National Biodiversity Network
*Building knowledge
by sharing information*

Linking Local Record Centres

Developing Operational Standards
and
Good Practice Guidance - Phase 1

Working in partnership towards the NBN

577.4.087

The National Biodiversity Network is a partnership of local and national custodians of wildlife information providing access to all within a framework of standards. This report was prepared as a contribution to the NBN by The Wildlife Trusts, a member of the consortium helping to establish the National Biodiversity Network.

The Wildlife Trusts are leading the Linking Local Record Centre Project on behalf of the NBN consortium. This project is funded by Countryside Council for Wales; English Nature; Scottish Natural Heritage; The Esmée Fairbairn Charitable Trust and The Wildlife Trusts.

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INTRODUCTION

A key part of the National Biodiversity Network (NBN) project is to develop a fully functional national network of Local Record Centres (LRCs) early in the next millennium. The development and implementation of common operational standards and good practice guidance throughout the network is an essential component of the NBN concept.

The Linking Local Record Centres Project is being led by The Wildlife Trusts as part of the NBN. The Wildlife Trusts are working with a wide range of partners to develop a framework for Local Record Centres. These partners include statutory conservation agencies, naturalists' groups, local authorities, museums and conservation bodies. Using a series of pilot and existing LRCs, the project aims to develop and test operating standards for LRCs; evaluate existing practice within LRCs and partner organisations and promote good practice.

The first phase of work on developing operational standards was a study to assess the current situation, which was undertaken by Cornwell Affiliates Ltd. The main objectives of the study were to document the work of six established LRCs; evaluate the effectiveness of their existing policies, practices and operational management in meeting the needs of customers and suppliers and draft recommendations on the preparation and implementation of operational standards and good practise guidelines. The results of this study will be used by the NBN to develop operational standards for LRCs operating as part of the NBN and disseminate good practise to NBN pilot LRCs.

This report is a compilation of Cornwell Affiliates findings and recommendations and the NBN Executive Group's response to these recommendations. A separate report has been produced on the survey methodology, which is available from The Wildlife Trusts.

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RESPONSE ON BEHALF OF THE NBN CONSORTIUM

Summary

1. This report, based on a study of six existing Local Record Centres by consultants from Cornwell Affiliates Limited and Thurner Automation, provides a sound basis for the development of a means of establishing and disseminating best operational practise for LRCs.

2. The NBN Executive Group endorses the recommendations within the report and will endeavour to ensure that the programmes of work that make up the NBN take them on board.

3. This response outlines how the NBN consortium will seek to take on board the recommendations within the report, in particular through the work of the Linking LRCs project. This response should be read in conjunction with the full report.

Recommendations

Development of Model Office Procedures

4 It is recommended that a fully documented 'model office' should be developed and tested in three LRCs

The model office approach, ie enabling standards to be developed and tested *in situ,* is a valuable approach to developing operational standards that will be practical and widely applicable throughout the existing and developing LRC network. This would clearly build on existing practice, provide a sound basis for disseminating information to other LRCs and help demonstrate the value of adopting these guidelines to existing LRCs. In developing model office procedures care needs to be taken to identify those areas where documentation will add real value. It is important to capture these areas with short, simple guidance which will be helpful to LRC staff and in a way which does not become overly bureaucratic or stifle flexibility and innovation. This model office approach will be adopted as part of the demonstration phase of the Linking LRCs Project.

Formalising Local Partnerships

5 It is recommended that Framework Documents are developed for the LRCs acting as the model offices for the NBN.

The use of Framework Documents will provide a clear footing for the establishment and development of partnerships to run LRCs. All LRCs working as part of the NBN demonstration phase will be encouraged to prepare Framework Documents as part of their work. Guidance on the format and preparation of such documents will be prepared as part of the Linking LRCs project to enable new LRCs to follow this approach and existing LRCs to consider the value of these in their work

Managing Quality

6 It is recommended that the LRCs selected to act as model offices should document their working practices to meet ISO 9000 standards

Work with the proposed 'model offices' will follow this recommendation, taking care to focus on the principles behind ISO 9000 and the practical use of documentation generated In addition the LRC team will ensure that such documentation generates guidance that is practical and simple to implement

7   *It is recommended that the NBN initiate discussions with selected National Recording Schemes and relevant co-ordinating bodies, such as the Institute for Ecology and Environmental Management (IEEM), with a view to providing consistent advice to local taxon specialists and LRCs in a form that can be added to the LRC manual of procedures*

Work in this area is already built into a number of NBN projects - Linking LRCs, Linking National Schemes and Societies and Standards. This recommendation highlights the needs for close interaction between projects within the NBN programme that needs careful planing and phasing. This work needs to be progressed as part of the demonstration phase of the NBN

National co-ordination of LRCs

8   *There are a number of issues that would be best solved by the NBN as a whole   These include*

- *The development of a national policy on the sharing of data between LRCs and between local and national databases*

- *The implementation of data management standards to ensure that data means the same thing to all its potential users*

- *Implementing software version control and communications standards for the network as a whole*

9   *It is recommended that the NBN should develop and promulgate policies on these matters and that all LRCs should formally commit in their Framework Documents to implement the resulting policies*

A joint approach to these issues is the core of the purpose of the NBN and the widespread acceptance of this approach will be fundamental to the success of the NBN   This will not be achieved by any one element of the proposed network making progress independently, but by a gradual iterative approach. Initially this should seek acceptance of the net-gain for each "node" in the NBN in developing a common approach, then identifying what this will look like and the implications for any one part of the network. This approach will need to be adopted by all the projects contributing to the development of the NBN. This will require groups of people involve in the NBN coming together to identify issues, analyse e situation an come to common agreement over the way forward. As LRCs choose to adopt the principles of the NBN and participate in its development we would wish to see them establish Framework Documents which express this commitment.

Mobilising the Recorder Network

10. *It is recommended that LRCs use manpower planning techniques to forecast the long-term requirement for recorder effort and that they initiate plans to ensure that there is adequate input of new recorders for the relevant taxa*

Work on identifying the need and resource for recorders should be looked at across the whole NBN. This work should be integrated with the establishment of LRC 'model offices', alongside national schemes and societies, during the NBN demonstration phase. This focus is likely to identify the role that wider, less clearly focused activities (such as encouraging public participation in recording schemes) have in the long-term maintenance of the NBN.

11 It is further recommended that the NBN builds on existing initiatives to co-ordinate the national provision of training both in identification and survey skills and in the procedures for the validation of records agreed with the National Recording Schemes

Whilst recognising the need for improved training in identification and survey skills the role of the NBN is to build capacity in both LRCs and national schemes and societies, not to provide training direct to surveyors or recorders. However by using manpower planning techniques (as discussed above) the NBN can help identify a clear requirement for suitably competent recorders and surveyors. Procedures for validation of records need to be a standard adopted by everyone working within the NBN. Work on this area is already built into a range of projects on standards, national societies and schemes and accreditation

National Training for LRC Managers

12 It is recommended that a national programme should be set up for training in LRC management skills including

- *Business planning,*

- *Negotiating skills,*

- *Motivation of volunteer recorders;*

- *Building effective local partnerships;*

- *Public relations.*

Work on establishing standards for LRCs should ensure that these requirements are built into the staff development needs for LRCs. In addition, at a later stage in the Linking LRC Project, work is needed to ensure that information on appropriate training is widely disseminated and where necessary specific training is developed to meet these needs. There are also factors relating to staff recruitment. Links with existing training establishments (such as universities) should be investigated to ensure that suitably trained staff are likely to be available in the future. It is anticipated that further funding will need to be sought for this area of work.

Building these recommendations into the NBN work programme.

13. The proposal for taking forward the recommendations (as outlined above) need to be integrated with the detailed project plans for each area of the NBN Programme. A copy of the report and recommendations will be passed to each NBN Project Leader to enable them to do this.

14. The most significant area of work that needs revising is the second tranche of demonstration LRCs within the Linking LRCs Project. A detailed revised proposal for this work is currently being developed. A further series of demonstration LRCs will be selected to focus on developing:

- 'Model office' approach to develop and document procedures and standards for LRCs

- Bring on board new partners to establish a wider and stronger local partnerships to an existing LRC

- Involve LRCs effectively in National Schemes and Societies.

15. These demonstrations will involve existing LRCs that wish to work with the NBN addressing particular difficulties they are experiencing, building on known practise elsewhere or refining and documenting their existing practise. When these LRCs have tried and tested methods and proven their success they will be asked to document them and then act as a 'model' LRC,

continuing to work with the LRC Project team to disseminate this good practise   The work of these further demonstration LRCs should complement the work of the existing three pilot LRCs

16   A range of LRCs will be selected to cover the full range of issues identified in the report, with projects specifically focussing on the two priorities identified (working with national schemes and societies and building partnerships)

17   LRCs will be selected to participate by a two-stage process.   Firstly all LRCs will be invited to "express interest"   Potential participants will then be identified and they will be asked for further information and negotiations will take place on an individual basis   The total number of LRCs needed to cover the full range of issues will depend on the ability of existing LRCs to participate in the project   However LRCs will be selected which give a reasonable geographic spread and involve the widest range of different participants without creating too large a co-ordination function.

18.   Resources available for this work are limited.   Participating LRCs will be expected to bring expertise and resources to the project but funding will be available to "back-fill" existing staff whose time is re-directed or bring in further resources for the work.   There may need to be some prioritisation unless further resources can be found - for example through HLF funding.

Report to the Wildlife Trusts

Developing Operational Standards and Good Practice Guidance

Phase 1 - Assessing the Current Situation

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CONTENTS

1. INTRODUCTION

1 1   This report to The Wildlife Trusts, commissioned on behalf of the National Biodiversity network (NBN), documents the findings, conclusions and recommendations following the Stage 1 study into Local Record Centres (LRCs). The aim of the study was to assess the current situation in six LRCs in order to inform a programme of work to establish the LRC element of the NBN. The Wildlife Trusts are taking the lead on the Linking LRCs project of the NBN programme.

1.2   The study was carried out for The Wildlife Trusts by consultants from Cornwell Affiliates Limited and Thurner Automation, under the guidance of a steering committee and reporting to the NBN Local Advisory group.

1 3   This report has been prepared after interview visits to six Local Record Centres (LRCs) and a questionnaire survey of 21 users and data suppliers   Separate reports have been prepared to document·

  •   The survey methods;

  •   Interview reports from the six LRCs.

1 4   In addition to providing the basis for the further development of the NBN, it is intended that this work should be useful to the six LRCs surveyed.

2. OUR APPROACH

2.1   Our approach to 'Stage 1: Assessing the current situation' was to audit six selected existing, mature LRCs in order to assess the effectiveness of their operational procedures.

2.2   These surveys were carried out by developing a questionnaire to be administered by interview during a half day visit to each of the selected offices. A written report has been prepared for each visit which has been submitted to the respective LRC in draft for confirmation or amendment. The questionnaire was designed by reference to the European Foundation For Quality Management Business Excellence model[1].

2.3   It was hoped that the Business Excellence model could be used to define the various topics to be addressed and the relative weight to be assigned to each. Although we drew selectively from this questionnaire in developing our own questionnaire, we found that many of the questions were not appropriate because of the size of the LRCs and the consequent lack of sophistication in their management structures. To make sure that the questionnaire was user friendly, and could be administered in the six centres to be surveyed, we carried out pilot interviews in one additional LRC.

2.4   During the interviews we assessed the relevance of national standards for management including:

  •   The Government's Investors in People (IiP) initiative;

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[1] A report titled *Towards Best Practice* on the use of this model by the Office of Public Service in the Public Sector Benchmarking Project can be accessed at the Cabinet Office home page via the Internet at http://www.gtnet gov.uk/co/cohome.htm.

- The international quality standard ISO 9001

2 5   In addition to the questionnaire interviews in the 6 specified LRCs, we sent postal questionnaires to 21 data users and data providers

2 6   Copies of all the questionnaires used are included in the separate report on survey methods

3. FINDINGS

Review of the Local Record Centres

Purpose and Aim of Local Record Centres

3 1   Typically the aims of a LRC are to promote the conservation of biodiversity in the local area by supporting the following activities.

- Making biological records accessible to a wide variety of bodies and thus increasing their utility in promoting biodiversity;

- Environmental input to the Planning Process;

- Definition of Conservation Priorities and Biodiversity Action Planning (BAP),

- Baseline Audit and the Monitoring of Conservation Programmes,

- The Promotion of Scientific Enquiry;

- Education,

- Providing catalogues to support the curation by museums and others of voucher and display specimens;

- Raising of public awareness of biological recording and biodiversity.

3 2   The relative weight given to each of these activities varies from centre to centre What is clear is that LRCs are becoming increasingly involved in the promotion of biodiversity.

Governance

3 3   None of the LRCs visited are free standing legal entities. All are sustained within the management structure and organisation of one of the main stakeholders in the LRC. The following distribution of governance was found.

- Local Authority - Museums Service·

   o   Leicestershire Environmental Resources Centre (LERC)

   o   North East Environmental Records Centre (NEERC) (part of Tyne and Wear Museums)

- Regional/National Authority - Museums Service:

   o   Centre for Environmental Data and Recording (CEDaR)

- Cost Centre within a Wildlife Trust (County/National):

   o   Somerset Environmental Records Centre (SERC)

>   o   Lothian Wildlife Information Service (LWIS)
>
> * Section within local authority planning division:
>
>   o   Fife Nature

3 4   This arrangement for governance gives LRCs the advantage of being within a large organisation with the attendant benefits. These include the availability of big organisation management arrangements, the provision of accommodation and IT support. In some cases these overheads are charged to the LRC cost centre, in others they are absorbed centrally

3.5   There are, however, significant disadvantages. These include:

* Subjecting LRC staff to 'role conflict' by requiring them both to be an employee of their parent organisation and to act as the focal point for the recording community;

* Services that are oriented to the needs of the parent organisation at the expense of the other stakeholders;

* The risk that the LRC is not seen as neutral (for example in the supply of information to a planning enquiry).

3 6   This issue is discussed further under Leadership.

Funding

3.7   The requirement for ecological data is partly statutory, driven by European directives and related United Kingdom legislation and by planning guidelines. Local authority planning departments and the Country Agencies have a duty to monitor species and habitats and to implement Biodiversity Action Plans. ˙ Such responsibilities cannot be exercised without adequate information. Voluntary conservation organisations are also increasingly active in sponsoring and funding environmental information provision.

3.8   While there are strong statutory and policy drivers to collect, collate and distribute biological information, there is no requirement for such information to be provided in any particular way. LRCs are only one of several options for providing such data. Other options could include drawing on National Datasets, Wildlife Trusts, voluntary Field Clubs or Natural History Societies. A case has to be made that an LRC is the most cost effective source representing a "one-stop-shop" for composite ecological information. But the cost to the user must be competitive and the source must be seen to be free of bias.

3 9   The reliability of funding is a critical issue for all the LRCs visited. One of the LRC's visited has had to cut back its service due to the lack of staff resources. Even those LRCs with a 'permanent' personnel establishment feel insecure. Despite the statutory requirement for data to monitor the effectiveness of the Government's conservation and biodiversity policies, there is a fear that biological recording will be seen by funding authorities to be an optional activity.

3 10   LRCs are having to justify the funds they receive in terms of the service outputs they provide There is an increasing trend for organisations providing funds to require a formal Service Level Agreement (SLA). Business planning based on SLAs should be seen as the tool to obtain long term commitment from the funding agencies.

Staffing

3.11   The staffing of the six LRCs visited is summarised in table 1 below.

Table1 Staffing of the LRCs visited

LRC	Full-time Permanent FTE [1]	Short-term Staff FTE	Volunteers within the LRC FTE
LERC	9 4	0	2
NEERC	0 03	0	3 - 4
SERC	4	4 - 5	2 - 3
CEDaR	3		
LWIS	1		3 - 5
Fife Nature	2	1	

Leadership

3 12 The organisation structure of all the LRCs visited is complex. Most operate within the management structures of the parent body. In CEDaR two of the staff report to the keeper of Botany and one to the Keeper of Zoology. Such management structures, although ambiguous, can be particularly effective in a rapidly changing organisation. They also enable LRC staff to follow a taxon specific career path. However, this arrangement does mean that there is no one person within the LRC who has responsibility for all aspects of its operation.

3 13 SERC operates as a cost centre within Somerset Wildlife Trust Sales Limited. The director is responsible for financial functions to the Somerset Wildlife Trust Council and for management functions to a management group that brings together the major stakeholders.

3 14 CEDaR has an advisory committee and SERC and Fife Nature have liaison Groups. These bodies involve the wider recording community and selected customers in the setting of priorities for these centres.

Business Planning:

3.15 Four of the LRCs prepare business plans. The plans seem to adhere to industry best practice in terms of form and content. Typically they include a statement of vision, mission and objectives. Some have key targets or key performance indicators.

3.16 Business Plans are a critical requirement in bidding for funds. For the most part, these plans are subsidiary to the overall plans of the host department. For example, LERC produces a plan as an element in the Department Forward Plan for the Directorate of Museums, Arts and Records of Leicester County Council.

3 17 It is common practice to consult with the wider recording community, including volunteer recorders, in the construction of these plans. The BAP process plays an important part in defining the priorities for all the LRCs visited.

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[1] Full Time Equivalent

3 18   SERC prepares a future projects list   Although it has no formal business plan this LRC has a mission statement: 'Delivering quality data for decision making'. Forward financial approval is based on an annual budget approved by the Somerset Wildlife Trust

Determination of Information Need

3.19   As LRCs have scarce resources, they have to be increasingly focused on priorities   There is a requirement for a more structured approach to the determination of what information should be collected, how and by whom to·

- Integrate local recording effort with national recording (as a contribution to the 'think globally, act locally' philosophy inherent in the Rio Agreement);

- Make best uses of all resources, professional and volunteer;

- Concentrate recording effort on taxa and habitats that are being actively managed through site designation, the planning process and biodiversity action plans;

- Ensure that geographical coverage is complete, or at least consistent.

3.20   Most of the LRCs visited make some attempt to target the resources under their direct control. Some National Recording Schemes also guide their recorders to specific locations, to apply recommended survey techniques at predetermined times. Such disciplined recording has the potential to be more useful to LRC customers than the ad hoc collection of data or the clustering of recording effort around 'interesting' sites.

Documentation of Procedures

3.21   Some of the LRCs have documented their procedures. In Scotland Biological Recording in Scotland (BRISC) has taken the lead in preparing a generalised procedure manual[2]. Similarly a number of LRCs have documented their own procedures Preliminary inspection of these procedures indicates that there is already a body of 'best practice' that could be customised in the preparation of a manual for the LRC Model Office. Similarly a number of LRCs have documented their own procedures. We did, however, sense that in some instances there is at present some reluctance to share such examples of best practice with other members of the NBN.

Human Resource Management

3 22   All the LRC staff are employed under the terms and conditions of the parent organisation   Staff are subject to the Human Resources policies of the parent body, but are not prime movers in the formulation or implementation of those policies. Tyne and Wear Museums, housing NEERC, has implemented the Investors in People (IiP) approach. Given the low level of activity at NEERC, it is unlikely that IiP will confer much benefit.

Quality Management

3.23   None of the LRCs visited are accredited under ISO 9000. One (LERC), was included within the wider Total Quality Management (TQM) initiative carried out by its parent organisation. SERC has implemented a quality culture and has a written Quality Assurance Policy.

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[2] It is understood that the BRISC guidelines will shortly be published by SNH.

Service Level Agreements

3 24   As indicated above, Service Level Agreements (SLAs) are widely used to define the service give by LRCs to their external customers   There is scope to widen the use of LRCs to ensure that all stakeholders have an appropriate say in the operation of the LRC.   In general the business planning process is used to define the service given by LRCs to their parent organisations

3 25   No LRC has a formal SLA with suppliers, but all have a published booklet explaining how the LRC works, what will happen to any records they submit and a simple explanation of the intellectual property position   LERC is considering the development of SLAs with suppliers

Products and Services

3 26   LRCs offer the following products and services:

- **Habitat monitoring:**   LRCs vary in the degree to which they use records for site monitoring   Key factors are the requirement of the main stakeholders for site monitoring data and the availability of professional surveyors to carry out structured surveys at predetermined intervals,

- **Species monitoring:**   Local species records are used to monitor the status of species in an area.   The more active LRCs (e g. LERC) have produced County RDBs[1]   Others are in the process of analysing records to identify locally notable species,

- **Species enquiry:**   Very few external enquiries are made about individual species   The main use of species records is internal to the LRCs most of which are involved in the analysis of local status of species and the designation of locally notable species,

- **Site enquiry:**   Most development control planning related enquiries relate to one or more sites   In addition local authorities will need to take account of the whole portfolio of habitats and sites in order to develop structure or local plans   The identification of a 'second tier' of sites below those with statutory designation plays an important part in zonal planning.   The logging on planning systems of the designation of sites of local interest is used to alert planners at an early stage in the process;

- **Personal research projects:**   All the LRCs make data available to support personal research projects,

- **County atlases:**   The production of County Atlases is seen a powerful way of bringing the records to life.   Most LRCs either have produced such atlases or are in the process of doing so;

- **Support and training of volunteers:**   LRCs emphasised their role in the support and training of volunteer recorders   Support includes help with the use of the RECORDER software package.   LRCs also provide, or help volunteers to find, advice, counselling and support in survey methods and identification skills;

- **Outreach and education:**   All LRCs encourage the involvement of the public including schoolchildren in survey activities.   Examples are the Garden Wildlife survey carried out by LWIS, the ladybird survey carried out by Fife Nature, the mapping of ancient trees by LERC and CEDaR's Mammal Recording Sceme

Fee Income

3.27   Fees are charged for the staff time spent in searching and preparing the response   None of the LRCs visited makes a charge for the data.   The income generated is a useful, but relatively insignificant, part of the LRC budget.   Fee income varies between about £3,000 pa up to £24,000

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[1] In Northern Ireland, such initiatives cover the whole region supported by CEDaR and EHS

(Note· this higher figure may include some consultancy work outside the normal remit of a LRC)

Training of Existing and New Recorders

3 28   Most LRCs provide training for their recorders either through a programme of visits or by organising conferences and training days. Some LRCs are also active in various 'outreach' and education projects to involve the community in the recording process and in the interpretation of the results.

Review of Users and Data Suppliers

3 29   To get as wide as possible a view of the various stakeholders of the LRCs we contacted data users (customers) and suppliers of data related to the six centres visited. The names and addresses of key users and suppliers of data were provided by the LRCs. Contact was made in person at the time of the LRC visit, by postal questionnaire and by telephone. Postal questionnaires were sent out to 11 users and 7 suppliers and after telephone reminders all responded. Copies of the user and supplier questionnaires are included in the report on survey method. The main conclusions from the response are as follows·

Users

3 30   The users were all professional organisations including local authorities, ecological consultants and Wildlife Trust trading companies. They had been selected as working well with the LRC.

3 31   A small majority of users saw a statutory requirement to have access to ecological data, mainly related to SSSIs and species scheduled for statutory protection.

3 32   The required response time to an enquiry varied from one to four weeks.

3.33   Users with an ecologist required raw data and in most cases also wanted interpreted information Users without an ecologist required only interpreted information and advice   About half the users required field survey services.

3.34   Several users expressed an interest in interactive access to gain access to the LRC database via his or her own computer and to run their own queries and extract reports.

3.35   Most users would ideally like a guarantee of accuracy of the records supplied by the LRC but all seemed realistic enough to know that this was not really on offer.

3.36   Most users were aware of the NBN but wanted more information. They felt that accreditation was likely to have a benefit to them so long as the standards were relevant to them and it was not too expensive to implement.

Suppliers

3.37   The suppliers comprised voluntary specialist recorders (individuals, special interest groups, Natural History Societies) and conservation organisations (English Nature, Wildlife Trusts). They had been selected as co-operative suppliers of data to the LRC.

3.38   The suppliers contacted felt their records were currently being used, wanted them to be useful and were already depositing copies of their records with their LRC. It will be necessary in a later stage of the study to contact other suppliers who are not currently co-operating with an LRC to learn their views and understand their motivation.

3 39   Most suppliers were happy for the LRC to be oriented to Planning as well as Science and added Conservation, Education and Public Information   Most had reservations about Public access to their data and felt that safeguards and constraints would be required

3 40   Few suppliers claimed to guarantee the accuracy of their data.

3 41   Only about half of the suppliers were aware of the NBN and none saw benefits to them   They expressed an interest in receiving details and offering comment.

4.   KEY ISSUES

Defining the organisational boundaries of the LRC

4 1   The formal organisational boundaries of all the LRCs visited are usually defined by the departmental structure of the host organisation. However, the formal LRC also functions as the nucleus of a much larger community of data recorders and users.   LRC managers exercise leadership over this community in a number of important ways, including

- Providing help and support for biological recording,

- Recruiting new recorders;

- Helping recorders to publish their work;

- Helping recorders to gain access to sites through liaison with their owners;

- Directing activities to improve coverage by taxon and locality;

- Providing IT assistance and tuition.

4.2   The effectiveness of this larger recording community is critical to the success of the local element of the NBN.   It is particularly important for this community to be inclusive of all the taxon interests in the LRC area.

4 3   The NBN is to be set up at the national level as a partnership. Many of the proposed partners are represented formally in the governance of the LRCs visited. There is however, scope to develop the partnership principle at the local level   For example, governance structures could establish a local partnership in which the staff from different organisations would have authority and responsibility for the direction and control of the LRC (as, for example, trustees or non-executive directors).

Interaction between LRCs and National Recording Schemes

4 4   All the LRCs visited have established links with at least some of the National Recording Schemes. Each LRC makes its own ad-hoc arrangements with the appropriate national schemes Data is currently shared by its replication, perhaps in three or more places (e.g. National Scheme database, Biological Records Centre (BRC) and LRC). Most LRCs have gaps in the coverage of records available. These links function in, one or more, of the following ways:

- *Co-ordinated data collection* Major national surveys are co-ordinated through the LRC, so that local and national data are collected as a single process,

- *Dual flow.* Taxon specialists associated with the LRC are also members of one or more National Recording Scheme and pass data directly to both local and national databases;

- *Pull back from national to local records* LRC managers have negotiated with a number of National Recording Schemes to be supplied with records for their area.

4.5 The NBN vision of a dispersed biological database, in which each item of data is held in one place and shared, is still some way off. It is essential that LRCs collaborate with other parts of the NBN and do not see themselves in competition.

4.6 While the NBN Collect/Collate software, together with the associated work on standards for the exchange of data, should provide the technical basis for implementing this vision, it will fall to the NBN partners to agree a workable arrangement for the sharing of data. Until the NBN technical architecture is fully in place, there is probably no alternative to the replication of data at local and national levels. In the mean time, there is scope to reach agreement on an appropriate migration path to implement a co-ordinated data collection policy as the first stage towards full implementation of the vision. Such an agreement is critical to the success of the whole NBN concept.

Management and Direction of LRCs

4.7 It is taken as given that at least some of the LRC staff will have an interest in biological recording, gained through experience either as a volunteer or as a professional. Such a background is seen as necessary to gain credibility with the recording community. For most, but not all the centres visited, the development of managerial competence has been seen as a lower priority.

4.8 A common theme to emerge from the study is that the factors critical for success include such management competences as:

- The ability to motivate staff and volunteers,

- The ability to listen to users of biological information;

- The ability to resolve conflict;

- A good understanding of the funding process;

- The ability to build goodwill and trust;

- The ability to raise the public profile of the LRC;

- IT literacy and the ability to provide help to users of the RECORDER software.

4.9 Only a minority of the interviewees had had the training necessary to develop these competences In most cases therefore the development of these skills has been slow. The exception was SERC which includes in its training course for graduate scientists, a structured programme in management topics including:

- General background in how LRCs are managed;

- Funding sources and financial management,

- The development of service level agreements,

- Information management and setting priorites for data collection,

- Strengths and weaknesses of different survey techniques;

- Commisioning surveys;

- Policies on the access to and use of data, including confidentiality,

- Data management,

- Use of the RECORDER and GIS software.

SERC currently trains some 10 graduates each year, most of whom find jobs within the broader field of environmental science and management. There is room for more training of this type, in particular those appointed to positions of responsibility within the LRC network

Building Trust in the NBN

Acceptance of NBN Standards

4 10   We have formed the impression that some of the LRCs visited are at present remote from the NBN development process   One interviewee complained that he had not yet been consulted There is concern that significant effort will be required to document procedures and to implement a QMS.

Implementation of the NBN Collect/Collate Software

4 11   LERC has not been impressed by the current version of RECORDER and has implemented its own biological records application based on Microsoft Access   There are separate databases for sites and for species. Membership of the NBN will impose an obligation to implement the NBN data model and access standards. However, there is no obligation on LRCs to implement the new NBN Collect/Collate software

Contribution of Records to LRCs

4 12   Some surveys carried out by Government departments, for example environmental impact assessment studies by DETR, are not made available to LRCs. The results of surveys carried out by ecological consultants on behalf of private developers are only rarely transferred to LRCs The free exchange of data is central to the vision of the NBN. The stature and value of the network would be enhanced if all those using data were to share their own data through the chain of LRCs or the respective National Recording Schemes.

Importance of Satellite Recorders

4.13   Most of the LRCs visited rely heavily on satellite installations of the recording software. Such satellites, which are usually stand-alone installations of the RECORDER software are mostly

operated by volunteers. Satellite recorders are responsible for a significant part of the data capture effort. This arrangement enables data capture and record verification to be carried out simultaneously A minority of satellites are in related organisations, for example the Ranger Service Those LRCs that do not yet have satellites plan to establish them in the near future.

Biological Records based on Administrative Areas

4.14   LERC is now based on the modern county of Leicestershire, but does have a service level agreement with the recently separated Rutland County Council and continues to liaise with the unitary authority of Leicester City Council.

4 15   NEERC is based on three Watsonian vice-counties. This very large region does not map easily onto administrative areas and there have been many changes recently with the creation of unitary authorities. This confusion in boundaries has had an impact on the fortunes of the NEERC

4 16   The main problem for LRCs when boundaries change is in the reorganisation of the historical database. There is also a need for information relating to sites that cross borders to be shared between LRCs. In the case of CEDaR, there is a developing need to share information on an all Ireland basisIf the new NBN Collect/Collate software has adequate spatial functionality, this problem will disappear. It is hoped that the trend for better and cheaper geographical information systems will make it easier for adjacent LRCs to share information particularly where areas of interest do not respect administrative boundaries.

Quality Management System (QMS)

Adoption of formal QMS

4.17   Quality is an important concern of all the LRCs visited. All take action to verify and validate records and to manage the overall quality of the data held. However, none of the LRCs visited have implemented a formal QMS.

4.18   LERC was included in the Leicester County Council Total Quality Management (TQM) programme. The adoption by the council of the TQM philosophy does not seem to have been extended to the development of a formal QMS specific to the work of the LRC.

4 19   There is a concern that the work to develop and implement a QMS might distract LRCs from what they see as their primary purpose. It would certainly be sub-optimal for each LRC to develop its own QMS with the associated documentation of procedures. There is therefore scope for the NBN to include an outline QMS within the design of the model office This QMS should also make reference to the relevant National Recording Scheme standards and should cover both the mechanics of recording and the quality of the services provided to customers, for example, by setting standards for responding to requests for information.

Record verification

4.20   Bird records are always subjected to critical review against both local and national standards for verification. The rigour of the verification routines applied to other taxa varies. There is much reliance on individual experts who acquire this status through the informal process of 'peer acclaim' As a result the LRC will hold records verified to differing and in the worst case unknown, quality standards.

4 21   A fundamental principle of all quality management systems is that procedures must be in place so that inputs can be trusted All taxa should have documented procedures for the verification of records

Record Validation

4 22   The main procedure for the validation of records is to print copies of all or selected records for each taxon group for consideration by the relevant local taxon specialist Some LRCs make use of mapping facilities to make this task easier

Accuracy of data entry

4 23   Errors in the entry of data are of concern to all the LRCs visited There are particular problems with the entry of grid references and the selection of the correct species name from the RECORDER menu. Checking routines are based mainly on scrutiny of sets of records by the relevant taxon expert.

Documentation of procedures

4 24   An essential aspect in the adoption of a formal QMS is that procedures should be documented Accreditation under ISO 9000 would involve an external audit to verify that the procedures are being applied The 'model office' approach also requires the documentation of procedures so that they can be promulgated throughout the NBN. All LRCs visited have made some progress in the documentation of their procedures. Figure 2 illustrates the coverage of these procedures in the six LRCs visited and in Gloucestershire Environmental Records Centre (visited to test the study methodology) and in the BRISC Guidelines (soon to be in the public domain) None of the six LRCs has a QMS that would stand up to an external audit for formal accreditation The issue of data quality will become more critical as the collection of data becomes more focused on the strategic requirement   There is therefore a need to take forward the identification of requirement in parallel with the implementation of management systems that will enable the LRC to guarantee the quality of the information it provides.

Figure 2: Coverage of documented procedures by LRC - examples collected during the survey of LRCs.

Element	A	B	C	D	E	F	G	H
Data Collection and Recording								
Priorities for Data Gathering				x			x	x
Defining Sites							x	
Habitat Classification								
Species Identification								
Recording Standards					x			
Survey / Sampling Methods								
Data Standards								
Voucher Specimens								
Motivation for Data Providers								
Data Management / Processing								
Priorities for Computerisation								
Changes in Taxonomy								
Integrity of Data	x	x		x			x	
Legal Ownership of Records/Confidentiality	x			x			x	x
Elimination of Duplicate Records								
Security against Loss of Data				x			x	x
Software	x						x	
Data Exchange				x			x	x
Data Provision								
Access to Data	x	x		x			x	x
Publications				x				
Enquiry and Response	x	x		x				
Charging	x	x		x	x	x	x	x
Acknowledgement		x					x	
Feedback to Suppliers		x					x	

Facilities for Voucher Specimens

4 25   Museum based LRCs tend to be much better organised in the maintenance of a voucher specimen collection. There are several advantages in such an arrangement These include·

- Close liaison between the LRC and the taxon expert over problematic identifications;

- Better adherence to taxon specific requirements for acceptance of records;

- The potential to check the original specimen if a record is challenged or if the taxonomy changes.

Dependence on Voluntary Effort

4 26   All the LRCs visited are dependent on volunteers both to collect records and for assistance with data capture. There is some concern that the age profile of volunteers is weighted towards the venerable.   Interviewees are concerned that that the volunteer recorder will be resistant to change In particular, there is a fear that they might resent the imposition of external standards

4.27   One idea that has yet to get the full support of the LRCs is that experts should be 'qualified' either through the approval of the appropriate National Recording Scheme or by the acquisition of formal qualifications under the Identification Qualification (IDQ) scheme

Quality of Professional Surveys

4 28   SERC has a programme for training surveyors in botanical surveying, habitat assessment, biodiversity issues and LRC management. The Scottish Wildlife Trust also trains surveyors from an office co-located with, but not part of, LWIS. There is some concern about the quality of surveys carried out by newly trained staff that is being addressed through the Institute of Ecology and Environmental Management training and accreditation scheme   Several universities now offer training in biological recording and species identification There is a need for NBN to work closely with the providers of such training

Blurring of the Distinction between Information Provision and Interpretation

4.29   LRCs believe that they offer a service based on factual records without interpretation. LRC staff are, however, increasingly required to apply agreed rules to interpret information on the database to identify threatened, rare or notable species. They also participate in the BAP planning process and the LRC records are an important element of feedback in the monitoring of species action plans It is clear that LRCs will continue to be drawn towards adding value to the data that they hold.   They do however, hold back from providing advice that is the proper domain of the Country Agencies and the county wildlife trusts. It is important for the management and steering arrangements to take account of this dilemma, so that LRCs can optimise the impact of their services while preserving the independence of their advice

5. CONCLUSIONS AND RECOMMENDATIONS

Development of Model Office Procedures

5.1   Although there have been a number of national and regional (top down) attempts at Standardisation of procedures, there are many areas where LRCs have been left to their own devices   As a result they have all devoted effort to solving the same sort of problems. This diversion of the scarce resources of the LRC network is wasteful and will in future make it more difficult to implement the vision of data sharing between members of the NBN.   The development of detailed working procedures is best done on a bottom up basis in which one or more LRC develops and documents procedures which, when proven, can be adopted as the NBN standard   This approach, under the title the 'model office', is widely used in the commercial sector to combine the advantages of a bottom up development, which has been proved to work with the top down promulgation of the same method across the whole network.

5.2   It is stressed that the 'model office' approach involves the hands on development of a procedure manual by staff who can test each aspect in practice. It therefore differs from the development of procedures and standards by centralised organisations away from the desk.   The 'model office' approach helps to take the fear out of change by enabling further LRC staff to see for themselves that the procedures have been implemented and are working. It is important that the LRCs chosen as 'model offices' should understand their future role in spreading the word

5.3   The model office approach has the merit of documenting organisation and procedures so that LRCs joining the NBN do not have to make all the same mistakes over again. It is also a very useful discipline for the application of national standards to LRCs. It is **recommended** that a fully documented 'model office' should be developed and tested in three LRCs

Developing the NBN Partnership

5 4   An effective network of LRCs will be critical to the success of the NBN. It is at the local level that the effectiveness of the NBN partnership will be tested, through the day to day interactions between local officers and staff of the bodies represented in the partnership   Working relationships are in place or are being established in all the LRCs visited. The usual model is for one of the partner organisations to provide for the management of the LRC within its own structures. The partnership aspects are catered for by the inclusion of partner organisations in Steering Committees or Liaison Groups. These Steering Committees have influence over the policy and business direction of the LRCs but do not have direct executive control over their management. Partners that fund the LRC usually require a SLA that defines what they can expect in return for their financial support. There is a risk that LRCs are not perceived to be independent of their host organisation. The task of managing the potential tension between the partners tends to fall on the LRC manager.

5.5   The alternative to embedding the LRC within a host organisation, would be to set it up as a free standing legal entity. While this model would replicate the partnership at a local level, it would also deny LRCs much of the management support that they currently get from their host organisations.   While such a model may be appropriate in some circumstances, it is not recommended as the norm. There is, however, scope to formalise the partnership at local level through the development of a suitable Framework Document that defines the role of the LRC and the part played by each of its partners. Such a document would be used to generate long term commitment to the LRC from each of the partners and would help to demonstrate the independence of the information and services provided by the Centre.   The Framework

Document would set down the formal representation on the Steering Committee of the partner organisations.

5 6   It is **recommended** that Framework Documents are developed for the LRCs acting as the model offices for the NBN   The scope and content of such a Framework Document is given at Appendix A

Managing Quality

5 7   All the LRCs visited placed great importance on the management of quality   None has a formal Quality Management System (QMS)   However, most have documented at least some of their procedures in a form that could be embodied in a QMS   ISO 9000 defines the requirements for a QMS that would qualify for accreditation under this international standard   ISO 9000 is the international standard for quality management   The benefits for an organisation to seek accreditation include:

- Increasing the credibility of the data and services will increase their value and therefore increase the price that users are prepared to pay;

- Organisations using the data and services provided through the NBN will know that they come from a trusted source;

- If they themselves have ISO 9000 accreditation they can accept inputs from outside bodies that are similarly accredited without needing to check the validity and accuracy of each input

5 8   The attainment of ISO 9000 accreditation should be the longer term objective for LRCs, either in their own right or through having their structures and procedures included within the scope of the QMS for the accreditation of the host organisation.

5 9   In order to meet the requirements for ISO 9000 accreditation it will be necessary for the LRC to

- Set up a clear quality management structure in which the LRC Manager is accountable to senior line management[3] for the quality of all aspects of the LRC's work,

- Document the working procedures of the LRC;

- Set up procedures so that incoming records come from 'trusted sources' and are assured to a defined quality standard;

- Implement the procedures with a clear audit trail;

- Expose the implementation of the QMS and the application of procedures to external audit.

5.10   It is **recommended** that the LRCs selected to act as model offices should document their working practices to meet ISO 9000 standards.

5 11   More problematic will be the assurance of incoming records. It will, for example, be necessary to demonstrate that all records have been appropriately validated and that they have been collected using a valid survey method. At the present time LRC managers largely rely on their informal assessment of each taxon specialist. For the more popular taxa, there are well defined procedures for the acceptance of records by the National Recording Schemes. To demonstrate

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[3] Where a LRC is within a host organisation this would be the LRC managers line manager in that organisation. For an LRC that is within a charity a senior officer should have responsibility for the implementation of the QMS.

that a record comes from a trusted source it will be necessary for the LRC to prove that it has been validated to an appropriate national standard. Establishing a suite of such standards is a matter for the NBN as a whole.

5 12   It is therefore **recommended** that the NBN initiate discussions with selected National Recording Schemes[4] and relevant co-ordinating bodies, such as the Institute for Ecology and Environmental Management (IEEM), with a view to providing consistent advice to local taxon specialists and LRCs in a form that can be added to the LRC manual of procedures.

National co-ordination of LRCs

5 13   There are a number of issues that would be best solved by the NBN as a whole. These include.

- The development of a national policy on the sharing of data between LRCs and between local and national databases;

- The implementation of data management standards to ensure that data means the same thing to all its potential users;

- Implementing software version control and communications standards for the network as a whole

5.14   It is **recommended** that the NBN should develop and promulgate policies on these matters and that all LRCs should formally commit in their Framework Documents to implement the resulting policies.

Mobilising the Recorder Network

5.15   The National Recording Schemes, through their local groups, have a key part to play in getting voluntary local recorders going. LRCs can and in some cases already do, support the recruiting of specialist recorders   Although their contribution is voluntary, it will be necessary to include this aspect of resourcing in the annual round of business planning   When LRCs set their objectives for developing the scope in terms of taxa and geographical coverage and the accuracy or relevance of the their databases, they should use manpower planning techniques to convert the volume of new records into recorder effort.   By matching required effort with the available resources, it should be possible to develop plans for:

- Recruiting, in association with the specialist interest groups, new volunteer recorders;

- Making use of semi-professional recorders (e.g. rangers and other conservation professionals);

- Training in identification and survey skills;

- IT training and support;

- Assisting recorders with their own projects and in the publication of their own work.

5.16   It is **recommended** that LRCs use manpower planning techniques to forecast the long term requirement for recorder effort and that they initiate plans to ensure that there is adequate input of new recorders for the relevant taxa.

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[4] Possible candidates are BSBI, the Mammal Society and Butterfly Conservation.

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5 17   It is further **recommended** that the NBN builds on existing initiatives to co-ordinate the national provision of training both in identification and survey skills and in the procedures for the validation of records agreed with the National Recording Schemes

National Training for LRC Managers

5.18   LRCs often struggle with inadequate funding and ambiguous organisation structures These pressures together with the range of managerial, technical and scientific skills place great demands on LRC staff for which they are not adequately prepared. The implementation of the NBN will depend to a great extent on the managerial skills of LRC managers. Taking some policy matters up to national level can relieve some of the pressure, as will the adoption of a formal Framework Document. However, it will still be down to the LRC manager to promote the relationships between staff of the various partner organisations and to motivate the volunteer recorders.

5 19   It is **recommended** that a national programme should be set up for training in LRC management skills including.

   •   Business planning,

   •   Negotiating skills,

   •   Motivation of volunteer recorders,

   •   Building effective local partnerships;

   •   Public relations.

5 20   The Investors in People (IiP) initiative could be used to develop a consistent standard for the diagnosis and implementation of training for all aspects of work carried out within LRCs

6.   SUGGESTED PROGRAMME OF WORK FOR STAGE 2

6 1   In order to develop the model office it will be necessary to select up to three LRCs willing to devote the effort needed to develop and document their procedures. The 'model office' LRCs and their host organisations should also be willing to assist in the promulgation of these procedures through:

   •   Documenting procedures after they have been proven, in a form that can be used by other LRCs,

   •   Collaboration in the writing of a publicity leaflet describing the model office;

   •   Accepting staff from other LRCs to work with them in order to see the procedures in action;

   •   Presenting the procedures to any management training courses arranged for LRC managers,

   •   Visiting other LRCs and counselling their managers and staff on the development of procedures;

   •   Providing telephone help and mentoring support for other LRC managers

6 2   The programme of work for Stage 2: Development of Model Office Procedures is as follows

- Select the 'model offices',

- Identify up to three National Recording Schemes known to have some professional staff, well developed and documented validation and data quality management procedures and already give training in survey methods and identification;

- Visit officials of these National Recording Schemes to obtain their agreement in principle to the establishment of a quality management policy for the NBN as a whole;[5]

- Develop a QMS for the 'model offices' integrating as appropriate the procedures specified by National Recording Schemes;

- Build a draft procedures manual (the proposed content of this procedures manual is given at Appendix B) based on examples of material collected during Stage 1;

- Review this procedures manual with the managers of the 'model offices';

- Allocate responsibility for developing each part of the procedures manual;[6]

- Draft procedures and test in one office;

- Bring all the parts of the procedure manual together and test in all three 'model offices';

- Revise draft;

- Develop material to explain the model office approach to other LRCs and to the NBN partnership.

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[5] The requirement for external audit may be a sensitive issue. Under ISO 9000, there would be no need to audit a data suppliers' procedures if that supplier was itself accredited to ISO 9000.

[6] It is expected that each 'model office' will have responsibility for part of the manual, but this arrangement requires agreement that there should be a common design for the NBN as a whole. It would therefore be necessary to reach agreement with, for example BRISC or Gloucestershire Environmental Data Unit, that their work should be subsumed into this project.

APPENDICES

A.   Examples of Policies and Procedures

LOCAL RECORD CENTRE FRAMEWORK DOCUMENT

Each Local Record Centre (LRC) should have a single document that describes the status, structures and operating arrangements of the Centre. This document will be used to describe the structure and responsibilities of the LRC to existing, and potential future, funders and can be used in support of a bid for accreditation to the National Biodiversity Network (NBN). The Framework Document should describe the structural arrangements for ensuring that the LRC.

- acts as an unbiased source of biological data;

- conforms to NBN standards;

- is responsive to its data suppliers and to its customers;

- soundly managed;

- accountable for its business and financial performance.

The Framework Document should have the following headings:

Status and accountability

Status - (e g company limited by guarantee, registered charity, branch within a local authority division, branch within a museum (give also status of museum), branch within a county wildlife trust (identify whether within the registered charity or associated trading company))

Role of Chair of Management Board - describe the role and authority of the Chair of the LRC Management Board. Does he or she have a line management relationship with the LRC Manager (e g as the line manager in the host organisation)

Role of the LRC Manager - describe the role and authority of the LRC Manager.

e.g.   Formulating and proposing the strategic direction of the LRC.

Implementing the LRC Business Plan and achieving the LRC key targets.

Managing LRC resources efficiently and effectively.

Delivering an agreed range of services to LRC customers.

Ensuring that there are adequate arrangements for consulting with data suppliers and users

Monitoring, advising and reporting to the LRC Management Board and other bodies (to be specified).

Accountability - describe the accountability of the Chair of the LRC Management Board (e.g. is he or she accountable to the elected officers of a local authority or the trustees of a registered charity.

Relationship with the NBN - describe the relationship with the NBN. (e.g. LRC accredited by the NBN, together with any conditions that are attached to that accreditation).

Functions, aims and objectives

Functions - list the functions of the NBN

Aim - describe in one sentence the aim of the LRC.

Objectives - describe the standing objectives of the LRC. (Note: the Business Plan will describe the dynamic or project based objectives of the LRC and will quantify the performance indicators for assessing success.)

LRC organisation

Describe the organisation, physical location and geographic coverage of the LRC. Include any remote satellite activities (e g data input or record verification) run by volunteers or by the staff of other organisations.

Planning, Tasking and Resourcing

Planning - describe the arrangements for the construction and approval of the Business Plan, including the planning cycle, plan horizon and relationship, if any, with other plans (e.g. the Local Biodiversity Action Plan or Host Organisation Business Plan).

Tasking - describe how the LRC Manager and any other LRC staff, including volunteers in satellites, are tasked

Resourcing - describe the principal sources of finance for the LRC, including

   grant aid (under Service Level Agreement).

   donations.

   funds allocated by host organisation.

   support in kind (e g office space and supporting services).

   fee income.

Performance Evaluation

Key Targets and Performance Measurement - describe how targets will be set for the LRC and how they will be monitored.

Performance Indicators - list the primary indicators of performance for the LRC These could for example cover.

   scope, currency and completeness of the database.

   implementation of major projects.

   achievement of quality standards (e.g. full accreditation to the NBN).

   provision of agreed levels of data and service to users.

   financial performance and efficiency measures.

Reporting and Financial Audit

Reporting and Accounts - describe the accounting regime (e g. accounting under Companies Act rules, full cost accounting within host organisation, cost centre accounting for direct costs only etc)

Audit arrangements - describe the internal and external audit arrangements for the LRC accounts

Personnel, Pay and Training

Status and conditions of employment - describe the status and conditions of employment for

> full-time staff of the LRC

> staff of other organisations seconded to the LRC

> paid or unpaid staff under government 'job creation' schemes.

> volunteers working within the LRC

Personnel management - describe the arrangements for the personnel management of LRC staff, including staff development, performance appraisal and training.

Pay - indicate any local or national pay and grading systems that apply to LRC staff.

Review of the Framework Document

It is suggested that the Framework Document should be reviewed every five years or whenever there is a significant change in the role or organisation of the LRC.

Annexes

Annexes should give the composition and terms of reference of the following groups and committees·

> LRC Management Committee

> Customer Advisory Committee

> Biological Recording Policy Committee

> Data Supplier Forum

> Software User Groups (one for each major software application supported by the LRC)

B.   Content of Procedures Manual

Policies and Procedures

LRC Context

Quality Assurance

IEEM Code of Conduct

Expertise / Recruitment

Training for new staff

Finance

Products and Services

>   All known information about a site / area

>   Information on important aspects of a site / area

>   Information about a species in a local context

>   Planning   Development Control responses

>   Forward Planning alert maps / updates

Business Planning and Setting of Priorities

Information management

Information needs assessment.

Priorities for data gathering

>   Habitats (BAP)

>   Species (BAP, Notables)

>   Identification of gaps in geographic recording coverage (BAP)

>   Identification of gaps in scope of taxa recording

>   Habitat re-survey frequency (for each major Habitat type)

>>   e.g. Grassland 5 years, Woodland 20 years)

Priorities for computerisation of data

>   Species (Notables, Age of records)

>   Habitats (Age of records) .

>   Literature records

>   Museum / Herbarium searches

Resource planning.

Data Collection and Recording Policies

Assessing available data

Sources to check

Public involvement in data gathering (specific projects)

Defining Sites

        Boundaries (Paper maps, GIS)

        Subs-sites / habitat partitions

        Second tier site (County Wildlife Site, SNCI, SINC) - selection criteria

        Locally Notable species - selection criteria

Habitat classification system / verification

        Quality assurance / guarantee of accuracy

Species identification / determination

        Selection of determiners

        Use of reference collections

        Dispute procedures

        Abundance measures

        Quality assurance / guarantee of accuracy

Recording standards

Survey / sampling methods   (Institute of Ecology and Environmental Management

                              Accreditation of Surveys)

Data standards

        Minimum content of site records

        Minimum content of species records

        Grid reference guidance

Voucher specimen collecting (plants / invertebrates)

Motivation for data providers

        Help with purchase of computers

        Training and technical support

        Meeting room / photocopy facilities / secretarial support

        Local recording cards

        Land ownership information for surveyors

Distribution mapping

Assistance with publications

Atlases, local RDBs, BAPs

Management advice to landowners / managers

Data Management / Processing

Setting data processing priorities in accordance with plans for information management.

Register of datasets

Changes in taxonomic classification / names (lumps and splits)

Integrity of data

Species / Habitats

Verification of data entry

Guarantee of accuracy

Quality Assurance

Legal Ownership

Copyright / Intellectual Property Rights (Collector or commissioner of survey)

Rights of access to land

If no permission to survey or to use records, no point in doing the survey

Moral right of ownership

Liabilities

Elimination of duplicate records

Security of data against loss

Hard copy - Species / Site records

Backup and off-site archive. Fire alarms

Software

Recorder

NBN Collect / Collate Software

Uses of GIS

Other databases / spreadsheets

Data exchange with

Satellites

Other NBN centres

Non NBN centres

Agreements

Data Provision

Data supply policy

Access to data

Security to prevent unauthorised access

Computer room security. Log-on names / passwords

Freedom of Access to Environmental Information

Confidentiality

Fears

Loss of control of data

Copyright issues

Commercial   Loss of revenue from potential sale of data related services

Damage to wildlife / environment

(Badgers, Bats, Breeding Birds, Rare Plants)

Species / Records

Landowners

Restrictions / limitations on release of information / use of data

If unreasonable restrictions, no point in having records

Data Protection Act

Public access to information

Guidance on restrictions

Publications (Atlases, local RDBs)

Mechanisms / Methods /Media for enquiry and response

Search / information request forms

Standard report forms

Validation of output

Target maximum time to respond (10 days)

Charging Policy

Data extraction /searches and reporting (hourly rate). No charge for the data itself.

Service Level Agreements

Categories of user - free of charge

Natural Historians, Individual Conservationists, Voluntary Recorders, Natural History Societies, Taxon Specialist Groups, Wildlife Trust, Landowners, Farmers, Research and Education Establishments, General Public, National Park.

Categories of user - charged (Commercial gain)

Local Authorities, English Nature, Environment Agency, RSPB, Environmental Consultants, Developers, Water Utilities, National Trust, Forestry Authority, Farming and Rural Conservation Agency.

Scales of charges

Acknowledgement of ownership of records used in reports

Feedback to suppliers of data