation undertaking this role. Also, LRCs were specifically asked to name organisations from which they had received habitat from in the last year. In many areas there may not be on-going comprehensive survey programmes.

4.28   Assessment of LRCs validation and verification procedures:

- The NBN Position Statement states that LRCs should ensure quality control by having documented procedures in place for validation and verification, working in partnership with others.

1 - No validation / verification procedures in place.

2 - Data partially validated but not verified.

3 - Data partially validated with ad-hoc verification.

4 - Data subject to validation and verification procedures, although not fully comprehensive.

5 - All data is subject to comprehensive validation and verification procedures.

□ - not included in review
▤ - 1
⊞ - 2
⊠ - 3
▦ - 4
■ - 5

Figure 6 Assessment of LRCs' validation and verification procedures

- The above assessment (Figure 6) shows that all established LRCs hold data that is at least partially validated and may have been subject to verification. 72% of established LRCs were assessed as holding data that was subject to validation and verification procedures. As discussed in Section 3.62 all established LRCs validated at least some of the data submitted by volunteers. The majority of LRCs worked with county recorders or local natural history groups on data verification. In some LRCs taxa requiring compulsory verification were flagged up on data entry. Policies on the handling of unverified records varied across LRCs.

4.29   Overall assessment of LRCs against essential functions:

- The results of these assessments have been combined to provide an indicative status of individual LRCs and hence of the network as a whole, which is presented in Figure 1 (Section 3.1). These assessments are not intended to represent the definitive status for each individual LRC but to give an indication of the relative status of LRCs across the UK. Only 33% of established LRCs were gauged as meeting the criteria for a fully functional LRC (scoring 4 or above in each of the components). By area 27% of the UK was identified as having a fully functional LRC. This does not take into account areas where LRCs were not included in this review. Also, this assessment does not consider the sustainability or funding security of individual LRCs. This is discussed further in Section 3.83.

5 Ability to deliver against local authority and statutory agency needs

5.1   The following section attempts to assess the information requirements of bodies funding LRCs, covering the statutory requirements of local authorities and statutory agencies. It also attempts to assess how well LRCs are fulfilling these information requirements.

Local Authority requirements

5.2   Local Authorities have a range of statutory requirements that require them to incorporate biodiversity issues into their considerations of the environmental, social and economic interests of the local population. These include:

- informing decisions in the planning process;
- helping to implement and monitor LBAPs;
- identifying sites of importance for biodiversity and geological conservation; and
- helping to plan conservation strategies.

Informing decisions in the planning process

5.3   PPS9 outlines the Government's objectives for the planning process to follow the UK Biodiversity Action Plan (BAP) and states in the Key Principles in the Guide to Good Practice (Office of the Deputy Prime Minister, 2005):

'Development plan policies and planning decisions should be based upon up-to-date information about the environmental characteristics of their areas.'

5.4   The information required for this may include species, habitat and site-based data from LRCs that are maintaining and managing existing databases on the authority's behalf. The requirement for up-to-date information means that data suppliers, LRCs or otherwise, must be actively collating and supplying information to planning authorities.

Helping to implement and monitor LBAPs and identifying sites of importance for biodiversity conservation

5.5   Helping to implement and monitor LBAPs and identifying sites of importance for biodiversity conservation are specifically covered as planning considerations in PPS9 – Regional Spatial Strategies, as stated in the Guide to Good Practice (Office of the Deputy Prime Minister, 2005):

'Regional planning bodies should liase closely with regional biodiversity fora or equivalent bodies, English Nature or its successors and the Environment Agency to identify the current regional and sub-regional distribution of priority habitats and species, internationally and nationally designated areas, and broad areas for habitat restoration and re-creation.'

5.6   These two requirements are also more generally covered by the individual countries BAP targets, for example:

England Biodiversity Strategy: 'The Public Service Agreements between Government and local authorities provide the opportunity to include biodiversity indicators. These indicators and targets

need to be monitored and fed into the process of establishing high-level indicators in the future. We propose to use the following biodiversity indicators in this area of work: Progress with LBAPs in England (H4); Condition of SSSIs in Local Authority ownership (L1); Community Strategies with biodiversity elements (L2); Incorporation of biodiversity objectives in regional programmes and strategies (L3)' (England Biodiversity Group, 2002).

Scottish Biodiversity Strategy: 'Local authorities should therefore fully support the Local Biodiversity Action Plans, and take account of them in all their decision making…' (Scottish Executive, 2005).

5.7   LRCs should be perfectly placed to help monitor the distributions of LBAP species and habitats, being able to draw together information from a range of data sources. They also have good links with recorders and may be better placed to coordinate specific monitoring programmes.

5.8   LRCs should also be able to collate and disseminate information relating to designated areas, both statutory and non-statutory sites, and areas for habitat restoration and recreation.

Help to plan conservation strategies

5.9   Biodiversity is a key consideration of Communities and Local Government's Public Service Agreement Target 8 – Liveability (Office of Deputy Prime Minister, 2006a) that contributes to the delivery of the Government's '"Cleaner, Safer, Greener Communities" programme.

5.10   This principle is also a constituent of BAP strategy targets, as stated by the England Biodiversity Group (2002; see quotation above).

5.11   The information and services provided by LRCs can be key to successfully meeting these objectives.

LRC functions that can assist with Local Authority needs

5.12   LRCs can assist in fulfilling these requirements by:

- providing species/habitat inventories for a given site/area;
- providing species/habitat context for a given region;
- automatically screening planning applications;
- digitising information generated by EIAs and other paper based information;
- maintaining and managing existing databases on the authority's behalf; and
- coordinating monitoring programmes.

Statutory Agency requirements

5.13   All of the statutory agencies require access to and the ability to distribute biodiversity information at a national scale in order to fulfil their statutory requirement to conserve biodiversity countrywide.

5.14   LRCs can assist in fulfilling these requirements by:

- providing contextual information on species, habitats or sites;
- providing distribution maps for priority species, habitats and sites;
- managing core datasets on behalf of statutory agencies;
- providing access to information to the public and statutory users; and
- digitising information currently held in paper files.

Assessment of whether LRCs are fulfilling local authority and statutory agency requirements

Providing species and habitat information

5.15   Of the 41 established LRCs that provided information on their customers 39 (95%) stated that they provided information to local authorities, whilst 33 (80%) stated that they provided information to the appropriate statutory agency. It is possible that the LRCs not included within this analysis forgot to include these organisations in their answer.

5.16   Although they do provide data to the relevant statutory agency, the inactive LRC has not been included because they receive a very small number of data requests each year from all data users, so the data they provide to the statutory agency is probably insignificant in comparison with the other data provider covering the same area.

5.17   However, established fully functional LRCs cover only 27% of the UK, as shown in Figure 1. Some of these gaps are where LRCs were not interviewed, whilst others are being filled by establishing and prospective LRCs.

5.18   LRCs should also be providing public access to data, as specified by statutory agency requirements. Most existing LRCs provided this service, as discussed in more detail in Section 4.26.

Other LRC functions

5.19   Three of the four LRC functions identified that are not covered by data provision (management of statutory agency or local authority datasets, capturing data to agreed standards, automatically screening planning applications) would most likely form specific agreements between the LRC and the local authority or statutory agency. Coordinating monitoring programmes would be an enhanced function, none of which were included in the questionnaire. An assessment LRCs' ability to deliver these functions on behalf of statutory agencies and local authorities was beyond the scope of this review.

6 Evaluation of the questionnaire and interview technique Discussion

Local Record Centre inclusion and personnel

6.1   Some additional 'records centres' were suggested for inclusion before this work commenced. However, these were rejected and were therefore not interviewed. Most were in Scotland, which may have biased the results towards the rest of the UK.

6.2   Furthermore, where no LRC existed, some of the individuals interviewed questioned why they had been selected for interview, as they believed that they were the wrong person. These individuals were most likely less informed to answer particular questions.

Issues arising from questionnaire interpretation

6.3   As was inevitable with a questionnaire of this type and scale, a number of problems were encountered. These may have affected the results or led to discrepancies, despite positive efforts to ensure consistency. The main problems encountered were:

- It was difficult in some cases to know which of the three questionnaires to use, as there was a degree of LRC establishment between no LRC and prospective LRC where it was planned but none of the detail had been established. In these cases a mixture of questions from all three questionnaires were asked as appropriate.
- Some of the questions were hard to answer on the spot, so LRCs that either could or did not do any preparation produced less complete answers.
- More categorisation prior to the interviews may have made analysis easier, though this would have depended upon anticipating the sorts of responses, which was difficult in many cases.
- The questionnaire also contained some 'self assessment' questions (e.g. questions 157, 158 and 168). As some of the LRCs rightly suggested, if it was necessary to find out the benefits of the LRC (questions 155 and 156) the customers should be asked. As a result, these questions were interpreted differently by different LRCs.
- Questions 36 and 37 also presented problems, as most LRCs encouraged data to come through groups, rather than from individuals. The interviewers endeavoured to make clear that groups should be included in this question.
- Question 66, which asked where data that the LRCs did not receive went to, was also difficult for them to answer. In most cases the LRCs had no idea where the data went, so it is likely that there was some guess work involved in answering this question.
- Question 177, which asked about running costs, was difficult for some LRCs to answer as they did not have access to the information. In these cases their hosting organisation had full control over finances. As a result some of the answers to this question were underestimates.
- Question 177 did not immediately lead to the inclusion of data requests. This information was not included elsewhere, so the interviewers made efforts to include it here. In general terms, the financial information here can only be used as guidance, as much more detailed information would be needed to precisely determine the level of funding or additional funding required.

Project execution

6.4   In terms of developing a greater understanding of the operation of LRCs across the UK and the problems they face this review has been extremely useful. In particular, face to face and telephone interviews allowed cross-cutting themes to be drawn out that would not have been identified with a questionnaire alone.

6.5   The face to face approach proved to be a very successful way of reaching the information needed, allowing interviewers to clarify the meaning of difficult questions, talk around answers and cover LRC specific issues not covered by the generic questionnaire. Telephone interviews were also acceptable, especially if this was simply to clarify answers to a questionnaire that had already been returned.

6.6   The length of the questionnaire may have been an issue. Many LRCs found the length of time this took was very difficult to accommodate, so serious consideration should be given to producing a questionnaire of similar length in the future.

7 Glossary

BNA	**British Naturalist's Association.**
Defra	Department for Environment Food and Rural Affairs
ELS	Environmental Stewardship Entry Level Scheme
FWAG	Farming and Wildlife Advisory Group
HLF	Heritage Lottery Fund
HLS	Environmental Stewardship Higher Level Scheme
LBAP	Local Biodiversity Action Plan
LRC	Local Record Centre
NBN	National Biodiversity Network
NFBR	National Federation of Biological Recorders
NSS	National Scheme and Society
RDS	Defra Rural Development Service
SEPA	Scottish Environmental Protection Agency
SLA	Service Level Agreement

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Appendix 1 - Project steering group members

Table A Project steering group members

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Mark Wright	Environment and Heritage Service Commonwealth House 35 Castle Street Belfast BT1 1GU	mark.wright@doeni.gov.uk	028 9054 6604

Appendix 2 – Local Record Centres (and other stakeholders) interviewed for this work

Table B South West

Name	Address	Email	Telephone
Tim Corner and Daniel Marshall	Bristol Regional Environmental Records Centre (BRERC) Ashton Court Visitors Centre Ashton Court Estate Long Ashton Bristol BS41 9JN	info@brerc.org.uk	0117 9532140
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Trevor Edwards	ERC for Cornwall and the Isles of Scilly (ERCCIS) Cornwall Wildlife Trust Five Acres Allet Truro Cornwall TR4 9DJ	WIS@cornwt.demon.co.uk	01872 240777
Ian Carle	Gloucestershire Centre for Environmental Records Church House Standish Stonehouse Gloucestershire GL10 3EU	gcer@gloswild.cix.co.uk	01453 822761

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Carolyn Steele	Dorset Environmental Records Centre Library Headquarters Colliton Park Dorchester Dorset DT1 1XJ	derc@dorsetcc.gov.uk	01305 225081
Purgle Linham	Wiltshire & Swindon Biological Records Centre Elm Tree Court Long Street Devizes Wiltshire SN10 1NJ	brc@wiltshirewildlife.org	01380 725670

Table C South East England and Greater London

Name	Address	Email	Telephone
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Table continued…

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Alistair Kirk	Surrey Biological Records Centre c/o Surrey Wildlife Trust School Lane Purbright Woking Surrey GU24 0JN	alistair.kirk@surreywt.org.uk	01483 795448
Henri Brocklebank	Sussex Biodiversity Record Centre Woods Mill Henfield West Sussex BN5 9SD	sxbrc@sussexwt.org.uk	01273 497553 / 554
Philippa Burrell	Thames Valley Environmental Records Centre (TVERC) c/o The Oxfordshire Museum Fletcher's House Park Street Woodstock Oxon OX20 1SN	philippa.burrell@oxfordshire.gov.uk	01993 814147
Nicky Court and Andy Barker	Hampshire Biodiversity Information Centre Ashburton Court West The Castle Winchester Hampshire SO23 8UE	nicky.court.hbic@hants.gov.uk	01962 846741

Table D East of England

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James Jacomb	Cambridgeshire and Peterborough Biological Records Centre The Manor House Broad Street Great Cambourne Cambridge CB3 6DH	james.jacomb@wildlifebcnp.org	01954 713571
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Table E West Midlands of England

Name	Address	Email	Telephone
Sara Carvalho	EcoRecord 28 Harborne Road Edgbaston Birmingham B15 3AA	enquiries@ecorecord.org.uk	0121 454 1808
Steve Roe	Herefordshire Biological Records Centre (HBRC) PO Box 144 Hereford Herefordshire HR1 2YH	hbrc@herefordshire.gov.uk	01432 261538
Sue Swales and Dan Wrench	Shropshire County Council Sustainability Group Shire Hall Abbey Foregate Shrewsbury SY2 6H2		0845 678 9000
Craig Slawson	Staffordshire Ecological Record The Wolseley Centre Wolseley Bridge, Stafford Staffordshire ST17 0WT	info@staffs-ecology.org.uk	01889 880100
David Lowe	Warwickshire Biological Records Centre Warwickshire Museum Field Services Ecology Unit The Butts Warwick Warwickshire CV34 4SS	davidlowe@warwickshire.gov.uk	01926 418060
Simon Wood	Worcestershire Biological Records Centre Lower Smite Farm Smite Hill Hindlip Worcester WR3 8SZ	records@wbrc.org.uk	01905 759759

Table F East Midlands of England

Name	Address	Email	Telephone
Rob Johnson and Pete Acton	Nottinghamshire Biological and Geological Records Centre Natural History Museum Wollaton Park Nottingham Nottinghamshire NG8 2AE	nbgrc@ncmg.demon.co.uk	0115 915 3909
Graham Walley and Darwyn Sumner	Leicestershire Environmental Resources Centre Holly Hayes 216 Birstall Road Birstall Leicestershire LE4 4DG	gwalley@leics.gov.uk	0116 267 1950 ext 28
Margaret Haggarty	Lincolnshire Environmental Records Centre Banovallum House Manor House Street Horncastle LN9 SHF	mhaggerty@lincstrust.co.uk	01507 526667
Terry Smithson	Northamptonshire Biodiversity Record Centre Lings House Billing Lings Northampton NN3 8BE	terry.smithson@wildlifebcnp.org	01604 405285
Jo Brown	Conservation Manager Derbyshire Wildlife Trust East Mill Bridge Foot Belper Derbys DE56 1XH		01773 881188
Nick Moyes	Derby Museum & Art Gallery The Strand Derby Derbyshire DE1 1BS	nick.moyes@derby.gov.uk	01332 716655

Table G Yorkshire and Humber Region of England

Name	Address	Email	Telephone
Simon Pickles and Clare Langrick	North & East Yorkshire Ecological Data Centre St William's College, 5 College Street, York, YO1 7JF	info@neyedc.co.uk	01904 557235
Jenny Watts and Jan Bolton	West Yorkshire Ecology c/o Learning and Leisure Dept. Parks and Countryside 7th Floor West Merrion House Merrion Centre Leeds West Yorkshire LS2 8DT	westyorkshireecology@leeds.gov.uk	0113 2375310
Bill Ely	Rotherham Biological Records Centre Greenspaces Unit (Culture and Leisure) Rotherham Metropolitan Borough Council Norfolk House Walker Place Rotherham S65 1AS	bill.ely@rotherham.gov.uk	01709 822437
Jean Glascock	Sheffield Biological Records Centre City Ecology Unit Meersbrook Park Brook Road Sheffield South Yorkshire S8 9FL	jean.glascock@sheffield.gov.uk	0114 2734481
Colin Howes	Doncaster Museum and Art Gallery Chequer Road Doncaster DN1 2AE	colin.howes@doncaster.gov.uk	01302 734287

Table H North West of England

Name	Address	Email	Telephone
Steve Hewitt	Carlisle Museum BRC Tullie House Museum Castle Street Carlisle CA3 8TP	steveh@carlisle-city.gov.uk	01228 534781
Steve McWilliam	rECOrd Oakfield House Chester Zoological Gardens Upton Chester Cheshire CH2 1LH	manager@record-lrc.co.uk	01244 383749 / 383569
Christine Bennett	Merseyside Biobank From Oct 2006: The Estate Barn Court Hey Park Huyton Liverpool	christine.bennett@eas.sefton.gov.uk	0151 934 4954
Jon Hickling	[Lancashire Biodiversity Network] English Nature Cheshire to Lancashire Team Pier House Wallgate Wigan Lancashire WN3 4AL	jon.hickling@english-nature.org.uk	01942 820342
Steve Garland	Bolton Biological Records Centre Bolton Museums, Art Gallery and Aquarium, Le Mans Crescent, Bolton. BL1 1SE	steve.garland@bolton.gov.uk	01204 332211

Table I Wales

Name	Address	Email/Internet Address	Telephone
Janet Imlach	Powys & Brecon Beacons National Park Environmental Records Centre Great Britain Limited (Trading as BIS) 1st Floor Offices Coliseum House 7 Wheat Street Brecon Powys LD3 7DG	info@b-i-s.org URL://www.b-i-s.org/	01874 610881
Dr Rob Davies	West Wales Biodiversity Information Centre Ltd Landsker Business Centre Llwynybrain Whitland Carmarthenshire	llanunwas@btopenworld.com	
Roy Tapping	Cofnod - North Wales Environmental Information Service Intec, Ffordd y Parc, Parc Menai, Bangor, Gwynedd. LL57 4FG	roy.tapping@cofnod.org.uk URL://www.cofnod.org.uk	01248 672603

Table J Scotland

Name	Address	Email/Internet Address	Telephone
Paul Harvey	Shetland Biological Records Centre Garthspool Lerwick Shetland ZE1 0NY	sbrc@zetnet.co.uk URL://www.shetland-heritage.co.uk/amenitytrust/natural_heritage/sbrc/sbrc.html Soon to be replaced by: URL://www.nature-shetland.co.uk/brc/	01595 694688
Nadine Russell	Orkney Biodiversity Records Centre Orkney Library & Archive 44 Junction Road Kirkwall Orkney KW15 1AG	biodiversity@orkneylibrary.org.uk URL://www.orkneylibrary.org.uk/obrc/html/home.html	01856 873166

Table continued…

Name	Address	Email/Internet Address	Telephone
Dianne Holman	Scottish Natural Heritage - SW Region 19 Wellington Square Ayr KA7 1EZ	dianne.holman@snh.gov.uk	01292 261392
Dr Malcolm Ogilvie	Islay Natural History Trust Port Charlotte Isle of Islay PA48 7TX	malcolm@ogilvie.org URL://www.islaywildlife.freeserve.co.uk	01496 850288
Gavin Smith, David Wood, Louise Gregory	Scottish Natural Heritage 1 Kilmory Industrial Estate Kilmory Lochgilphead Argyll PA31 8RR	gavin.smith@snh.gov.uk	01546 603611
Jonathan Watt (IMAG) and Murdo McDonald (HBRG)	Museum & Art Gallery (IMAG), Castle Wynd, Inverness IV2 3ED		01463 237114 and Highland Biological Recording Group (HBRG)
Jon Mercer	Scottish Borders Biological Records Centre Harestanes Countryside Visitor Centre Scottish Borders Council Ancrum Jedburgh TD8 6UQ	sbbrc@scotborders.gov.uk	01835 830405

Table continued…

Name	Address	Email/Internet Address	Telephone
Mark Pollitt	Dumfries and Galloway Biological Records Centre Campbell House The Crichton Bankend Road Dumfries DG1 4ZB	mpollitt@dgerc.org.uk URL://www.dgerc.org.uk	01387 247543
Bob Saville	Lothian Wildlife Information Centre Vogrie Country Park Gorebridge Mid Lothian EH23 4NU	info@lothianwildlife.co.uk	01875 825968
Simon Scott	Take a Pride in Fife Environmental Information Centre (Formerly Fife Environmental Recording Network) Hanover Court North Street Glenrothes Fife KY7 5SB	shelley.mccan@fife.gov.uk	01592 413793
Nick Littlewood	North East Scotland Biological Records Centre NESBReC Room G41/G42 23 St Machar Drive Aberdeen AB24 3RY	nesbrec@aberdeenshire.gov.uk URL://www.nesbrec.org.uk	01224 273633

Table K Northern Ireland

Name	Address	Email/Internet Address	Telephone
Damian McFerran	Centre for Environmental Data and Recording (CEDaR) National Museums and Galleries of Northern Ireland Ulster Museum Botanic Gardens Belfast Northern Ireland BT9 5AB	damian.mcferran@magni.org.uk URL://www.habitas.org.uk	(028) 9038 3154

Appendix 3 – Questionnaire

8.1   Following are the questions that were asked to the LRCs. Some did not apply to each LRC, but they were included in the numbering so that only one database was required. The LRCs were divided into three main types, existing, prospective and no LRC, so the questions indicate which LRCs they apply to.

Basic factual information

1)   Name of organisation

2)   Address of organisation

3)   Date of discussion

4)   Start time

5)   End time

6)   Duration

7)   On site?   Yes ☐   No ☐

8)   Name of researcher

9)   Name of principal respondent

10)   LRC status?

11)   Supporting documents

No LRCs only
12)   Who do you think are the main users of biological information in your region? Please complete the table below, adding the types of information you think each potential customer needs, the reason the information is needed (e.g. planning/development, personal interest) how they meet their current information needs and what requirements they have that are not being met.

User	Information needed	Why is it needed?	How meet current needs	Requirements not being met
1				
2				

Table continued…

User	Information needed	Why is it needed?	How meet current needs	Requirements not being met
3				
4				
5				
6				
7				
8				
9				
10				

13) Is there an existing partnership for sharing biological data? Yes ☐ No ☐

14) If yes, who are the members and what are the objectives?

15) Why is an LRC not being planned for your area?

16) Have there been attempts to establish an LRC previously? Yes ☐ No ☐

17) If yes, what were the factors in it failing to establish?

- Insufficient funding commitment from prospective partners to reach a critical mass. ☐
- Prospective partners failing to agree on priorities and/or ways of moving forward. ☐
- Concerns from a small number of local naturalists or consultants that their interests will be compromised / failure to engage with these issues or for the majority view of local naturalists to be asserted. ☐
- Other (specify). ☐

18) What are the possible alternatives to establishing an LRC (locally, regionally or nationally)? Please also give the advantages and disadvantages of each, and state which your favoured option is.

	Alternative	Advantages	Disadvantages	Favoured alternative
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

19) Who are the key players and what do they need to do to make it happen?

Existing and prospective LRCs

20) What local authority areas are / will be covered (wholly or partially) by your LRC?

21) What is / will be the area (km²)

22) Does your coverage overlap with another LRC?   Yes ☐   No ☐

23) If so, what arrangements do you have to allow for sharing of data?

Existing LRCs only

24) How many years has your LRC been in existence?

25) What is the status of your LRC?

- Charity   ☐

- Limited company ☐
- Local Authority ☐
- Part of a Wildlife Trust ☐
- Other (please specify) ☐

(Tick all that apply)

26) Does your LRC have a formally agreed constitution? Yes ☐ No ☐

27) If not, is one planned? Yes ☐ No ☐

Existing and prospective LRCs
28) What are/will be the written objectives/purposes for your LRC?

29) What is/will be the management structure of your LRC?

Existing LRCs only
30) How many staff (temporary or permanent) are working for the LRC at present?

31) How many contractors are working for the LRC at present?

32) What is the FTE (Full Time Equivalent) of people working for the LRC at present?

33) How many species and habitat records does your LRC hold at present?

34) Section summary for final report

Relationships with local data providers

Existing LRCs only
35) Which volunteer groups / organisations have you worked closely with over the last year (the answer to this could be very long and may require some preparation)?

36) How many volunteer individuals have supplied you with more than 10 individual records over the last year (approximately)?

37) What proportion of your species records comes from these key volunteer individuals over the last year?

38) What proportion of your habitat records comes from these key volunteer individuals over the last year?

39) Are there any volunteer groups / organisations you would like to work with but currently do not? Yes ☐ No ☐

40) If yes, please list them.

41) If yes, what are the obstacles?

42) Which non-volunteer organisations (e.g. EN, SNH, CCW, Defra, local authorities, etc.) have you worked closely with over the last year?

43) How many non-volunteer organisations have supplied you with more than 10 individual records over the last year?

44) What proportion of your species records comes from these key non-volunteer organisations over the last year?

45) What proportion of your habitat records comes from these key non-volunteer organisations over the last year?

46)	How many of these organisations supply you with other data, e.g. OS data, habitat inventories, etc?

47)	Are there any non-volunteer organisations you would like to work with but currently do not? Yes ☐ No ☐

48)	If yes, please list them.

49)	If yes, what are the obstacles?

Prospective and no LRCs only
50)	Who are the main biodiversity data providers in your geographical area? Please complete the table below listing the 20 main data providers, including whether they consist of volunteers or not, what taxa they cover, who they currently make their data available to, and what support or funding they receive and from whom.

	Organisation	Volunteer?	Taxa covered	Who receives their data?	Support or funding they receive.
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					

Table continued…

	Organisation	Volunteer?	Taxa covered	Who receives their data?	Support or funding they receive.
14					
15					
16					
17					
18					
19					
20					

Prospective LRCs only
51)   Which of the groups listed above, or which individual volunteers, will the LRC work with?

No LRCs only
52)   From where else is biological data generated?

Existing and prospective LRCs only
53)   Do/will you provide any of the following services for volunteers?

	Yes	No
• Meeting space	☐	☐
• Use of other office facilities, e.g. computers	☐	☐
• Newsletter	☐	☐
• Other published material	☐	☐
• Provision of local contacts	☐	☐
• Training/ Technical advice on recording	☐	☐
• Forums or conferences	☐	☐
• Meetings with volunteers	☐	☐
• Other (please specify)	☐	☐

(Tick all that apply)

Existing LRCs only
54)   Do you feel you need to do more for volunteers to maintain their support?   Yes ☐ No ☐

55)   If yes, what are the obstacles?

Existing and prospective LRCs only
56)   Do/will you have written agreements with volunteers over the data they supply and how you use it?   Yes ☐ No ☐

57)   If yes, please summarise what these agreements are/will be.

Existing LRCs only
58)   If no, do you plan on doing so in the next year?   Yes ☐ No ☐

59)   Not included in final questionnaire.

60)   What proportion of volunteers submit records at each of these intervals (as individuals rather than by quantity of records submitted)?

- Daily   _____ %
- Weekly   _____ %
- Monthly   _____ %
- Seasonally/yearly   _____ %
- Greater than yearly   _____ %

61)   What proportion of records from groups/volunteers is received in each of the following formats over the last year?

- Verbally, incl. phone   _____ %
- Email – unstructured   _____ %
- Online recording form   _____ %
- Paper notes – not on recording form   _____ %
- Standard paper recording form   _____ %
- Electronic spreadsheet   _____ %
- Recording software   _____ %
- Reports   _____ %
- Other (please specify)   _____ %

Existing and prospective LRCs only
62)   Do/will you commission surveys through volunteers?   Yes ☐ No ☐

Existing LRCs only
63)   If yes, please describe the types of survey you have commissioned in the past.

64)   If yes, how many volunteers have taken part in commissioned surveys in the last year?

Existing and prospective LRCs only
65)   Do/will all records submitted by local volunteers come straight to your LRC?
Yes ☐ No ☐

66)   If not, where do/will other records go, and do/will they eventually come to your LRC?

Prospective LRCs only
67)   Where have volunteer records gone up until now?

Existing and prospective LRCs only
68)   How will you ensure that all records come to your LRC in the future?

69)   Does/will your LRC receive data from national schemes or societies that also rely on and support volunteers   Yes ☐ No ☐

70)   If yes, please state which ones.

71)   Does/will your LRC provide data to national schemes and societies?   Yes ☐ No ☐

72)   If yes, please state which ones.

73)   Does/will your LRC actively encourage local volunteer participation in national schemes and societies surveys?   Yes ☐ No ☐

74)   Section summary.

Links to other networks and scales

Existing and prospective LRCs

75) Do you feel you need to operate as part of a wider network of LRCs (i.e. regional, country, UK)? Yes ☐ No ☐

76) Why/why not?

77) Do you see any need to operate as part of a regional network of organisations (not limited to other LRCs)? Yes ☐ No ☐

78) If yes, what would be the benefits of this? If not, why not?

79) Do you think you have/will have a role in supporting the provision of biodiversity information on a wider geographical scale, i.e. contribute to the bigger picture? Yes ☐ No ☐

80) Why/why not?

81) Do you need to link with national schemes or societies? Yes ☐ No ☐

82) Why/why not?

83) Is there a need for wider data holdings than just biodiversity (e.g. geological, landscape etc.)? Yes ☐ No ☐

84) Why/why not?

85) Section summary

Relationship to the National Biodiversity Network

Existing and prospective LRCs only

86) How do you see your LRC relating to the NBN?

87) Do/will you use the NBN Gateway as a way of providing access to data? Yes ☐ No ☐

88) If not, what, if any, are the factors restricting your LRC from doing so?

89) What alternative mechanisms do/will you use?

90) Do/will you use any of the NBN guidance or agreements, e.g. the NBN Data Exchange Principles? Yes ☐ No ☐

91) If yes, which ones do/will you use?

92) Do/will you make use of species data available through the NBN Gateway? Yes ☐ No ☐

93) If not, please state why not and describe what alternative mechanisms you use/will use to access data from regional or national sources.

94) Does the NBN concept help or hinder? Help ☐ Hinder ☐ Both ☐

95) Please explain how you think it helps or hinders.

96) Are you aware of any other LRCs developing NBN web services (e.g. querying from within a GIS)? Yes ☐ No ☐

97)   If yes, which ones?

Data content, coverage and quality

Existing and prospective LRCs only
98)   With which data providers do/will you have a data exchange agreement?

Existing LRCs only
99)   Are there any datasets that you are aware of but do not have access to?   Yes ☐ No ☐

100)   If yes, please list them.

101)   Do you have a record of your current data holdings (at least summaries of taxonomic, geographical and date coverage, and number of records)?   Yes ☐ No ☐

Existing and prospective LRCs only
102)   Do/will you validate[1] data submitted by volunteers?   Yes ☐ No ☐

103)   If yes, please describe how the data is/will be validated.

104)   How do/will you verify[2] data quality?

105)   Do/will you involve local representatives/experts of national schemes and societies in data verification?   Yes ☐ No ☐

106)   If yes, please list these societies or schemes.

107)   Do/will you run any automated electronic checks on your data? (Blank for don't know)
Yes ☐ No ☐

108)   If yes, please describe what checks are/will be carried out and how often.

109)   What software do/will you use as the main data repository?

- Access   Yes ☐ No ☐
- Recorder 3.x   Yes ☐ No ☐
- Recorder 2000   Yes ☐ No ☐
- Recorder 2002   Yes ☐ No ☐
- Recorder 6   Yes ☐ No ☐
- Marine Recorder   Yes ☐ No ☐
- Mapmate   Yes ☐ No ☐
- MapInfo   Yes ☐ No ☐
- ArcGIS   Yes ☐ No ☐
- Other (specify)   Yes ☐ No ☐

[1]Validation – checking that all the information required to make it a record is sufficient, i.e. that it fulfils the criteria for 'what, where, when and who'.

[2]Verification – expert checking that the record is most likely correct, i.e. was the identification accurate, is it likely to be in that area / habitat, etc.

110) What software do/will you use other than as the main data repository?

- Access   Yes ☐ No ☐
- Recorder 3.x   Yes ☐ No ☐
- Recorder 2000   Yes ☐ No ☐
- Recorder 2002   Yes ☐ No ☐
- Recorder 6   Yes ☐ No ☐
- Marine Recorder   Yes ☐ No ☐
- Mapmate   Yes ☐ No ☐
- MapInfo   Yes ☐ No ☐
- ArcGIS   Yes ☐ No ☐
- Other (specify)   Yes ☐ No ☐

111) What systems do/will you use to query and produce reports?

- Access   Yes ☐ No ☐
- Recorder 3.x   Yes ☐ No ☐
- Recorder 2000   Yes ☐ No ☐
- Recorder 2002   Yes ☐ No ☐
- Recorder 6   Yes ☐ No ☐
- Marine Recorder   Yes ☐ No ☐
- Mapmate   Yes ☐ No ☐
- MapInfo   Yes ☐ No ☐
- ArcGIS   Yes ☐ No ☐
- Other (specify)   Yes ☐ No ☐

112) Do/will you have a web site? Yes ☐ No ☐

113) Can/will web users interrogate your datasets via your own website? Yes ☐ No ☐

114) What other systems do/will you use to manage data (e.g. paper records, surveys etc.)?

Existing LRCs only
115) What software / IT infrastructure do you need to help you operate more effectively.

116) Can you think of any ways of providing better data management services, including both data capture and dissemination?

117) Section summary

Policies and operation of the LRC

Existing LRCs only
118) Over the past year, what proportion of paid staff time has been spent on each of the following roles?

- Volunteer support/liaison (other than training)   ____%
- Data entry   ____%
- Data management   ____%
- Analysis/reporting   ____%
- Technical development   ____%
- Business development   ____%
- Surveying   ____%

- Training volunteers   ____%
- Administration   ____%
- Other (please specify)   ____%

Existing and prospective LRCs only

119)   Do/will you have policies for data release? Yes ☐ No ☐

120)   If yes, please describe what they are/will be.

121)   Do/will you provide public access to data? Yes ☐ No ☐

122)   If yes please describe how this is/will be achieved.

123)   If not, please could you state why not?

124)   Do/will you have any formal links with institutions holding biological collections and archives? Yes ☐ No ☐

125)   If yes, please list these institutions.

126)   Does/will your LRC provide advice or other ecological support, in addition to the provision of information? Yes ☐ No ☐

127)   If yes, please describe what is/will be provided.

128)   Do/will you have procedures for data security (e.g. fire, data corruption, backup etc.)? Yes ☐ No ☐

129)   If yes, what are they?

130)   Do/will you carry out any marketing activity? Yes ☐ No ☐

131)   If yes, what sort of activity do/will you carry out?

132)   If yes, who is/will be targeted?

133)   Do/will you seek feedback from customers on your service provision? Yes ☐ No ☐

134)   If yes, how do/will you go about it?

135)   Do/will you use work planning? Yes ☐ No ☐

136)   If yes, please describe your systems.

Staff Conditions

Existing LRCs only

137)   How many volunteers help run the LRC (excludes survey work and providing records)?

138)   On average, how many hours do volunteers contribute per week?

Prospective LRCs only

139)   Will you use volunteers to help run the LRC? Yes ☐ No ☐

Existing and prospective LRCs

140)   Do/will you provide a pension scheme for permanent and/or fixed term contract staff? Yes ☐ No ☐

141)   Do/will you pay statutory sick pay? Yes ☐ No ☐

142) Are you/will you be able to provide salary security (including annual increments in line with inflation) to your permanent staff?   Yes ☐ No ☐

143) Are the staff/will the staff be subject to regular formal appraisals by line management? Yes ☐ No ☐

144) Do/will you have links with other career structures?   Yes ☐ No ☐

145) If yes, please describe them.

146) Do/will you provide training for your staff?   Yes ☐ No ☐

147) If yes, please describe what training you/you will provide and how it is administered.

148) Do/will you have an active health and safety policy?   Yes ☐ No ☐

Existing LRCs only
149) Do you have problems in recruiting staff?   Yes ☐ No ☐

150) If yes, please describe the obstacles.

151) Do you have problems in retaining staff?   Yes ☐ No ☐

152) If yes, please describe what the problems are.

Existing LRCs only
153) Who are your main 'customers'? Please complete the table below, adding the types of information each customer needs and where they heard about your LRC (for consultants, please specify the contracting body where known).

	'Customer'	Information needed	Where they heard about your LRC, if known
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Prospective LRCs only

154) Who do you see becoming the main 'customers' of the LRC? Please complete the table below, adding the types of information you think each customer needs, how they meet their current information needs and what requirements are not being met.

	Potential 'customer'	Information needed	How meet current needs	Requirements not being met
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Existing and prospective LRCs only

155) What do you see as the main benefits of your LRC?

	Benefit
1	
2	
3	
4	
5	

156) Who will benefit most?

	Beneficiaries
1	
2	
3	
4	
5	

Existing LRCs only
157)   Do you think your customers would agree with you about the main benefits of your LRC?
Yes ☐ No ☐

158)   If not, why not?

Existing and prospective LRCs only
159)   Do/will you review your services on a regular basis?   Yes ☐ No ☐

160)   If yes how often do/will you review them?   Less than yearly ☐   Yearly ☐   More than yearly ☐   Continuously ☐

161)   Please describe.

Existing LRCs only
162)   Are there any services that you could provide that customers do not currently request and that are within the remit of your LRC?   Yes ☐ No ☐

163)   If yes what (e.g. digitisation of data, biodiversity data interpretation, assistance with EIA, training for recorders, etc.)

164)   Are there any services customers ask for that you cannot provide?   Yes ☐ No ☐

165)   If yes, please list them

Existing and prospective LRCs only
166)   Are you/will you be competing with other information suppliers in your geographic area (e.g. consultants, recording groups, etc.)?   Yes ☐ No ☐

167)   If yes, please list them.

168)   If yes, please describe what the unique qualities of your LRC are/will be versus other comparable data sources.

Existing LRCs only
169)   Do you duplicate what national societies and schemes provide?

Prospective LRCs only
170)   Is there an existing partnership for sharing of biological data?   Yes ☐ No ☐

171)   If yes, who are the members and what are the objectives?

172)   Have there been attempts to establish a record centre previously?   Yes ☐ No ☐

173)   If yes, what were the factors in it failing to establish?

174)   What are the possible alternatives to establishing a record centre, either locally, regionally or nationally?

175)   Who are the key players and what do they need to do to make it happen?

176)   Section summary

Viability of your LRC

Existing and prospective LRCs only

177)   What are the total/estimated annual operating costs of your LRC (including staff, premises, overheads etc.)?

178)   Which organisations (or types of organisation) in your geographical area provided/will provide financial support (in 2005/6 financial year)? Please list all supporting organisations (largest financial contribution first), indicating whether or not they provided/will provide support, and if they do not/will not provide support, why not. Please also add what sort of agreements you have/will have with them (e.g. SLA, MoA, grants) and what is/will be required as a condition of the funding (deliverables).

	Name / type of supporting organisation	Proportion of total funding	If no financial support, why not?	Type of agreement	Deliverables
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

179)   Do/will you use funding formulae to take account of differences between geographical areas or workloads associated with different LAs?   Yes ☐ No ☐

180)   If yes, what are they?

181) Do/will your data holdings and data provision act as performance indicators for SLA's and other agreements?   Yes ☐ No ☐

182) For how many years ahead (06/07 is year 1) do you have funding security (i.e. reasonable assurance that funding will be available to enable you operate with at least the resources you had in 05/06)?

183) Do you have financial security for all permanent staff (at least as secure as the LRC)? Yes ☐ No ☐

184) Are you confident that the LRC will be able to achieve funding security?   Yes ☐ No ☐

185) Can/will you meet all existing user needs from your current structure and resources? Yes ☐ No ☐

186) If not, what needs are/will you not able to meet?

187) What are the risks in your current/proposed support arrangements (includes financial or staff/volunteers)?

188) Do you have all the database skills you need within your LRC staff?   Yes ☐ No ☐

189) Do you have all the GIS skills you need within your LRC staff?   Yes ☐ No ☐

190) Do you have all the management/administrative skills you need within your LRC staff? Yes ☐ No ☐

191) Do you have all the taxonomic identification skills you need within your LRC staff? Yes ☐ No ☐

192) What training would the LRC staff most benefit from?

193) Do/will you produce an annual report including a budget/accounting report or something that performs the same function?   Yes ☐ No ☐

194) Section summary

Ideal position

195) What is your vision for your LRC?

196) Do you have a forward plan, business plan and/or strategy for development? Yes ☐ No ☐

197) If yes, what period do they cover (in years)?

198) If yes, how do you plan to finance them?

199) If not, is there a plan to produce them?   Yes ☐ No ☐

200) What size budget is 'enough' to meet your vision (including staff costs)?

201) How many FTE (Full Time Equivalent) staff members does this include?

202)   What size budget would meet your basic requirements (i.e. not meeting your ideal vision, but adequate to provide a basic service to users and volunteers)?

203)   How many FTE staff members does this include?

204)   Do you see your LRC operating within the NBN?   Yes ☐ No ☐

205)   How do you think future demand will change (e.g. public access, SEA etc.)?

206)   Section summary

Blocks to achieving your ideal position

Existing LRCs only
207)   If funds were dependant upon you providing open access to data at the finest geographical resolution (i.e. finest resolution available rather than 10km resolution), what would need to change?

208)   Who are the key players that need to change to meet your ideal position and what would they need to alter in the way they operate?

209)   What is the single most important aspect that would help move towards open access and sustainability for LRCs?

210)   Section summary

All LRCs
211)   Can we contact them again for more information if necessary?   Yes ☐ No ☐

212)   If yes who should we contact?

Appendix 4 – List of volunteer groups that LRCs would like to work with

A complete list of the volunteer groups that LRCs would like to work with but do not is shown in the following table, along with a count of the number of times it was mentioned. This information was specifically requested by the project steering group and is not for general release.

Table L List of volunteer groups that LRCs would like to work with

Name	England	Scotland	Wales	Grand Total
BSBI	1	3	1	5
BTO	1	2	1	4
RSPB	1	2	1	4
Badger Group	3			3
Bat Group	3			3
National Trust	2		1	3
Badger Groups	2			2
British Bryological Society	1		1	2
Butterfly Conservation (more formally)	2			2
National recording schemes	2			2
Scottish Ornithologists' Club		2		2
West Midlands Bird Club	2			2
A few other county groups	1			1
A local barn owl charity	1			1
Amphibian and reptile group	1			1
Anglers	1			1
Avon Badger Group	1			1
Badger and otter group	1			1
Bird Club	1			1
Bird Club - do communicate, but future working relationship is not guaranteed	1			1
Bird groups	1			1

Table continued…

Name	England	Scotland	Wales	Grand Total
British Dragonfly Society		1		1
British Lichen Society		1		1
British Trust for Ornithology	1			1
Bryophytes (County Recorder)	1			1
Derbyshire and Nottinghamshire Entomological Society	1			1
Derbyshire Ornithological Society	1			1
Devon Bird Group - trying to negotiate	1			1
East Kent Badger Group	1			1
Edinburgh Natural History Society		1		1
Everybody collecting biological or geological information for West Wales			1	1
Herpetological Conservation Group.	1			1
Highland Biological Recording Group members who will not share data		1		1
Huntingdonshire flora and fauna society.	1			1
Individuals	1			1
Invertebrate Group - few records as yet	1			1
Leeds and York Universities (especially millennium volunteers)	1			1
Local Badger consultant		1		1
Local Fungi Group		1		1
Local Hoverfly recorder		1		1
Local Moth Group		1		1
Local Raptor Group		1		1
London, Essex and Herts. Amphibian and Reptiles Trust	1			1
Mammal Society/Steven Harris (Bristol University)	1			1
Mycological Society	1			1
National groups without local representatives	1			1
National Museum of Wales			1	1
National Recording Schemes in general.	1			1
National Trust for Scotland		1		1
Natural History Society (formalise)	1			1
North Yorkshire Bat Group	1			1

Name	England	Scotland	Wales	Grand Total
Note that records from the Lincolnshire Naturalists' Union tend to come from their reports, not direct.	1			1
One recorder is not providing records.	1			1
Other 'friends of' groups	1			1
Other Gloucestershire Natural History Society County Recorders who don't currently supply data.	1			1
Plant Group - Atlas was developed in parallel.	1			1
Ramblers (work with some but would like more)	1			1
Scottish Badgers		1		1
Sheffield Bird Study Group	1			1
Spider Recording Scheme		1		1
Sussex moth group	1			1
Various others		1		1
West Kent Badger Group	1			1
Wildlife Trust ecology groups	1			1
Wildlife Trusts		1		1
Wiltshire Badger Group	1			1
Wiltshire Ornithological Society	1			1

Appendix 5 – List of special interest groups with data exchange agreements with one or more LRCs

- Amphibians and reptiles groups
- Natural History Society.
- Badger Groups
- Bat Groups
- Bedfordshire Badger Group
- Bedfordshire Bat Group
- Bedfordshire Natural History Society
- Bird Clubs
- BRERC recording groups
- Bristol Naturalists (informal)
- British Arachnid Society
- Bryophyte groups
- BSBI
- Butterfly Conservation
- Butterfly Conservation (Sussex Branch)
- Butterfly Conservation (West Country Branch)
- Cumbria Biological Data Network (working towards)
- Cumbria Bird Club (working towards)
- Derbyshire Flora Group
- Dragonfly society
- Entomology groups
- Fungi groups
- Gloucestershire Natural History Society
- Hampshire Amphibians and Reptiles Group
- Hampshire Mammal Group
- Highland Biological Recording Group members
- Herpetological Conservation Trust
- Hertfordshire Amphibians and Reptile Group
- Hymenoptera groups
- Lepidoptera groups
- London Bat Group
- Other local volunteer recording groups
- Somerset Rare Plants Group
- Somerset specialist groups
- Sorby Naturalists - though exchange is still patchy
- Spider groups

- Sussex Ornithological Society
- West Yorkshire Bat Group