

**WILDLIFE INFORMATION
AT YOUR FINGERTIPS**

**THURSDAY 27 JULY 2000
EDINBURGH**



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CONFERENCE REPORT

WILDLIFE INFORMATION AT YOUR FINGERTIPS
Generating data solutions through Local Record Centres
Thursday 27 July 2000
Royal Botanic Garden, Edinburgh

INTRODUCTION

This report is the summary of the 'Wildlife Information at Your Fingertips' conference, held on Thursday 27 July at the Royal Botanic Garden, Edinburgh. The conference was organised as part of the National Biodiversity Network's (NBN) Linking Local Record Centres project, and targeted at those who use biological information or work with or in a Local Record Centre (LRC).

Through a series of presentations and open discussion, the conference provided an overview of the NBN and Linking LRCs project. This was followed by a more detailed look at the range of products and services an LRC can deliver to a wide range of users, and the process of setting up a Local Record Centre.

The accounts in this report represent the views of the speakers and delegates and should not be regarded as the views or policies of the NBN.

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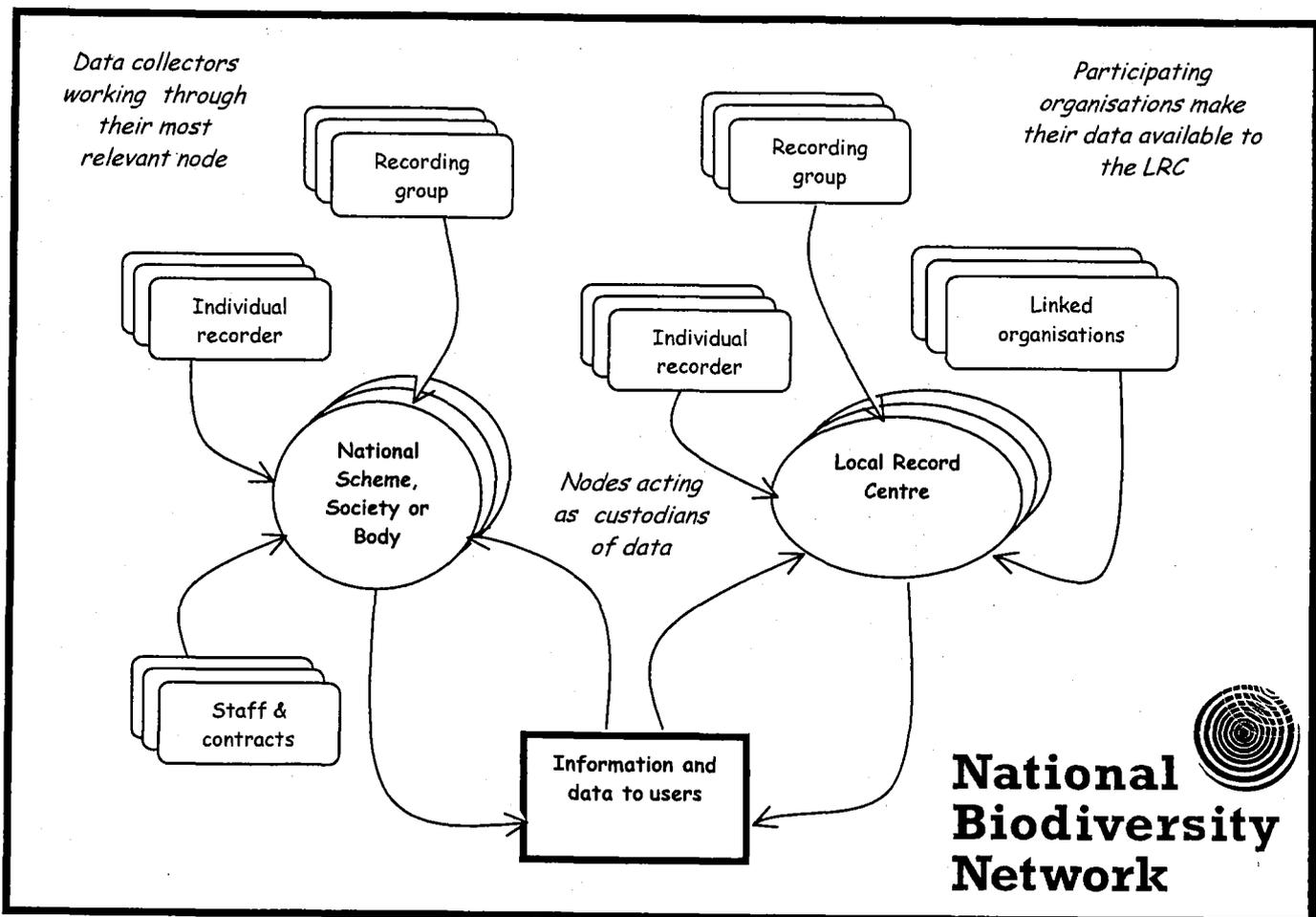
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WILDLIFE INFORMATION AT YOUR FINGERTIPS - FACT OR FICTION?

Sara Hawkswell, The Wildlife Trusts

The National Biodiversity Network (NBN) should ensure more sharing of information which, in turn should mean an increased transparency in decision-making processes. Instead of debating the value of a site or the distribution of a species the discussion can turn to what action should be taken as a result of the information. Obviously of critical importance is the better use of scarce resources; not just money but in particular special skills such as those held by taxonomic experts or professional data managers. Perhaps most exciting is the prospect of getting more out of existing data sources. By increasing their accessibility and making them more useable it should be possible to bring data sets together, to analyse them in new, inventive ways.

But what is the NBN? First and foremost it is a network of 'data custodians' all working to agreed standards and cooperating to give a complete picture of the UK's biodiversity. Collectively they can provide easy access to data, when and where it is needed, and ensure that data collection is carried out to meet current and future users' needs. The NBN is simply a concept, and one with many players.



Once the NBN is established it will provide access to data collected by others. There will be an increase in quality of data – or at least the quality will be known – and there will be clear ways of accessing data, using known terms and conditions through a single contact point. As well as increasing the availability of relevant data, resources can be shared, therefore maximising benefits to wildlife and people.

This portrays the NBN as a cooperative venture between many players, so where does the NBN

Trust fit in? The NBN Trust is a newly formed company (currently seeking charitable status). Members are organisations involved in collecting and using biodiversity information. The NBN Trust's sole objective is to facilitate the development of the network. To do this it will encourage others to work towards an NBN and will coordinate this work. In some instances it may develop tools to ensure the network develops.

There are two key components to the development of the NBN: standards and tools so the network functions as a network; and linking in data custodians, so there is some data in the network!

Work on standards and tools already underway includes reference dictionaries - habitats and species; technical data standards; Recorder 2000; access terms; accreditation schemes; and the NBN Index and Gateway to data held by custodians. Work on linking data custodians mainly falls into three categories: national recording schemes; national conservation bodies (eg SNH, RSPB); and Local Record Centres.

Progress with linking LRCs includes guidance already produced on 'Developing an LRC', helping local partners go through the process of establishing or further developing LRCs. 'Guidance on Running an LRC' is currently being developed through work with a series of demonstration LRCs. Three pilot LRCs are also being established; managers for these LRCs are in post and starting work, following detailed LRC development plans. Work also includes promoting the role of LRCs to potential users and participants and providing advice and support for existing and developing LRCs.

Although still in early stages, all this activity is making steady progress towards the vision of the NBN becoming a reality. It won't be long before the concept of having wildlife information at your fingertips will be fact, not fiction

THE ROLE AND FUNCTION OF LOCAL RECORD CENTRES WITHIN THE NBN

Alan Cameron, The Wildlife Trusts

The Linking LRCs project has been working to develop a model describing the activities and role of LRCs working within the National Biodiversity Network (NBN). It has established a number of outline principles governing the function of LRCs operating as fully integrated NBN nodes. Such LRCs will differ from many existing LRCs in their role and functions.

Functions

LRCs will become the primary calling place for all requests for biodiversity data in their area. They will not necessarily hold all local data but they will be experts on its availability. In addition, LRCs operating within the NBN will be able to send and receive data. Through receiving data from other custodians (other LRCs, national recording schemes etc) they will be able to put local data into its wider context. Through contributing data to the wider network, other data users, such as government and the country agencies, will be able to build a composite picture.

It is proposed that LRCs within the NBN will act as the focus for biological record management in their area and will provide easy access to data for all local users. However, data on biodiversity is often complex to interpret and use, and it is the key task of LRCs to generate useful products and services through processing and analysing their data holdings. Some products may be standard outputs such as site species lists and distribution maps, or more complex queries. Services provided may range from simple searches for protected species records to providing local ecological profiles for conservation planning or assessing planning applications against agreed criteria. It is not envisaged that any LRCs working within the NBN will offer advice on decisions requiring assessment of conflicting values; they will simply provide factual information equally to all parties. In addition to managing data and offering products and services, LRCs will provide related support

services to their users. These may consist of advice on survey methodologies and data standards, or contacts with local species experts. The assessment of need is at the heart of LRC functions, and giving advice on users' exact requirements must be part of services provided. Handling spatial and ecological data is a time-consuming and complex activity and most organisations do not have the staff or resources to manage their data properly. Providing professional information management and advice enables an LRC's users to focus on their priorities.

Without comprehensive and up-to-date data holdings of known quality, an LRC will not be able to carry out the activities described above; data input is critical to LRC functioning. As locally based operations, LRCs are in an ideal position to identify data gaps, to seek new data sources and to work with users to prioritise survey work. Relationships with local recorders are therefore crucial and LRCs will need to build high quality support services for amateur naturalists working in their area.

Role

LRCs will form the backbone of the NBN. The NBN presents a fantastic resource of specialised data sets, agency data, standard dictionaries and other data management tools, but without LRCs it will remain a shell. Complete geographical coverage will be essential in order to provide full contextual information for all data held.

A stable and growing NBN will require individual LRCs to be stable entities. Such stability can only be delivered through developing public and political support and a secure funding base. LRCs must cover an area that is large enough to deliver the resources required to provide a high quality, professional information management service which its users will pay for. Only their users will pay for services and these users will only pay for what they need. Partnerships of users with shared needs provide the rational foundation for developing efficient, reliable and responsive services. It is important to involve data collectors in these partnerships. The goodwill, energy, enthusiasm and expertise of amateur recorders must be supported through equal partnership working. The Linking LRCs project has issued guidance on 'Developing a Local Record Centre', which describes the individual stages of the development planning process in detail.

Everyone has a role to play in making the NBN a reality and in ensuring that it becomes more than the sum of its parts. Its success will be judged on the ability of practitioners to seize the opportunities it presents.

The NBN undoubtedly provides a timely and effective tool to meet a definite and growing need for better information, through partnership working, with sharing at its heart.

HOW DOES AN LRC REALLY WORK?

William Penrice, Fife Nature

Across the UK the most successful LRCs have a number of features in common:

- Professional approach
- Clear and unique identity
- Clear, documented remit
- Clear and strong management structure
- Forward planning of work and strategy
- Evidence based approach showing what is needed by the user
- Customer based approach servicing users as well as collecting data

The objective of Fife Nature is 'to provide a quality biological information service for Fife'. The records centre does not exist to conserve species or habitats. It provides quality information to allow others to do that more effectively – informed decision-making is the key to effective practical

nature conservation. The records centre is concerned with data management, filling gaps in data, ensuring key products are delivered and analysing and querying data to defined criteria.

Fife Nature is a part of Fife Council and planning service, and is responsible for the management of the LRC. There is also a liaison group with representatives from other stakeholder organisations and an official recorders group which advises on biological recording.

Species data is held on Recorder 3.3, Access and custom databases; habitat data is held on Access and ArcView GIS layers; and site information is held on ArcView GIS layers – products are then produced through ArcView. There is considerable time involved in incorporating data and so data is only included if there is a genuine customer requirement, if it is cost-effective to do so, or there is added value brought to other data sets.

Data suppliers

- Amateur recorders – people undertaking surveys outside their profession as volunteers are the backbone of most records centres. There tends to be a wide range of ability, but most stick to the species groups on which they are experts. All validation of records is undertaken by amateur species recorders.
- Public surveys – these are not generally useful as a data gathering exercise. They are not usually cost-effective and the coverage is variable and unknown. However, they can be useful as a first trawl for key species and are important as a public awareness exercise for Fife Council and getting people interested in recording.
- Professional surveyors – surveys by professionals (eg ranger services, contractors, SNH staff) can also be of variable quality. The surveys are usually very specific and are generally tailored to site management or site contexting.
- Contractors – Fife Nature makes extensive use of contractors for certain types of work. For example the work may be dull and volunteers will not do it, commercial skills may be required or significant control may be needed over the outcomes (eg Phase 1 and National Vegetation Classification (NVC) habitat surveying, species populations and baseline surveys of sites). Contractors will achieve very specific objectives and timescales, as a project can be tightly defined. In some instances they will represent better value than a public survey and professionally collected data strikes a chord with some users (eg planners facing a public inquiry). However, contractors are not always an easy option since they require significant management and quality checking. Ideally, records centres should not employ surveyors – much work undertaken by volunteers is excellent quality and commercially valuable. It is unfair to pay one person while not another and it also potentially devalues volunteer work. However, practically, there are insufficient volunteers to do everything, key customers require certain data sets immediately and continued funding relies solely on deliverables.
- Other organisations – some organisations (eg SNH, SEPA, Scottish Wildlife Trust) have large quantities of data. The data can be of variable quality and it is rarely validated, but most is excellent. However, the information is rarely managed effectively and an LRC can perform a useful service managing such data.

Centre users

The two key users of Fife Nature are Fife Council and SNH. They require the best possible management of Fife Nature to ensure that it is sustainable, cost-effective and maintains a focus on the work undertaken. This will help justify the funding commitment. Management is undertaken through a number of mechanisms: 3 year business plan; yearly work programme; 6 monthly review; monthly priorities review; auditable accounts; key performance indicators and annual European

Foundation for Quality Management (EFQM) assessment. These measures appear to be bureaucratic, getting in the way of 'real' work, and stifling productivity. However, in reality such measures have tended to secure funding (core and other sources), promote genuine efficiency and generate management and political awareness of achievements.

Products and services

Customers do not pay for data or information. They pay for the core time required to collate information, the time required to service their request, updates of information and the extra information added to the raw data ('added value'). Most users request habitat information and notable species lists for sites.

Fife Nature holds context, status and distribution information for over 10,000 species. Detailed information (supported by records) is held for 4,000 species. Currently, over 400,000 records are held by Fife Nature – the number of records held has increased considerably since a full time data manager was employed.

Future direction

The availability of Recorder 2000 presents an opportunity for Fife Nature to review its data management. It will enable links with recorders to be improved, simplifying the establishment of written agreements with satellite recorders. Being a node in the NBN will also become a reality.

Future funding is likely to be linked to NBN accreditation at some level and achieving this is going to be very important, particularly within local authorities. External accreditation can demonstrate efficiency and nationally agreed standards 'guaranteeing' Fife Nature's product. The guidelines and exchange of ideas produced by the NBN are also important for further development.

In the future, there will be more emphasis on desktop products allowing organisations such as SNH to access information directly. The aim will be to extend and improve the current range of desktop products available with more focus on customer requirements. Desktop products make the user feel more in control and mean that they can have unlimited access at a fixed and fair price. It also means that there is a lower demand on the records centre and makes workloads easier to manage. There will also be more web-based products so that basic information is available free to the public.

Fife Nature's underlying strategy is continuous, structured review leading to improvement, increased customer responsiveness and flexibility to change with the times where necessary.

THE MULTIPLE LOCAL USES OF BIODIVERSITY INFORMATION

Malcolm Muir, South Lanarkshire Council

The collection of information on biodiversity through biological recording has a long and noble history and remains one of the last bastions of amateur, observational science. However, the problem of how to maintain the earth's biodiversity, based on an understanding of principles, remains with us today. Despite three centuries of effort and vast amounts of data, little can actually be used to plan, assess and monitor remedial action. Understanding living systems and their underlying principles requires the testing of hypotheses based on selecting a manageable number of controlled variables. Meanwhile, extinction rates accelerate.

Agriculture is the controlling land management factor over vast areas of Scotland and the administration of subsidies is the single largest influence on biodiversity. Despite a low level of interest from urban dwellers and massive institutional inertia, there are glimmers of hope for improvements in review of the Common Agriculture Policy and in the new Rural Stewardship Scheme.

Second to agriculture, the ground management and planning functions of local authorities probably constitute the next most important factors influencing Scotland's biodiversity. Urban habitats and other land over which local authorities retain control are often right under the noses of the majority of voters, and there is tremendous potential for developing education, awareness and participation. The biodiversity value of urban habitats is often overlooked and undervalued, yet actions to conserve and enhance urban biodiversity present clear options for redirecting effort and resources under initiatives such as Local Agenda 21 or through requirements such as 'best value'.

Local authorities certainly have responsibilities, through guidance, legislation and wider government policies, to take nature conservation into account. However, there are few, if any, statutory requirements relating specifically to local authorities and the natural heritage. There is a lack of scientific expertise and understanding, and an entrenched resistance to change in some quarters, which can lead to a degree of defensiveness.

There are a number of things that need to be done in order to ensure that local authorities can fulfil their potential role. These include: demonstrating the many links between biodiversity and social and economic objectives; understanding the social and economic factors contributing to biodiversity loss; using high quality information in decision-making; devising prescriptions and setting targets. All of these requirements are embodied within Biodiversity Action Planning. Land designations and protective legislation are not enough on their own; properly supported, Local Biodiversity Action Plans (LBAPs) will deliver.

The implementation of LBAPs will stand or fall on the quality of information available. The data required falls into a number of categories. Comprehensive historical records are needed during the audit stage when past distributions and trends may be discerned. It is this audit stage which often highlights the very limited taxonomic range of much collected data. It is critical that specialist recording is ongoing; such recording can identify changes that might otherwise go unnoticed but it is unsuitable on its own for monitoring the implementation of LBAPs. Specialist recording demands high levels of expertise and dedication, both of which are in decline. Biodiversity Action Planning requires functional indicators of habitat quality drawn from a range of taxa. It requires the targeting of recording effort at easily identified, highly visible and not necessarily rare, species. Above all, an LBAP requires a programme of systematic recording effort and associated data analysis. This may indicate a need for targeted, commissioned recording but there is certainly great potential for involving a far wider cross section of the community in gathering biological records. Community involvement can provide a clear social and economic rationale for recording and help to build a valid methodology for measuring sustainability. Conservation can be advanced, costs and benefits can be assessed and the case for supporting good information collection and analysis can be strengthened.

The task is urgent. If we cannot harness our remaining expertise and enthusiasm to practical targets and effective action, there will be precious little left to record and store in our record centres.

THE NORTH EAST PILOT – SETTING UP AN LRC

Ian Francis, Royal Society for the Protection of Birds (RSPB)

Background

The North East of Scotland pilot LRC covers a large geographical area within which there has been a great deal of amateur recording and professional biological work. It contains many centres of research and academic excellence, particularly in the fields of land use and the earth sciences. As a consequence there is a substantial population of scientific experts resident in the area. However, there has never been a centre for the collection and management of biological records in North East

Scotland. The UNCED conference in Rio in 1992 and the drawing up of the UK Biodiversity Action Plan added the impetus needed to improve the situation, and it was the Local Biodiversity Action Plan (LBAP) partners who decided to bid to be a pilot Local Record Centre within the National Biodiversity Network (NBN).

Need

The audit of species and habitats, which constituted the first stages of the biodiversity planning process, uncovered a situation where it was found that biological records were highly disparate and disorganised. Despite it being clear that the region is important for various habitats, particularly native pinewoods and raised bogs, it was found to be difficult to collate any available habitats information, and that the situation for species was even worse. There was clearly a strong case for establishing a much improved mechanism for managing data. It was also recognised that information is not static and that an ongoing system that could capture new data was required. Other attributes of the improved system were determined: these included a capacity to identify data gaps; the provision of a single contact point; the ability to recognise outdated material and the capacity to use information technology to promote data sharing.

Process

The development of a plan for establishing an LRC in NE Scotland has been a long process, which started in September 1997. The application to the NBN was approved in October and the process started in earnest in February 1998 with the appointment of an LRC support officer. Interviews with potential users, various workshops and a Biological Recorders' Open Day were held between April and September 1998. The workshops had focused on a number of issues including the needs of users and suppliers, the proposed LRC's methods of operation and on funding arrangements; a reasonably clear picture was obtained for most sectors with a high level of support much in evidence. The first full draft of the development plan, setting out the LRC's purpose, services, organisational structure, resource requirements and an outline plan of actions was completed in October that year. However, getting agreement on all points was not easy and took considerable time to negotiate. It was agreed that the LRC would initially be established as part of Aberdeenshire Council rather than as an independent company. In this way NE Scotland would be piloting a different approach from other pilot LRCs within the NBN.

Current position/outline/principles/establishment

At present the Scottish Wildlife Trust, the RSPB, Aberdeenshire Council and Scottish Natural Heritage are actively supporting the establishment of the LRC, with the University of Aberdeen supplying accommodation. A manager is now in post and establishment activities are well underway. There is a reasonable degree of consensus within the partnership and the development plan sets out a clear way forward.

Partnerships

It is evident that there is a great deal of variation in expectations and commitment within the wider partnership involved in the LRC. A major division is that between the providers and users of biological data, with users tending to be rather more enthusiastic and suppliers perhaps needing to be convinced of what the LRC can offer them.

It is possible to divide the organisations in the wider partnership into four categories. These are:
The Philanthropists, who see the LRC as having virtue in its own right, with clear benefits for wildlife

The Pragmatists, who recognise the potential for increased efficiency and cost savings

The Exploiters, who recognise the benefits but are not necessarily interested in contributing

The Cautious Watchers, who see the LRC as a good idea but remain unsure of the benefits to themselves or the constraints under which they operate

Lessons

The pilot has demonstrated that in order to develop a firm base it is essential to pursue inclusiveness and to consult throughout. It is for these reasons that it seems unavoidable that planning will be a long-term process. Developing an LRC is a complex task and there are considerable calls on staff time.

Funding an LRC is not inexpensive and there is a need for short-term pump priming to permit the initial development and establishment activities to take place. Securing long-term funding is an issue that all LRCs must face. It is also inevitable that as more LRCs are established there will be a greater total demand for resources.

Elements of cynicism are still heard; there are those who think that either they can manage without good information, or that somehow they will get the information anyway when the 'chips are down'. However, the pilot has demonstrated that these beliefs display a lack of understanding of the need to work in partnership. Ultimately nearly all users of biological information are 'persuadable', and the case for LRCs is strong.

While recognising that it is a complex task to establish a record centre it is important to set out clear objectives and to deliver a straightforward message. In the final analysis what is needed to secure the pilot and other LRCs is the will and the development of supportive policies at the highest possible levels.

FINDING DATA SOLUTIONS THROUGH NETWORKED LRCS

Stuart Ball, Joint Nature Conservation Committee (JNCC)

Data collected in the field needs to be captured and put into a machine-readable form so that it can be used. It then needs to be sent to a collation point, and analysed and interpreted, since raw data is rarely used. Once suitable for use, data (or information) can then be accessed by the user. The final step in the process of biodiversity information collection and use is a review of survey needs, to determine if the data required is being collected.

The National Biodiversity Network (NBN) has been developing tools that contribute to this process. Recorder 2000 is a piece of software that is responsible for the capture and collation of biodiversity data. The NBN Gateway project will provide a mechanism for accessing or viewing data.

Recorder 2000

- Recorder 2000 is a Windows software providing a rapid, customisable data capture mechanism. For example data entry windows can be designed so that they reproduce species recording cards
- It uses maps to obtain grid references and site information
- It will produce simple distribution maps, although it may still be better to export to a mapping package such as DMap
- It will produce simple reports, although information can also be exported to word processing packages
- Data exchange is in the NBN transfer format – XML (eXtensible Mark-up Language). Data can be exported to a text file and can be imported without concern of overwriting existing data – each record has a unique identifier and it will give a warning if you are importing the same data twice

The CDs for Recorder 2000 are now being printed and should soon be available through approved resellers. The recommended retail price will be £100 for a single user licence and £30 for a satellite

user licence. For this you will get:

- Stand-alone or network server installation
- Recorder 3.3 update to allow export of existing data
- Documentation and Getting Started Guide on CD
- 30 days 'warranty' support to ensure the software is installed and running properly

Consultation has shown that potential users did not want the cost of the software and support bundled together. Therefore subsequent support and training will be provided by the approved resellers and it will be up to the users to negotiate with the reseller. JNCC will not be responsible for support, although the NBN web site will provide responses to frequently asked questions, updates and a forum.

Satellite users will receive their copy of the software from the holder of the main licence (single user licence). For example an LRC may buy a number of licences for recorders from the approved reseller. The LRC will then be responsible for providing the recorders with support.

Recorder 2000 will not have a direct connection to Geographic Position Systems, although it could be a useful addition.

The NBN Gateway

The Gateway will provide web-based access to data. There will be different levels of access for different users. Work is progressing with developing the Gateway and it currently includes a few trial data sets.

Having logged into the Gateway it is possible to select information on a site, for example a SSSI in Wales. The central search engine will give a list of products available for the site, such as the location of species records and the designation of the species. It is then possible to find information on those species, for example synonyms from the species dictionary.

The Gateway demonstrated is a trial site and will soon be available live on the web (www.searchnbn.net). This will be accessible to the public, but a login will be needed to access some areas. NBN Members will be provided with a login and asked to contribute to a formal consultation process.

PARTNERSHIPS – A VIEW FROM SCOTTISH NATURAL HERITAGE

Ed Mackey, Scottish Natural Heritage (SNH)

*"A partnership enables each user to meet their needs (for biodiversity information) that no single body could otherwise afford."
NBN Guidance, Developing a Local Record Centre (1999).*

SNH is involved in a number of the National Biodiversity Network (NBN) projects, directly and through representation by Joint Nature Conservation Committee (JNCC). Among these, it co-funds the 'Linking Local Record Centres' module in Scotland, working with the Scottish Local Record Centre support officer and steering groups involved in the development of Local Record Centres.

Existing LRCs in Scotland, of which some 24 have been identified, are greatly different in terms of their capacity for the curatorship and analysis of biological records. A selection of current initiatives are discussed here, to illustrate some practical lessons and as pointers to the future. These include the establishment and development of LRCs in the Shetland and the Orkney Isles, in North East Scotland and in Tayside; and working with an established LRC in Fife. The Northern Isles and North East Scotland are examples of new LRCs which are being created to fill geographical gaps in

coverage. Tayside, on the other hand, is aimed at consolidating and connecting an existing, small and fragmented LRC structure. In Fife, which is the most fully developed LRC in Scotland, a 'Service Level Agreement' (SLA) approach has been piloted to explore the business benefits of LRC-based information provision.

The Northern Isles (Orkneys and Shetlands)

The establishment of LRCs in the Orkney and Shetland Isles was initiated by European Structure Fund partnerships, and extended to other groups with wildlife interests. A positive spirit of cooperation, with a 'will to succeed', has characterised the early years. As the LRCs become operationally effective, awareness, use and confidence has grown. European Objective 1 funding was the catalyst for their establishment. Priorities now are to secure their long-term functions, for example through an SLA type approach.

North East Scotland

A development plan for the pilot LRC in NE Scotland, North East Scotland Biological Records Centre (NESBReC), has been produced. This sets out the business and service objectives for the LRC. It would be useful if, as standard practice, these could be summarised for easy reference. An example of how this might be accomplished has been provided by SNH, based on the NE Scotland pilot.

Tayside

There is considerable demand for species, habitat and site information in Tayside, not least with regard to LBAP survey and monitoring requirements. Whilst some information is held within the existing record centres, there are large gaps. Some species groups which are recorded at a national scale are not held locally. The Tayside development plan concluded that a single enhanced LRC organisation would be the most effective means of delivering requirements. A partnership to develop the LRC has not yet been formed.

Fife

Fife Nature, the LRC for Fife, was established in 1992. Between 1993 and 1997 SNH supported LRC activities through a range of projects. In 1997, an SLA was signed with Fife Nature to specify and standardise information services. In 1999 the SLA was evaluated and, proving successful, has subsequently been extended. A similar approach is being considered for Borders and Lothian LRCs.

Fife Nature has been effective in providing a one-stop-shop for otherwise dispersed data, for keeping information updated, and for matching survey to priority information needs. The data holdings, which are especially comprehensive, are properly validated and made available on GIS (ArcView) to provide rapid response to information requests. Although SNH sees Fife Nature as a cost-effective way of managing and accessing data, SNH and Fife Council are the only funding partners. Fife Nature is forging ahead with further developments aimed at extending awareness, information services and partnerships.

Lessons learnt

Improved LRCs can become a focus for natural heritage audits, such as LBAP monitoring. They can become agents for biodiversity information about a local area, and facilitate the dissemination of environmental information. More effective information services can enable local authorities and developers to utilise facts more fully in the planning and development process, for efficiency and improved natural heritage outcomes. Reduced casework loads would then enable SNH staff to focus on its primary roles of interpretation and advice.

What do we need?

A difficulty for LRCs in Scotland has been in achieving a 'critical mass' of funding partners.

Potential partners do not have a standard model to engage with LRCs. Awareness of LRC functions and potential benefits remains low. These need to be addressed, and notably through the following:

- A practical overview of LRC activities and services for Scotland, which addresses user needs
- Agreement on the size and geographical coverage of the required LRC network for Scotland
- Accreditation standards to specify and promote LRC services, endorsed by the NBN
- Simplified subscription terms to replace the legalistic and contractual SLA approach
- The summarisation of LRC objectives in development plans
- An approved pathway to HLF funding for LRC establishment and development

The future

'Nature at your Fingertips', recently produced by the NBN as a framework document for HLF grant applications, explained that the users of biodiversity information include school children, local groups, conservation bodies and local authorities. Improved access to biodiversity information through LRCs can be of benefit to education, enjoyment and environmental management in Scotland. It is thus central to the aims of sustainable development.

SUMMARY

Sara Hawkswell, The Wildlife Trusts

Several key messages came across during the day:

Partnerships

Partnerships have to be established, built up and maintained if the NBN and LRCs are to succeed. It isn't always easy to work in partnership, but it's better in the long run.

Selling messages

The NBN and partnerships wishing to develop LRCs need to sell their case to those with political influence or who hold the purse strings, but the message doesn't always get through. Perhaps new techniques need to be developed to promote the need for both wildlife information and LRCs.

Resources

Partnerships are likely to be the best source of sustainable funding for LRCs, but there are particular problems finding the capital needed to kick-start LRCs. Possible sources of finance include Heritage Lottery Fund and various European development funds.

DELEGATES LIST

Shona Allan	Renfrewshire Biological Records Centre
Stuart Ball	Joint Nature Conservation Committee
Bill Brackenridge	North Lanarkshire Biological Records Centre
Alan Cameron	The Wildlife Trusts
David Chamberlain	Botanical Society of Scotland
Alec Coles	Northumberland Wildlife Trust
Stephen Corcoran	Edinburgh Biodiversity Partnership
Joanna Drewitt	Scottish Executive Environment Group
Andrew Ferguson	North East Scotland Biological Records Centre
Ian Findlay	Scottish Wildlife Trust
Ian Frances	RSPB Scotland
Paula Fraser	Scottish Environment Protection Agency
Christine French	The Wildlife Trusts
Mary Gibby	Royal Botanic Garden Edinburgh
Helen Gray	Scottish Natural Heritage
Tim Hall	Woodland Trust Scotland
Jeanette Hall	Scottish Natural Heritage
Liz Halliwell	The Wildlife Trusts
Alison Hannah	Scottish Wildlife Trust
Matthew Hawking	South Tyneside Metropolitan Borough Council
Sara Hawkswell	The Wildlife Trusts
Steve Hunt	Scottish Borders Council
Martin Johnston	Scottish Executive Rural Affairs Department
Alister Jones	Forestry Commission
Lisa Kerslake	North & East Yorkshire Environmental Data Unit
Richard Luxmoore	National Trust for Scotland
Ian Maben	Brambles Fields
Jessie Mackay	Independent Recorder
Ed Mackey	Scottish Natural Heritage
Douglas McKean	Royal Botanic Garden
Malcolm Muir	South Lanarkshire Council
D Nicklin	Glasgow City Council
Steve Palmer	Centre for Ecology & Hydrology, Banchory
William Penrice	Fife Nature
Brigid Primrose	Scottish Natural Heritage
Fiona Rice	Aberdeenshire Council
Adam Rowe	Powys & Brecon Beacons Environmental Records Centre
Bob Saville	Lothian Wildlife Information Centre
Ro Scott	Highland Biological Recording Group
John Sheldon	West Lothian Council
Mark Simmons	Perth Museum & Art Gallery
Alastair Sommerville	Scottish Wildlife Trust
Ross Spalding	Fife Nature
Eleanor Stafford	Scottish Wildlife Trust
Nicola Strazzullo	The Wildlife Trusts
Andy Swales	Centre for Ecology & Hydrology, Earlston
Karen Taylor	Scottish Wildlife Trust
Julian Warman	Scottish Wildlife Trust
Keith Watson	Glasgow City Council
Richard Weddle	Glasgow Natural History Society
Christine Welsh	Scottish Natural Heritage
Sarah Wiseman	Cumbria Wildlife Trust

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For further information about the Linking LRCs project contact Rachel Hackett at

THE WILDLIFE TRUSTS

**The Kiln
Waterside
Mather Road
Newark
Nottinghamshire
NG24 1WT**

Tel: 01636 677 711

Fax: 01636 670 001

Email: lrc@wildlife-trusts.cix.co.uk

Or visit the NBN web site: <http://www.nbn.org.uk>

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