

**SCOTTISH  
NATURAL  
HERITAGE**



No 107

**Guidelines on Standards and Good Practice for  
Biological Recording and *Recorder* Users**

***BRISC* - Biological Recording in Scotland**

**1998**

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**Research, Survey  
and Monitoring**

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## FOREWORD

Over the last few years there have been major developments in the world of biological recording with many new users and suppliers of site and species data around the United Kingdom. The growth in the number of both Local Record Centres (LRCs) and individuals using *Recorder* is continuing apace as co-ordination of effort becomes more effective. In this context, the aim of this guide is to advise centres, both small and large, on how best to develop biological recording in general and how to get the best out of *Recorder*, the electronic software recommended for biological recording in the UK. The guidelines have been drawn up by a working party consisting of four Scottish record centres, Borders (John Harrison), Fife (Anne-Marie Smout), Lothian (Bob Saville), and the secretariat of Biological Recording in Scotland (BRISC) (Bob Bryson), who have been using *Recorder* for some time, and the recommendations are the fruits of their combined experience. We are grateful to everyone who has commented on the numerous drafts and especially to James Williams, Scottish Natural Heritage Biodiversity Data Specialist, who provided the section on 'The legislative framework for handling information' and greatly assisted with this publication.

The first part of this guide (sections 1-13) provides a strategic overview and sets out those elements which should be considered by anyone involved in biological recording or anyone intending to develop a new Records Centre. The second part (sections 14-17) is designed to deal with the more practical aspects of entering data into *Recorder*. Several sections of this guide should be treated as essential reading, especially section 17 on 'Security and confidentiality'.

For the purpose of this guide, *Recorder* (in italics) indicates the software, whereas Recorder or recorder is a person collecting and sending in records. Key strokes to be executed are written in square brackets, e.g. [f2] means press the function key f2, and so on. A full glossary can be found in section 18.

For those unfamiliar with the *Recorder* software, *Recorder* is currently run on a database platform called 'Advanced Revelation', or AREV for short. Some users may have purchased the full Developer's version of AREV. However, the Joint Nature Conservation Committee (JNCC), who developed *Recorder*, have obtained a licence to use a 'run-time' version of AREV. In simple terms, this incorporates only those parts of AREV needed to run *Recorder*, and it is the run-time version that comes with the current *Recorder* software. A tutorial is included with the latest version of *Recorder*, and it is strongly recommended that users practise with this first, following the instructions in the tutorial manual. If you do not have a copy of the tutorial, please contact JNCC's *Recorder* support service (details in section 20, 'Useful Addresses').

The Help Sheets listed in Appendix A have been written by members of BRISC. They are intended for use with the latest version of *Recorder* (3.3), which is supported by the run-time version of AREV(3.2). They can of course be used with the Developer's version and may also be applicable to the earlier versions of *Recorder* and AREV. The Help Sheets are available separately from BRISC or Fife Nature as stated in Appendix A.

**This guide is NOT to be regarded as a substitute for the official *Recorder* manual which comes with the software, but should be used in conjunction with that manual.** Indeed, it is highly recommended that the *Recorder* manual be read thoroughly before attempting any processing, and then again during processing as problems present themselves. Nor is the guide intended to turn all *Recorder* users into clones but rather to help people avoid any initial mistakes which later prove to be very time-consuming to correct. Hopefully, the content of this guide will help to eliminate many of those unnecessary problems and the overwhelming desire to drop your computer from the top of the nearest cliff. We welcome comments on how to improve future editions of this document.

BRISC Sub-committee (December 1997)  
Anne-Marie Smout, Chairman



## PART 1

### A strategic guide to biological recording in general

#### PRELIMINARY STEPS

Before attempting any biological recording work at all, it is **ESSENTIAL** that some time is taken to consider and discuss with other relevant parties the following issues :

- The purpose of collecting data in the first place, i.e.
  - What kind of recording centre you intend
  - What species to record - to be comprehensive or selective
  - What geographical area you are going to cover
  - What data are available - these may depend on local experts, published reports, etc.
  - Who are likely to be the main users of your data
- Identification of individuals and organisations who may be useful (and maintaining contact!)
- How to ensure the scientific soundness of all accepted data
- The kind of output you are likely to want to produce or be asked for
- Who else would/should want to know about your data
- Who should have access to the system and at what level
- What constitutes adequate computer knowledge or training; access to support and backup facilities
- Financial implications

Sufficient consideration of these points should ensure that the overall direction and progress of work will be well planned in advance.

#### 1. TYPES OF RECORDS CENTRE

1.1 Basically there are three types of records centres, apart from the national data centres like the Biological Records Centre (BRC) at Monks Wood. Decide which type you wish to develop:

- **Local Records Centre (LRC)**, usually run by a museum, local authority or, in England, by a county wildlife trust. LRCs should attempt to collect data on all species and habitats within the area covered by the centre, and seek the co-operation of all local experts.
- **Species expert**, who usually collects data on one or two scientific groups for the area covered by the LRC. Vice County recorders generally fall into this group. Species experts may also act as satellite centres of the LRC where their data are shared electronically with a parent LRC which provides user support. As a minimum, all species experts should keep in close contact with the LRC and arrange to exchange data. Protocols for passing on data to national scheme recorders should be worked out between the species recorder and the LRC so as not to duplicate efforts.
- **Countryside Park**, where data on some or all species are collected from within the park. As with the species experts, Countryside Parks may become satellite centres of the LRC and, as a minimum, a system should be in place to ensure data are passed to the LRC on a regular basis.

A table setting out roles and tasks of each type of centre can be found in Appendix B.

#### 2. GEOGRAPHICAL COVERAGE

2.1 Geographical coverage has to be decided at the outset to avoid unnecessary overlaps and hard feelings. If your intended centre is a LRC, some research has to go into discovering who if anyone has been covering the area in the past. Politically, it is strongly advised to have clear lines from the start for exactly what areas are to be included in the coverage. This will entail discussions with any neighbouring LRCs.



Naturally, if the centre is supported by one or several local authorities, the demarcation of the geographical areas is likely to be determined by political boundaries. Species experts may need/wish to record for larger regions or confine their efforts to coincide with the boundaries of the LRC, whereas the geographical areas of Countryside Parks are usually well defined. The recent trend in biological recording is to encourage smaller centres to merge or co-operate in order to aim for larger, more financially viable centres (see also section 13 on 'Finance').

### 3. ASSESSING THE AVAILABILITY OF DATA

3.1 **Contact likely organisations and statutory bodies** such as nature conservation agencies, water authorities, environment agencies, museums, local authorities, local natural history groups and neighbouring LRCs for existing data. Monks Wood BRC is helpful but overburdened so do not expect speedy replies bringing huge lists. University biology departments could prove useful (theses, project work, etc).

3.2 **Local experts/naturalists** may hold large sets of data. This may be in notebook format and require a lot of effort to extract, but could be very important, especially in cases where work has been done on a species or scientific order for many years. BSBI Vice County recorders in particular will have large sets of data. Data may also be collected through clubs and societies, consultants, and the general public.

3.3 **Historical data** may be available from libraries and museums, even newspapers. Published works, journals and annual reports, e.g. of local nature reserves, may provide a lot of data. It is usually the task of the species expert to search the literature for historical references and many experts will have already carried out such searches.

3.4 **Surveys can be organised** to collect data. When asking people to submit data, it is strongly advised to ask for as precise a location as possible: preferably a six figure grid reference or better for each record. If necessary, a help sheet can be designed on how to work out grid referencing and be made available on request (see Appendix A for list of available Help Sheets).

### 4. INTEGRITY OF DATA

4.1 **Verification.** It is important to remember that a centre is only as sound as its data. To ensure the scientific soundness of data and consequently the integrity of the whole centre, it is of paramount importance that all processed data should be scientifically reliable. No single person can be an expert in all species and various measures are suggested here:

4.2 **Experts.** A network of experts should be formed in the case of a LRC, who can vet records (preferably before they reach the centre) and act as a kind of filter. This is especially important where rare, unusual or difficult species are concerned. When using *Recorder*, there is a space in the Local Species table, where codes (1-3) can be added indicating the degree of expertise the identification of certain species may require, though you may need the same expert to indicate this to you. Press [f1] for help when your cursor is placed at the appropriate section ('Critical species') in the Local Species table (3rd electronic window) to see how this works.

4.2.1 **Doubtful experts.** It may even be necessary to check the expertise of someone posing as an 'expert' (see also section 15.3).

4.2.2 **Less popular groups.** It may not always be possible to find a local expert and it will be necessary to come to some arrangement with a museum or national expert to vet the records and keep voucher specimens. Hopefully, if the museum has no experts in the required field, the staff will be able to suggest someone who is. It is also possible to contact the national BRC at Monks Wood and ask their advice. In some fields there may be only one or two experts in the country. In that case it is very important to present the data in as accessible and concise a format as possible in order to keep the effort involved to a minimum, or an answer may never come back.

4.3 **Voucher specimens.** These are required for scientific proof of some scientific orders, in particular of some invertebrates. They should be deposited in a safe place, such as with the local museum. Contact the

natural history section at National Museums of Scotland, Chambers Street, Edinburgh, or Glasgow Museums & Art Galleries at Kelvingrove in Glasgow, for advice on what to do with particular voucher specimens.

4.4 **Deleting unwanted records.** It is inevitable that some records entered onto your database will need to be deleted, though deleting records from *Recorder* presents some problems. [Alt] and [del] pressed twice will delete any record on screen, but it is then essential to force the whole Records table to rebuild its indexes or you may be left with serious problems later on. To do this, select the Utilities menu, then Indexes, then Rebuild, select Records table, then select all, and go away and have a cup of coffee, because this may take some time! **It is strongly advised not to overwrite duplicate records with new data, as this complicates matters if records have been transferred to other centres.**

## 5. DATA OWNERSHIP - THE LAW

5.1 **Ownership of information** is an important and difficult issue with the short answer being that the recorder holds the copyright of his or her records. The fact that someone else may also hold the data does not imply ownership. It follows that such data may only be released or copied to a third party if a licence to do so has been obtained from the owner (see Appendix G for a discussion of the legislative framework for information handling and a list of relevant UK legislation and policy. For a more detailed discussion, please contact BRISC or SNH).

5.2 The Co-ordinating Commission for Biological Recording (CCBR) report on *Biological Recording in the United Kingdom*, (see bibliography for full reference) presents advice obtained from solicitors in Oxford on the legal implications of biological recording. A section of the report deals with aspects of **intellectual property and related rights, obligations to make data available**, and potential liabilities on dissemination of biological records. The Environmental Information Regulations 1992 (see Appendix G) require publicly funded bodies to make information that they hold on the environment available in response to requests. Safeguards exist for confidential data. Although it is generally assumed that the odd data submitted to a centre, e.g. in response to surveys, will not present any legal problems, strictly speaking it is advisable to get at least an agreement with all people submitting data. Suggestions of how to do this are:

5.2.1 **If organising surveys, include a sentence on each recording sheet**, such as: 'unless otherwise advised, it is assumed that all records have been submitted to [name of centre] to be used for purposes of natural heritage conservation, research and advice, education and public information'.

5.2.2 **A statement can also be written into a newsletter** and circulated to observers to the effect that 'unless otherwise advised, [the centre] will assume that anyone who sends in records to [name of centre] do so for the centre to use for purposes of natural heritage conservation, research and advice, education and public information'.

5.2.3 **In cases where local experts have submitted a substantial amount of data** (e.g. often reflecting many years of effort on their part), an agreement for subsequent use of that information should be reached between the LRC and the data supplier(s), preferably in writing. It may be necessary to explain to data suppliers that any funds raised from using that information in a report will be reinvested in the work of the Centre.

## 6. CHARGING

6.1 Because of the complicated nature of data ownership, it is recommended **not** to charge for data as such, but **only for the time taken** to retrieve the data, analyse the information where necessary and the production of any written reports. A structured charging policy is recommended, which could involve different rates according to the status of the enquirer, e.g. scientific and conservation bodies may receive reports on the data at no charge, local authorities and statutory bodies may be levied a nominal fee, whereas private consultancy businesses would be charged at a market rate. (Contact BRISC for advice on current rates). It is strongly recommended that some formal, written agreement be undertaken when passing any data on to an enquirer, especially if the transaction involves money. A sample agreement is included in Appendix C.

6.2 Charging can, of course, be made for any **consultancy work** such as a specific survey or monitoring carried out by a centre for a client.

6.3 Care will be needed in all cases to ensure that any **suppliers of information**, such as relevant species experts, are reassured that the efforts they have put in (usually unpaid, and over many years) are not being exploited.

## 7. PRIORITISING DATA GATHERING AND PROCESSING

7.1 Inevitably, the following issues will influence the prioritisation of what data should be collected first and when they should be processed :

- user requirement and availability of data
- manpower and time
- computer facilities
- expert knowledge

7.1.1 **What is the information going to be used for?** Planning purposes, Local Biodiversity Action Plans, publications, reports, feedback, a local 'Red Data Book', lists of 'notable' species (see also section 8.4), exhibitions, research, education of the general public, etc. This may mean concentrating on one or a few scientific orders at a time, on species with limited distribution, or on species within a single habitat.

7.1.2 **Who needs the information?** Scottish Natural Heritage (SNH), Local Authorities' planning and education services, developers, researchers, the general public, the LRC, national organisations such as the BRC, the Butterfly Conservation Society, etc. For an LRC, contacting your local SNH Office and Planning Service is essential in order to find out what data resources they have and how they can best use your proposed resource.

7.1.3 **When is the information needed and at what level of detail?** Planners and developers often need very detailed information within days and, although most centres aim to be pro-active, it will probably happen that the database holds no relevant information particular to that query and a site visit will be required. Happily, it is often possible to gather significant amounts of data at very short notice, especially if there is an existing network of local experts, whose personal knowledge may be used, or by contacting other centres holding data, e.g. through SNH or Scottish Wildlife Trust (SWT).

7.1.4 **Historical data - how important is researching these?** Time and manpower has to be taken into account. Historical data are essential in monitoring populations and habitats over time, and for producing distribution atlases. Drawbacks are that many historical accounts are fairly general, giving often only vague dates and locations; species and common names may have changed, and such information takes a lot of time to research. It is recommended that species experts take on the historical research for their scientific group if they have not done so already.

7.1.5 **How are the data going to be stored?** Electronic systems, such as *Recorder*, are to be recommended, because this makes managing large datasets and reporting on these much easier and more efficient. However, computer skills will be required. All LRCs should aim to become fully computerised, whereas species experts and Countryside Parks should consider becoming satellite centres of a LRC in order to benefit from central guidance on recording and computerisation. BRISC runs a Scottish *Recorder* User Group and offers training in using the software *Recorder* from beginner to advanced levels.

7.1.6 **The financial aspect has to be considered.** Although computers are constantly becoming cheaper, and the *Recorder* software is relatively inexpensive, even the smallest centre requires some financial outlay. Species experts and Countryside Parks should consider forming a local network with a LRC of satellite centres, obtaining cheaper satellite versions of *Recorder* and other support, which might reduce cost while maintaining or even increasing efficiency. The LRC may also be in a position to let out some hardware on loan in return for data processing. For LRCs, *Biodiversity, the UK Steering Group's Report: Meeting the Rio Challenge* (see Bibliography) has a whole chapter on

monitoring and data management for LRCs, and recommends a consortium funding approach. (see also section 13 on 'Finance')

## 8. STANDARDS OF RECORDING AND CENTRE MANAGEMENT

8.1 **Accreditation.** In order to raise the standards of biological recording and the management of a records centre, a system of accreditation has been operating in Scotland for several years. This details minimum standards of operation for different levels:

**Level 1** would be assigned to an LRC running a records centre with full public access, an active habitat mapping scheme, a botanical database, active databases for at least three other biological groups, a site database, and storage facilities for specimens;

**Level 4** would be awarded to a group that could demonstrate an established system of data collation related to at least three minimum areas of interest, access to secure storage for any collected material, and the availability of all information and specimens to appropriate requests, though the data may be physically divided between members of the group;

**Level 5** is a special category for Countryside Parks  
(see Appendix E for more detail of BRISC' Accreditation Scheme).

8.2 **Developing centres.** It is hoped that developing centres will use the accreditation scheme as a series of targets to enhance their level of operation whilst also improving their chances of receiving any grant aid which may become available, either through statutory bodies or from lottery related funds. An application form for the BRISC Accreditation Scheme can be found in Appendix F.

8.3 **Data standards.** It is vital that sufficiently detailed data should be gathered. The absolute minimum requirements for a record are :

- species name
- location - preferably with a six-figure grid reference or better, as well as location name
- full date wherever possible
- full name of observer

It is also recommended to record habitat, altitude, state and abundance of species, and any associated species where possible. It is easy to present data in a less specific format, but not the other way round, and it is often the case that a very detailed location and species status are required e.g. for planning purposes. These good habits should be extended to other tables in the database e.g. adding as much supporting information as possible in order to manage the system more effectively.

8.4 **Notable species list.** It is strongly recommended that a list of 'notable' species be drawn up. This should be done with the co-operation of all biological recorders in the recording area. The list should contain species occurring in the area which are also listed in the Red Data Books, in published lists of nationally scarce species, and also take in locally rare or scarce species. For example, species which occur in less than 3% of 10km<sup>2</sup> covered by the centre (1km<sup>2</sup> for smaller regions) could be included as 'Locally Scarce'. The list should also indicate why a certain species has been included and should be updated regularly. All species listed in the Annex to *Biodiversity: the UK Steering Group's Report* (see Bibliography) should also be included.

8.5 **Network of recorders.** It cannot be recommended strongly enough that a network of anyone involved in biological recording in an area should be formed, and that routines be worked out for periodically transferring data between the recorders and your Centre. Such a network will also prove to be useful when training newcomers and volunteers in correct identifications, as well as providing a list of experts who can respond to urgent requests for data by surveying a site immediately.

## 8.6 Targets and aims for each category of centre (see also Appendix E)

8.6.1 **LRCs** - Should aim to record data for as many species as possible including a full botanical database. Full Phase 1 Habitat Survey information should be obtained at the earliest possible stage, with a view to acquiring Phase 2 or better information from the most important sites. Emphasis should be on recent records - i.e. less than 10 years old. - especially important for all 'notable' species and important habitats. There are a number of classification schemes in use, and most of these are included in *Recorder*. The data can then be used for a variety of purposes: identifying species and habitats under threat, informing the Planning Process, compiling and maintaining a 'notable' species list (see above); publishing distribution atlases - a good way of publicising the work of the Centre as well as helping to fill gaps in the knowledge of distribution of species on a local basis. A system should also be worked out for copying records to BRC, other national bodies and national projects such as the new *Botanical Society of the British Isles (BSBI) Atlas 2000*, or the *Millennium Butterfly Atlas* (see section 20 for 'Useful Addresses' and Appendix A for the Help Sheet on 'Routine for Exchanging Data').

8.6.2 **Species experts** - Should aim for as complete coverage of the relevant scientific order as possible, including researching and collecting all historical data. Species experts could also be central in forming 'interest groups' for their particular species, providing help with identification skills, leading outings, meetings and generally trying to involve people who would like to learn more. In co-operation with the LRC they should consider producing distribution atlases, local species accounts etc., as well as deciding how data should be sent to national bodies - directly from the expert recorder rather than through the LRC? Species experts may want to consider becoming satellite users of a LRC.

8.6.3 **Countryside Parks** - Should aim to record as many species as possible within the target area, but this will depend on individual rangers' identification skills, which may change with the turnover of staff. It is recommended that the direct interface with the general public should be utilised by producing leaflets with information for the public about data gathering within the park, how the public can help and how the information can be accessed. Identification skills could also be taught to the public by knowledgeable rangers to increase awareness and widen the network of good amateur naturalists. Countryside Parks should consider becoming satellite centres of a LRC.

8.7 **Permission to survey and collect data** should be sought as a matter of principle prior to entering any private land. This principle should also be adhered to by anyone carrying out surveys on behalf of a centre and it is important that centres do disassociate themselves from any form of trespassing, which may give biological recording a bad name and hinder co-operation with land owners/farmers/managers in the long run. Generally speaking, owners are usually quite willing to allow access, but if permission is denied, this should be respected or should be carried out by someone who has a legitimate right to do so. The countryside code should be followed in all instances. It is also good practice to inform owners of the results of a survey, send them copies of species lists collected on their land and of any special sightings, etc. Much can be gained by keeping them informed and involved.

## 9. STORING HARD COPY OF DATA, SITES INFORMATION ETC

9.1 **Original copy.** - Always keep original hard copies of data - it may be necessary at some time or other to refer back to check details. Satellite centres and Countryside Parks may wish to pass their hard copy of the data to the LRC for safe keeping. Arrangement for secure archiving of original data should be arranged.

9.2 **Unprocessed versus processed data.** - It is strongly recommended that if data are to be computerised, the data not yet entered on the computer should be kept separate from data already processed. It is probably inevitable that a priority input file be kept as well. The filing system, however, should follow the same rules whether records have been processed or not (see below). It is recommended that processed record sheets, letters containing records, etc. should be marked accordingly; perhaps with a note on each sheet showing the record number which was given to the last record entered.

### 9.3 Filing systems may vary depending on the type of centre

#### 9.3.1 For LRCs the following filing sequences are recommended:

- people (alphabetically)
- sites (by 10km<sup>2</sup> with an alphabetical index of site names and *Recorder* reference numbers)
- species (grouped and listed as in *Recorder*)

9.3.1.1 **People.** It is recommended that all data supplied by individuals be kept under their name. Historical records, however, should be kept with the species concerned as far as possible.

9.3.1.1.1 **Casual or intermittent data suppliers**, e.g. in response to special surveys, each record or record sheet should be filed alphabetically by observer's name. This could conveniently be in large ring binders, where it is easy to look up all the records submitted by an individual and the range of species covered over the years. It can reveal how experienced an observer is. Once a record has been processed on *Recorder*, it is easy to refer back to the original observer, because each record entered will have the name attached to it.

9.3.1.1.2 For 'experts', sending in substantial sets of records for particular species, it is recommended that each expert be given a separate file, which may be kept in a separate sequence.

9.3.1.2 **Sites.** A new file should be opened for each new site as it is entered into *Recorder*. This should contain a map with the outline of the site, in as large scale as possible. All relevant information should be filed with each site e.g. photos, reports, etc. The sequence of filing for sites depends on the amount of space available in the centre, but it is recommended that sites be filed alphabetically under the relevant 10km square. An alphabetical index, preferably with the outline of the site for reference, should also be kept. It is reasonably easy to print out all sites in *Recorder*'s Sites table alphabetically. To do this when in *Recorder*, ensure your printer is on line, press [f5] to get The Command Line (TCL). Then type in the following:

```
LIST SITES MAIN_NAME BY MAIN_NAME (P)
```

and press [f9] or [return] to execute. If you want to print out the names of sites within a given 10km<sup>2</sup> then type the following at TCL:

```
LIST SITES MAIN_NAME BY TENK BY MAIN_NAME (P)
```

then press [f9] or [return] to execute. It is also recommended that a full set of 1:10,000 maps of your area is acquired on which you can highlight all your sites. Note that although these are expensive, if treated carefully they can be a capital resource for many years.

Sub-sites should be filed together with master sites.

9.3.1.3 **The species sequence.** Data which are not filed under individual recorders will usually be filed under species; historical records are best filed this way. The recommended grouping should reflect the order in *Recorder*, a listing of which can be obtained by selecting the Add/edit data menu whilst in *Recorder*; then select Order/families; press [f2] and then [return].

9.3.2 **Good practice for satellite centres.** Hard copies of data should be sent/returned to the parent centre for storage after processing, unless the satellite centre is actually a single species expert who would retain hard copy (see below). Wherever possible, satellite centres should follow the conventions of the parent centre as this will facilitate data exchange.

**9.3.3 Single species experts.** Species experts who acquire *Recorder* in order to process their own data will already have a system for keeping their records. However, it would be good and sound practice to develop a way of distinguishing between data which have already been processed and data which await processing, e.g. by keeping them in separate files and clearly marking all data already processed e.g. with a fluorescent highlight marker. A system should also be evolved to specify any data which have been sent on to other centres, e.g. the LRC, BRC, BSBI. There is a space in *Recorder* in the Records table (last electronic page) to flag those records sent to BRC and JNCC, but it is sound practice to mark the hard copy also. For example, the LRC needs to know which records should be sent on again and which have already been sent (there is a Help Sheet 'Routine on data exchange').

**9.3.4. Countryside Parks.** Rangers will probably want to follow practices set out under the LRC (section 9.3.1.)

## **10. IMPORTANCE OF ACKNOWLEDGEMENT AND FEEDBACK**

**10.1 It is good practice to acknowledge all data received** as soon as possible even if only with a brief note. Full acknowledgement of anyone who has sent in relevant data should also be made in any subsequent publication.

**10.2 A mailing list** of everyone who has submitted one or more records is also recommended, so that the centre can keep such people informed with feedback, newsletters, new surveys, etc. Many people appreciate feeling involved in the work of a centre albeit in a small way; equally, many recorders feel frustrated if records disappear into a system which appears to give nothing in return. The Personal table on *Recorder* can be used to create address labels for this purpose whilst the Lists table allows several different list to be created and saved for different purposes (see *Recorder Manual*, section 29).

## **11. DISTRIBUTION OF RECORDS AND INFORMATION TO OTHER CENTRES**

**11.1 To whom?** If you are a species expert, satellite user or Countryside Park, you should agree a routine with your LRC for exchanging records. It is important to decide which local and national recording schemes and surveys to contribute to (BRC at Monks Wood will advise on national schemes and BRISC publishes a list - periodically updated - of all recording schemes in Scotland). LRCs should make it their business to contribute to as many national schemes as possible, or at least send all relevant records on to the BRC, who usually produce all the national atlases in any case. Some survey organisers are happy to receive basic records, others have more specific requirements; e.g. habitat and micro-habitats. It may be necessary to contact the organisers to find out what information is essential. You can then decide if the data you store is suitable, or you could help to ensure that you or your recorders keep details of any required information. The BRC and JNCC (Invertebrate Sites Register (ISR)) are the most wide-reaching national schemes and should eventually have all records. Because it is wasteful to duplicate effort, it is important to consult with all other recorders in your area and decide on a routine for how best to do this.

**11.2 When?** It is suggested that a list be kept of all schemes, keeping a particular note of any that require records by a certain date (it is probably best to put these dates in your diary). The list could also include the required record fields (called columns in *Recorder*). In most cases sending records once a year to long running schemes will probably be suitable, and it is recommended that a note be kept of the dates when the last batch of records was sent.

**11.3 How?** Check with survey and scheme organisers whether they will accept *Recorder* format (some may only accept records sent on their own forms and cards). If they do accept *Recorder* format, do they need a print-out or can the data be sent on a floppy disk? The most efficient way of carrying out repeat queries is to make a 'Filter' in *Recorder*'s 'Filter' Menu. The procedure for this is described in detail in the *Recorder* Tutorial manual. Some organisers prefer both, since they find it easier to check that the format is suitable. The National BRC at Monks Wood usually requires data to be sent in ASCII format. This is a basic machine code which is understood by all computers and there is a facility in *Recorder* for exporting a list of records or other data as ASCII text. (See Appendix A for Help Sheet on 'Data Transfer')

## 12. DEFINING SITES

12.1 **Outline of site.** It is recommended that each recorded site should have a physical boundary which can be outlined on a map, preferable on 1:10,000 for detail as well as on a smaller scale map such as 1:50,000 for quick reference. Personal knowledge or a visit to the site is naturally preferable for determining the boundaries, but a site outline can also be determined simply with reference to an up-to-date large scale map. It is recommended that a photo-copy of the general area on a map, with the site and its outline clearly marked, be kept with a file containing any other material relevant to that site (photos, management plans, historic accounts, events on that site, etc.). If desirable, a second copy of the map outlining the site could be kept alphabetically by site name for easy reference. **If, however, site boundaries are later changed, it is important to remember to change the boundary on all copies!** The column in *Recorder* for File code at the start of the 'Sites' window, allows for cross-referencing to your own, not *Recorder's*, file system. See section 9.3.1.2 for how to print out a list of sites alphabetically.

### 12.2 What constitutes a site?

12.2.1 **All sites that carry some official designation**, such as National Nature Reserves (NNR), Ramsar Sites, Special Sites of Scientific Interest (SSSI), Local Nature Reserves (LNR), and regional parks.

12.2.2 **Non-designated sites of conservation value** such as wildlife sites, which may be sites proposed for SSSI status or classified by SWT as Wildlife sites. There may also be sites listed in the local plans and structure plans - these should all have specified boundaries.

12.2.3 **All major waterways**, such as rivers and canals including the banks up to 6 feet on either side. These are likely to be split into sections for data management purposes.

12.2.4 **All important freshwater bodies** such as reservoirs and lochs. Individual ponds could be included.

12.2.5 **Other sites where there may be a strong natural history interest** or sites for which there are or are anticipated to be a lot of data. This could be a woodland, or even someone's garden. The important thing is that they should have a specified boundary which can be outlined on a map.

12.3 **Sharing identical code numbers for sites** with other organisations using *Recorder* can facilitate data exchange.

12.4 **All designated and most non-designated sites will have firm boundaries. It is very important to liaise with Scottish Natural Heritage, Local Authorities, Scottish Wildlife Trust and other appropriate organisations and individuals concerned with local recording, to ensure that everyone uses the same site boundaries!**

## 13 FINANCE

13.1 Traditionally, biological recording has been predominantly an amateur pursuit. Seventy percent of all existing data is calculated to have been collected by amateurs. Many record centres are currently doing wonders with shoe-string budgets, and a substantial part, if not all, of the work is carried out by volunteers. With adequate funding and trained full-time staff, centres can obviously present a far more professional image that will be required in order for Local Authorities and the Planning Process to take record centres seriously.

Increasingly, environmental auditing and action is included in national and international legislation, and local government in particular will be requiring environmental information for their local area. Thus the Government (in Scotland, The Scottish Office) will be putting pressure on Local Authorities to develop Local Biodiversity Action Plans, and LRCs are regarded as having a key role in this respect. *Biodiversity, the UK Steering Group's Report* recommends that where no LRC exists, the Local Authority should establish one. This will have profound implications for the long-term future and survival of LRCs, but centres will have to operate with best practices and standards.



Local Authorities are not, however, seen as having sole responsibility for LRCs but these are to be supported by a local consortium of bodies requiring environmental data. It is therefore strongly advised that existing LRCs spend considerable time on approaching their Local Authority's Planning Service, Education and Tourist services, SNH, SEPA, water authorities, NGOs and other potential partners that might need environmental data, in order to try and obtain service agreements, whereby financial support can be rendered in return for data management. Such an approach will require very efficient centres, operating with the best practice and standards.

## PART 2

### Computerisation

#### 14. PREPARING DATA FOR COMPUTERISATION AND AFTER

14.1 **Helpful hints.** The following are some suggestions on how to organise data prior to data entry, so that the task is easier and ensures that a certain universal standard is maintained. This is especially important if there are several different people with differing levels of experience and competence involved in input, as could be the case with Local Records Centres or Countryside Parks.

14.1.1 **Designing survey format.** It is much easier to enter data from a survey form which copies the basic format of the Records table in *Recorder*, and these should be circulated when a survey is conducted. Consideration should be given to designing each one specifically so that there are fields for taxa specific information within the basic format. A sample survey form has been attached in Appendix D.

14.1.2 **Standardising volunteer help.** Lothian Wildlife Information Centre, which relies on a team of volunteers under the leadership of the Biological Recorder, has devised a way in which all records are first entered manually on large sheets with columns which mimic the 'Record' window in *Recorder*. Details of data received are entered here first, grid references checked against the map, and the sheets checked by a more experienced helper, before any data are entered on the computer.

14.1.3 **Checking entries.** It is essential to check the data again after input to see if there are any mistakes. Zooming out from a distribution map in Plot 5 is a way of spotting rogue grid references. With the map on the screen, zoom in on the wayward dots, press [shift] [f1] together to activate the special select facility, where you can use the mouse to point the cursor to the centre of various dots, and click the left mouse button or press [enter]. These records are then selected for you to browse through as you exit from the mapping program, when you can check the grid references.

#### 15. GETTING INTO *Recorder*

The *Recorder* manual details the entry of information into the Records table. Some additional information is outlined below. A tutorial with manual is now also available to practice on. If you do not already have a copy, please contact JNCC (see section 20, 'Useful Addresses'). There is also a Help Sheet on 'Taking a volunteer through entering their first record'.

##### 15.1 Using the 'Records' table

15.1.1 **Use all information.** It is strongly recommended that no detail of a record should be lost on being entered in the database, though consideration must also be given to the time it takes to put in very detailed records. As already stated (section 8), the absolute minimum is species, location (site with grid reference), date, and recorder/observer. Choice of codes, such as for habitat, status and abundance, should be strictly controlled if they are to be a search tool rather than merely added information (see also Help Sheet on 'Coping with Codes'). Anecdotal information can be entered in the 'Comments' field.

15.1.2 **The default record number.** This can be changed by typing [=], after which you will be asked for a new default number. This should be used in cases where different blocks of records are allocated to different machines, e.g. to a satellite centre. *Recorder* offers defaults on many of the data entry fields based on the last saved record. These are shown in light blue at the bottom left of the screen and are accepted by pressing [return] or [enter]. **Great care should be taken** that a default from the last record is not entered inadvertently by pressing [return] through those parts of the record which are to remain blank. Using the arrow keys will avoid this.

**15.1.3 Relational databases.** It is important to understand that *Recorder* is a 'relational' database, which means that tables are related to one another by shared fields. It requires certain information to be entered before that information can be used elsewhere, e.g. entries in the Records table for individual People, Sites, Literature, etc. should already have been made in their respective tables; species, habitats and other codes are already provided by the *Recorder* software. Once the information has been entered, *Recorder* only refers to it again by using the code numbers allocated, though the user sees the full information when that record appears on screen or in a report. This saves space on the computer, avoids spelling mistakes, and any later changes in the information relating to these entries need only to be made once, in the original table. Tables for Sites, People, Literature, Events, descriptions for Local species, etc. have to be created by users to fit their locality. When using a satellite system much of this information will be copied electronically onto your machine by the parent centre. From within any table, press [f6] to call up a list of other tables you can access from within that table. The *Recorder* manual and Tutorial have sections on how to enter Sites, People, Events, etc., or press [f1] for on-line help.

**15.1.4 Access to other tables.** When entering a site into the Records table, and the 'no match found' message comes up, then press [f6] to get access to the other tables, which can then be selected for adding a new site. Pressing [f9] saves, and [esc] takes you back to where you were. Pressing [f2] at the site prompt allows you to find a site name by which 10km square it is in; pressing [f2] again will show an alphabetical list of all the words held in the names of your sites, allowing you to browse through if you cannot remember the correct spelling of a site name. The next record entered (after saving a record) will supply a default site based on the previous entry; equally, most of the other fields will offer this facility as long as you have just saved a record. Pressing [return] or [enter] accepts the default value which is highlighted in light blue type at the bottom of the screen. If you have entered a new site in the Sites table, update indexes immediately by pressing [f10] to access the Main menu, and then update indexes as normal, pressing [esc] to return to your record. Only then will *Recorder* recognise that new entry. This principle applies to other entries in relational tables, such as the Literature table.

**15.1.4.1 Using the Site column.** It is strongly recommended to use the Site field for every record, and not just the grid reference on its own in the offered field. This is because *Recorder* sorts records much more efficiently by sites, whereas asking it to search for particular grid references requires it to search the whole database. Speed will begin to matter when the database holds more than 20,000 records or so, and when 100,000+ records are entered the machine may take up to an hour to search the whole database - it is by then too late to change all the records. (See section 15.2.4 for creating dummy sites to cope with records that fall outside identified wildlife sites).

**15.1.5 Grid references** should be given as accurately as possible for each record, preferably a six- or eight-figure grid reference. The site's default grid reference (entered by the user when creating a new site) should only be used when a more accurate grid reference is not available. It is essential to remember that grid references should act as a signpost to the location at which the species was found, so that someone at a later stage can go back and check that exact location if needed. Vague grid references may be preferred if the record is confidential and the centre has a problem with security, such as open public access to the system. In such cases exact locations should be kept separately as hard copy only under lock and key (see also section 17 on 'Security').

**15.1.6 Location name** should be given if it differs from, or is more exact than the Site name. Since *Recorder* 3.2 it has been possible to give both Site name and location name which was difficult to do in *Recorder* 3.1. Pressing [Alt O] will copy the entry in a field from the last saved record into the current record even if there is no automatic default.

**15.1.7 Habitat and altitude** can be used as an interesting search tool at a later stage. This information might alternatively be derived from the Sites table, although that may be less exact, because a site may cover a range of heights and habitats. (See also Appendix A, for Help Sheet 'Coping with Codes').

15.1.8 **Entry of species in the Records table** is documented in the manual. When using the abbreviation of the binomial (the first two letters of the first and the first three letters of the second scientific name) **DO check that the correct species is selected!** If you are uncertain which of the choices offered to select, press [f1] for condensed information from the Species table (soft-keys do not allow access from the Records table to the Species table, only to the Local Species table). It is possible to restrict the choices offered by *Recorder* by biological groups or 'taxa' by pressing [alt] and [1] and typing in the taxon code, arrived at by pressing [f2], e.g. 09 for plants.

15.1.9 **Dates.** *Recorder* accepts many kinds of dates. Naturally a precise date is preferable but not always possible, e.g. with historical data. A date range, such as 1990-1994, or a season e.g. Spring 1992 can be given (pressing [f1] in the date field will give you a list of different date types), but this may mean that when distribution maps are plotted these records will not necessarily fall within the date range expected from the search. Thus if your cut-off date is 1980, the two examples above will appear as if they were pre-1980. However, this can be corrected by typing 'No' to the question 'Do you want to accept the default cut-off date' as you plot the map, and manually selecting the cut-off date for each type of date offered. (See also Appendix A for Help Sheet on 'Mapping').

15.1.10 **The Recorder column.** If having trouble finding a recorder known to be on the database, press [f2] twice, which will give you an alphabetical list of surnames. We recommend that an 'Anon' or 'Unknown' recorder be created for use against any reliable records which have no immediate source. Remember to update the indexes for all new entries in the relational tables to help *Recorder* recognise them (see section 15.1.4).

15.1.11 **The Determiner column** should not be used unless the Determiner is different from the Recorder. A Determiner may be essential with difficult or obscure species. It is recommended to use the options available in the Local Species table for checking difficult species, though because this requires a substantial amount of effort and knowledge to key in all the initial information, this may be done at a later stage (see also section 4.2).

15.1.12 **References used,** literature and collection columns are well covered in the manual. If you have a new entry in the Literature table, remember to update the indexes immediately.

15.1.13 **Codes for sex/stage, abundance.** It is strongly recommended that codes describing these sections be used with thought and care. [f2] in either of these fields will produce a list of relevant codes whilst pressing subsequently [f1] will show you the entry in the Codes table for the one you have the cursor on - this allows you to check the description of the code before using it, although some codes do not have an explanation. Codes can also be edited and added to, via [f6] and 'edit Codes table'. If indiscriminately used, codes lose their value as a search tool, though they may provide additional information. It is therefore recommended that only a few selected codes are used. It is quite possible to limit the choice of codes shown to a taxon or list of taxa, e.g. plants, birds and insects (press [f1] for help on this). A hard copy of the codes which a centre has decided to use should be produced and kept beside each computer where data are entered, especially if several people share the data processing. (See also Appendix A for Help Sheet on 'Coping with Codes').

15.1.14 **Type of record column** is useful for flagging records from a particular project/survey in addition to the nature of the actual sighting. New codes can be added in the same way as described in section 15.1.13. All codes can be used as search criteria for creating so-called 'select lists' for use in reports.

15.1.15 **Substrate and keywords** should be entered if the information is available, as they are invaluable in aiding later searches. There are no substrate codes provided by *Recorder* currently, but these can be added by pressing [f6] and selecting 'edit codes table' and then pressing [f2] to select the relevant type of code (see Appendix A for Help Sheet on 'Codes'). 'Keywords' are entered by simply typing any word into the field and *Recorder* will give the option of accepting it as a keyword. This facility also occurs in the Sites table. As with all other codes, great care should be taken not to create endless, overlapping keywords which will cause confusion when searching - again keep a written list

by the processor in order to check if a relevant word has been added and/or press [f2] to list currently held keywords.

**15.1.16 Associated species column** can be useful, e.g. for finding out which trees are preferred by rooks for rookeries, or are the host of fungi. The ability to enter any thing in this field presumes that recorders have been asked to supply the information in the first place! This is further explained in the manual.

**15.1.17 Confidentiality.** The upgrade to Version 3.3 of *Recorder* has fixed a problem previously encountered, whereby the security system promised more than it offered in reality. Users should be aware that in versions before this upgrade, although records might be marked as confidential it was possible to get access to the data. Users are recommended to upgrade their copies of *Recorder* to overcome this problem.

**15.1.18 Sent to BRC; JNCC columns.** It is useful to know if the record has already been sent to either of these two important national centres. It would be a lot of work to go through all individual records to tag every one, but fortunately it is possible to write a small program to do this automatically (see Appendix A for Help Sheet on 'Routine for Exchanging Data').

**15.1.19 Comments column** allows free text to be entered and should be used for additional useful information. Individual words within the comments can be used in searches with EasyWriter or TCL, though this is usually case sensitive. Such problems are overcome by adhering to correct English and only using capitals for proper names.

**15.1.20 Codes 1-3 for reliability of record.** Generally no unreliable records should be entered, because they will appear in unexpected places and be included in the distribution maps. However, it may be advisable to enter records which are known to be wrong simply to indicate that these records are known, have been checked, and need not be considered again. In this case, grid references should be omitted. It is possible to include or exclude records marked reliability '2' or '3' in reports by changing the search criteria under the 'Record selection' menu (see also section 16). However, take care that there is justification for assigning these codes to records, as this could be seen as an opinion on a recorder's abilities and thus be considered personal data.

## 15.2. Coping with the Sites table

**15.2.1 First steps.** It is important to liaise with ALL other people in the area who are involved in biological recording, to make sure that everybody means the same thing when they talk about a particular site. It is strongly recommended to use the same codes for Sites in *Recorder* as others in the area, as this will greatly ease data exchange. SNH have numerical codes allotted to SSSIs and it may be appropriate to use their numbers for these and other sites from the start. (For directions on how to decide when an area is a site, see section 12.2).

**15.2.2 Default Grid Reference.** It is recommended that the central point of each site, using a six-figure grid reference, be used as default, even for lochs, though the default should only be accepted when entering a record for this site if no better grid reference is available. For very big or awkwardly-shaped sites such as long linear sites, NO default grid reference should be entered: all records should be entered into sub-sites with as detailed a grid reference as possible. This avoids dots appearing in unexpected and meaningless places on distribution maps. Very large sites should be subdivided appropriately. Some sites may be physically divided into two or more distinct geographical locations. These should be treated as separate sites, related only by name or as entries in each other's 'associated sites' field.

**15.2.3 Records which fall outside pre-defined sites.** Because *Recorder* works most efficiently when records are entered under pre-defined sites, it is important to decide how to cope with data which do not fall within any of the types of sites outlined above. *It is, of course, quite possible to enter records with a grid reference only and leave the 'site' column empty, but if one then wants to search for all records or species in a particular area, e.g. in response to queries by developers, it*

*requires searching the entire database, which may take only 15 minutes when there are 50,000 records on the database, but might take hours if there are 5 million! and by that time it is too late to take steps to remedy this.*

**15.2.4 Dummy sites.** It is recommended that a way of limiting searches on grid references be worked out from the start. One way of doing this is to create 'dummy' sites using each 2km<sup>2</sup> ('tetrads') or 1km<sup>2</sup> for the entire area covered by the centre. These dummy sites can be 'nested' so that each 10km<sup>2</sup> becomes one dummy site. This dummy site can then be divided into 25 'tetrad' dummy sub-sites, which can be sub-divided again into four 1km<sup>2</sup> sites. If all dummy sites receive their grid reference as a name, this makes it extremely easy to retrieve them. Thus a 10km<sup>2</sup> dummy site could be called 'nt18' - (keeping 'nt' in lower case so that it is easily distinguished from the real grid reference on the screen), the dummy 'tetrad' (2km<sup>2</sup>) sub-site called e.g. 'tetrad nt18C', and the four 1km<sup>2</sup> sub-sub sites called e.g. 'km nt1084' (km distinguishes it from the tetrad); 'km nt1085'; 'km nt1184' and 'km nt1185'. Tetrads could be left out if this unit is never used for recording, or alternatively the 1km<sup>2</sup>, if the area covered by the centre is very large or difficult to access, such as parts of the Highlands.

**15.2.5 Site hierarchy.** Data should preferably be entered into real sites, as defined under section 12, but dummy sites help to absorb all the records that fall outside real sites into areas which planners, etc., most need to know about, often at short notice. This does demand an amount of extra work initially to enter the dummy sites, but they need only be created as the need arises, and although 1km<sup>2</sup> is not ideal, it is small enough to be relatively useful.

**15.2.6 A powerful gazetteer** of your area can also be created with this dummy sites system, by entering all place names found within the 1km<sup>2</sup> dummy site as alternative names for that site. The place names should be entered on the second or subsequent lines at the 'Name(s)' prompt. All names for sites are automatically indexed by *Recorder* and the location of any place name can therefore easily be retrieved down to the 1km<sup>2</sup>. Because the place names are not listed on the top line (with e.g. 'km nt1185'), they will not appear next to the grid reference when the dummy site is called in the 'Record' window, but only come up on the screen as part of a sub-menu for selection. One drawback is that if one asks for all sites to be printed, each of these names will also print out as alternative names for the dummy site, making this a very long list indeed.

**15.2.7 Parish/District.** The process of entering these is clearly dealt with in the manual and tutorial. Entering a parish for each site would be useful, but parishes are not marked on modern maps and their boundaries are more difficult to discover. It also takes quite a lot of time initially to enter grid squares against each parish.

**15.2.8 Vice-counties.** Vice-counties must be attached to site records if the vice-county is to appear in the Records table when a site is used. This allows records to be selected using vice-county(ies) as a criterion. A list of vice-counties can be found by pressing [F2]. *Recorder* already knows which 10km<sup>2</sup> fall within which vice-counties and uses this to check if the correct grid reference has been entered. Many national recorders use vice-counties because these do not change in the way political boundaries do.

**15.2.9 Other columns** in the Sites table are dealt with in the manual. However, the codes used to indicate a person's association to a site can be added to by editing the Codes table.

**15.2.10 The 'associated sites' field** is usefully explained in the manual.

## **15.3 Using the 'Personal' table**

**15.3.1 Use of Personal table.** There are many ways in which a list of recorders can be useful, e.g. as a mailing list, or identifying all observers who sent in records for a particular survey or particular species. The Personal table offers spaces for name, address(es), positions held and biographical details. However, any database holding more than just names has to be registered in respect of the Data Protection Act (1984). Details of how to do that are included in the manual for *'Recorder'*.

Furthermore, anyone whose name appears on the database must be allowed access to the data which pertains to them. It is obviously much more useful to have addresses in the Personal table, because these can be used for mailing lists, and also to distinguish between people having the same surname. In doubtful cases it is recommended that names be entered twice, because it is relatively easy to merge observers later on but much more difficult to separate them, so that the right records go with the right person. NOTE: it is strongly recommended that all *Recorder* users do register. (BRISC takes no responsibility if users do not register.) It is also recommended that a hard copy be kept, listing all observers.

**15.3.2 Under 'organisation and position'** only factual information should be listed, such as membership or offices held.

**15.3.3 Biographical details.** It is strongly recommended that only the briefest and most positive biographical details be listed, if this section is used at all. All comments of a personal nature should be avoided in the database. There are Data Protection Act implications, with issues of potential libel/slander, which could be expensive (see also Appendix G). If there are doubts about the validity of any records, this can be entered against each record, where a choice of 1-3 is given as the last column of the 'Records' window. Preferably all such records should be omitted in the first place, as they may find their unwanted way into reports and distribution maps. (However, see also section 15.1.20).

**15.3.4 Unknown recorder.** It is recommended that one number is allocated to 'anon' or 'unknown', to take care of any reliable record which has no obvious recorder or determiner.

**15.3.5 Reliability check.** It is recommended that some form of reliability check be carried out for all observers, even for experts, to safeguard and ensure the scientific value of the database. How this should be done can be left to individual centres, but checking through records to see the range of a recorder's expertise is one way - if someone turns up an unusual number of rarities or other strange data, these will require substantiation and vetting. Remember that a records centre is only as good as its data, and in many cases the centre will need to act as a kind of rarities committee. This can be done through a network of reliable experts.

## **15.4 Using the 'Local Species' Table**

**15.4.1 Using this table** can be a great advantage, but it is initially very time-consuming to process all the local species descriptions and other information such as rarity value. It is suggested that the local experts take on their particular groups and at least provide the centre with a written copy, if they cannot undertake the processing themselves.

**15.4.2 Local status.** It is strongly recommended where possible that local status be added to species be added, especially those of particular conservation needs. Obviously, it is extremely valuable for any centre to be able to pull out all notable species in that area, either on a list or for particular areas or sites, especially if the centre is involved in commenting on planning applications, or developing a local Biodiversity Action Plan. The published Red Data books provide much information on a national scale, but these do not necessarily cover all the local aspects. It is important a) to be objective and b) to record how decisions are made when assessing the status of species. It is suggested that a standard scale be adopted, and species become locally notable when they occur in less than 3% of all 10km<sup>2</sup> in the recorded area. This may be increased to less than 3% of all 5km<sup>2</sup>, tetrads or 1km<sup>2</sup> depending on how well covered and recorded the area and species are. It is essential to involve local experts for different groups. A reasonably comprehensive list of locally notable species of conservation value is a very important tool for any records centre, and it should be reviewed regularly. SNH should also be approached to discover if they have a list of 'notable' species in the locality (see also section 8.4).

**15.4.3 Difficult species and groups.** Any group or species can be flagged for difficult identifications by using a code which indicates the level of expertise needed (1-3) to correctly identify that species, and hence whether it should be investigated further before being entered on the database.

## 15.5 Using the Events Table

15.5.1 This table is used for recording events taking place on a site, such as a survey, a naturalists' outing, a pollution event, etc. Species experts may find this table extremely useful as a kind of diary to list activities. There is a Help Sheet on how to use the Events table.

## 15.6 Using the Literature Table

15.6.1 *Recorder* requires an entry to be made for each item of literature which is to be quoted elsewhere in the database. The use of this table is very simple and straight forward, and should not present problems. There is a column for stating whether it is unpublished, a book, etc. It is recommended that a hard copy of the possibilities be at hand for anyone processing data, although this is of course also available on pressing [f2]. It is recommended that indexes be updated after making a new entry (see section 15.1.4).

15.6.2 It is also possible to add journal names (see the Add/edit menu) for those regularly quoted - [ctrl N] will create an empty line for entry of new literature sources. This facility eliminates the need for constantly typing out lengthy journal names.

## 15.7 Using Codes

15.7.1 The *Recorder* manual deals with how to edit these. See also Appendix A for Help Sheet 'Coping with Codes'.

## 16. PRODUCING REPORTS

16.1 **Predefined reports.** *Recorder* now has a wide range of ready-made report formats, many of which are quite complex and lengthy (and may never be used). These are available under the 'Report' menu, but remember that you have to have made a selection of records or other data and preferably saved these in a 'list' (often referred to as a 'select list') before you can write any report at all. It is essential to check with the manual that comes with *Recorder* before using any of these formats to see if the actual result is what you want. A sample page for each of the ready-made reports is included in the additions to the manual which came with *Recorder* 3.2.

16.2 **Creating your own.** It is, however, quite easy to create your own reports, which you can then save in a library and use again. The way to do this is as follows: first select the records you want to report on. This can be done in various ways, but one way is to go to the 'Report' menu, choose 'Record selection', then fill in the electronic page offered, press [f9] to carry out the selection which should then be saved in the offered 'Temp' file. This 'Temp' file can now be used in a variety of ways. Each time you want to attempt to compose a report you must select a 'list' to make it active, and the limitation of AREV, the system that drives *Recorder*, means that this 'list' only stays active for one function. Therefore it is essential to save your selected records in a 'list' before you use them, or they will be lost if you make a mistake in your report and you have to start all over again. Having saved your selection in 'Temp' this means that next time you make another selection, this will just overwrite the previous selection and you are not left with a long list of useless selections in obscure files which just fill up the hard disk. (You can, of course, replace the name 'temp' with any other file name to use at a later time, or to export to a word processor). From the menu, select EasyWriter (which only earns its name when you have become familiar with the way in which it presents various options to you). Essential help is available by pressing [f1] and is well worth the time it takes to work through it.



16.3     **The printed report format** produced by *Recorder* is pretty basic (e.g. you cannot change the font), so to improve the appearance of a report it is necessary to transfer it to a word processor. This can be done by using TCL, invoked by pressing [f5] and redirecting the printer output to a separate file by typing:

pdisk [followed by a file name which you make up, e.g. pdisk rep.doc]  
where rep.doc is the name you are giving the new file. This file can then be retrieved  
from within a word processor by typing in its name when asked which file to open, in this case

C:\recorder\arev\rep.doc

It will then be necessary to format the text by choosing suitable page margins, font size, etc. If you stick with the Courier font, then usually the columns will be lined up properly, but if you want a different font all the tabulations will have to be redone. There are other ways to achieve this (see Appendix A for Help Sheet on 'Data transfer').

16.4     **EasyWriter**, AREV's own report system, is designed to help you write a command line (TCL) sentence. Some users find this system less than easy, but the tutorial and manual should help. It is also possible to bypass this and use TCL directly [f5], as you master the basic syntax.

## 17.     **SECURITY AND CONFIDENTIALITY**

### **!! THIS CHAPTER IS ESSENTIAL READING FOR ALL *Recorder* USERS !!**

17.1     **There are two kinds of security:** One is security of the actual information so that it does not get into the wrong hands, the other is security of the electronic system, so that processed data are not lost due to lack of precaution.

#### 17.2     **The information**

17.2.1   **The computer.** It is strongly recommended that passwords are used at all times: How to create passwords is documented in the manual which came with *Recorder*, and individual passwords should be chosen so that they cannot be guessed by others.

17.2.2   **Security of confidential records.** Although some computer criminals can bypass all passwords, passwords are useful to restrict the processing of any sensitive site or species information. However, other methods have to be used if there will be any public access to a system e.g. as part of a display. The most effective security is to not allow the public near the computer in the first place. This may not be practicable or possible, in which case it is better not to enter any confidential records on the database in the first place, but to keep these under lock and key elsewhere. This creates a problem when you have to remember to check all the confidential records against any planning application as well as data stored on the machine, even if lists and hard copies of maps, showing distribution, are kept. It is also possible to keep a separate table with confidential records, which is not available generally to the ordinary user. This requires more than basic knowledge of *Recorder*, but hopefully this problem should be solved in future upgrades of *Recorder*.

17.2.3   **The upgrade to Version 3.3 of *Recorder*** has fixed a problem previously encountered, whereby the security system promised more than it offered in reality. Users should be aware that in versions before this upgrade although records might be marked as confidential it was possible to get access to the data. Users are recommended to upgrade their copies of *Recorder* to overcome this problem.

17.2.4   **Hard copies.** It is important to remember to keep all hard copies of confidential data in a safe place, preferably under lock and key, and to allow only trusted people to process these records. Hard copies should never be left about for anyone else to see!

## 17.3 The system

17.3. **Security of records and system:** Viruses will not only disrupt but may destroy your system and make your hard disc unusable. Be sure that you don't use just any old disk in your floppy disk drive. It is definitely worth investing in virus testing software. Consult your dealer for the most up-to-date package if you are likely to get data sent to you electronically.

17.3.2 **Guarding against loss of data due to power cuts, undetected errors along the way, etc. is not a luxury, but an absolute MUST.** It is simply not a question of IF but rather of WHEN a system crashes. It is therefore of the utmost importance to keep several reliable copies of the database, both up-to-date copies and back copies for at least three months and preferably a year, in case something undetected went wrong during that time. It cannot be recommended strongly enough that a routine back-up should be carried out every day, once a week, once a month, once every three months, and these copies should be kept in a safe place, preferably in a separate building. Hence, when there is a power cut, or when a serious error is discovered, at worst only a day/a month/three months work will be lost and not the entire database!!! Loss of data can, and probably will, happen to everyone at some point, so get into good habits from the very start. Tape streamers are recommended for backups largely because the tapes hold about 250 Mbytes of data or more - as much as many computer hard disks - therefore large amounts of backup data do not need to be split. Many centres operate quite well with diskettes, but diskettes do fail occasionally - causing havoc if no other up-to-date copy exists. Tape streamers are relatively inexpensive - around £120 (tapes extra) and are recommended as essential. Other options are Magnetic Optical disks, high capacity removable disks, or even writing a CD.

17.3.3 **Backup software.** Various packages can be bought to support tape streamers backups, e.g. 'Norton Backup', 'Ditto', or 'Trakker'. These allow selective backup, so facilitating daily backup of just the data, codes and system directories (i.e. the ones that hold the data). It is recommended to backup all *Recorder* directories once a week including any additional mapping software which will hold all distribution map outlines. A full backup of the entire system, including AREV, should also be kept in a safe place. Software which can be used for selective backup should be chosen over non-selective backup software.

17.4 **Satellite Networks.** A separate routine is required for managers of these. Planning ahead, careful management and meticulous record keeping of what has been done and where, is essential to avoid chaos. Blocks of default numbers for the Records table, the Personal table, the Literature table, and any other table that will be shared (Events, perhaps) will have to be allocated to each user to avoid over-writing data when records are transferred from satellites to master. It is recommended that the Sites table is maintained centrally, and that no new sites should be added by any satellite user without first clearing this with the centre.

Decisions will also have to be made about who should have what data on their personal computer, and a routine worked out for data transfer. It should be noted that the 'master' user has to take over the responsibility of supporting the satellites where technical problems with the *Recorder* software are concerned. To run such a system requires a fair level of technical knowledge and can be time-consuming, but in return it can greatly assist with data processing and verification (experts process their own records and verify all others records pertaining to their group). Please contact FIFE NATURE, Fife House, Glenrothes, Fife KY7 5LT for more details on setting up and organising satellite users (or see Appendix A for Help Sheet on 'Setting up and managing Satellite centres').



## 18. GLOSSARY

- ASCII** A standard data exchange format (the acronym means American Standard Code for Information Interchange)
- BRC** This normally refers to the national Biological Records Centre at Monks Wood (see section 20 on 'Useful Addresses')
- BSBI** Botanical Society of the British Isles. The Society led the way in distribution atlases with the *Atlas of the British Flora*, published in 1962
- CCW** Countryside Council for Wales
- CD** Compact Disc
- Column** = 'Field'
- DTI** Department of Trade and Industry
- EN** English Nature
- Field** = 'Column'
- File** = 'Table'. You can list all *Recorder's* files/tables by selecting from *Recorder's* menu 'Utilities', file information, list files. AREV sometimes uses 'tables', 'rows' and 'column', instead of the more usual 'File', 'Record', 'Field', but it means the same thing. In this manual we try to use the new terminology which the manual for versions 3.2 and later use. However, neither this nor *Recorder* itself is consistent here!
- File is also the name of a letter or table or anything else that you have saved under a file name in a directory.
- ISR** Invertebrate Sites Register. This is held by each of the Country Agencies (SNH; CCW; EN)
- JNCC** The Joint Nature Conservation Committee, who now have the responsibility for developing the database *Recorder*.
- LRC** Local records centre. These may sometimes be referred to as local BRCs
- NGO** Non-Governmental organisation
- Record** = entry = row (in a table); data collected in the field, e.g. bird records
- Row** = record = entry
- SEPA** Scottish Environment Protection Agency
- SNH** Scottish Natural Heritage
- Table** = file

Here is a Table: It has 5 columns and 3 rows. Columns contain the headings, rows hold the actual information

	Column 1 ↓	Column 2 ↓	Column 3 ↓	Column 4 ↓	Column 5 ↓
	Site name	Grid reference	Persons associated	status	area
row 1 ⇒	Braes of Kettle	NO450621	James Kidd	SSSI	40 ha
row 2 ⇒	Colinsdean	NT147340	Norman Guest	pSSSI	13 ha
row 3 ⇒	Grange	NT146430	Norman Guest		20 ha

Taxon (plural taxa) Species or group of species

TCL The Command Line. **Warning: Do not attempt to use TCL unless you have mastered *Recorder* basics.** TCL is the window where you can get *Recorder* to do practically anything you like if only you know how. It can therefore also be a most dangerous window because you can cause absolute havoc too. If you are experimenting with what you can do in TCL it **essential to copy or backup your data directory beforehand**, so that if things go wrong you can always bring back the original. Useful keys are all the function keys, also in combination with [alt], [ctrl] and the shift key. Help keys are [f1] and [ctrl + f1]. This is all explained in the *Recorder* manual.

Voucher specimen = the actual plant or animal specimen which vouches for the authenticity of a written or published record. These should be kept in an appropriate location such as a museum for long term custodianship and as a proof of the integrity of an unusual record.

## 19. BIBLIOGRAPHY

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Linnean Society, *Biological Survey Need & Network.* 1988. PNL Press, London.

## 20. USEFUL ADDRESSES

**BRC** Biological Records Centre, Institute of Terrestrial Ecology; Monks Wood, Abbots Ripton, Huntingdon, Cambs PE17 2LS  
Tel 01487 773381  
Fax 01487 773467

**BRISC** Biological Recording In Scotland - c/o SWT, Cramond House, Kirk Cramond, Cramond Glebe Road, Edinburgh EH4 6HS  
Tel 0131-312 7765  
Fax 0131-312 8705

**JNCC** Joint Nature Conservation Committee, Monkstone House, City Road, Peterborough PE1 1JY  
Tel 01733 62626  
Fax 01733 555948

**SNH** Scottish Natural Heritage, Environmental Audit Unit, 2 Anderson Place, Edinburgh EH6 5NP  
Tel 0131-554 9797  
Fax 0131-446 2405

**Recorder SUPPORT** This changes from time to time, but the present contract is with  
ICS Solutions Ltd., Basingstoke, Hants  
Tel 01256 469460  
Fax 01256 842362

A number of local records centres and *Recorder* users are willing to act as advisors to beginners and to share their own experience : select your nearest contact from the list below.

**Dundee Nature Base** (Richard Brinklow, David Henderson, Adam Garside)  
Barrack Street Museum, Dundee DD1 1PG  
Tel 01382 434000

**Fife Nature** (William Penrice,)  
Fife House, Glenrothes, Fife KY7 5LT  
Tel 01592 413793  
Fax 01592 416300

**Lothian Wildlife Information Centre** (Bob Saville)  
Custom House, 11 West Harbour Rd, Granton, Edinburgh EH5 1PH  
Tel 0131-551 4589



**APPENDIX A**

List of *BRISC* Help Sheets on *Recorder* and recording

ALL Help Sheets are directed towards *Recorder* 3.2 with AREV run-time version

No	SUBJECT	Where to get these:
1	Grid Referencing made Easy	Fife Nature
3	Setting up and managing SATELLITE centres	Fife Nature
3	Data TRANSFER	Fife Nature
4	Getting the most out of Maps (using Plot5 and DMAP)	Fife Nature
5	Using 'lists' for data transfer	<i>BRISC</i>
6	Routine for exchanging data	<i>BRISC</i>
7	Coping with CODES	<i>BRISC</i>
8	Using EVENTS in <i>Recorder</i>	Fife Nature
9	Taking a volunteer through entering their first record	<i>BRISC</i>
	Further topics may be covered in response to requests - Please contact the Scottish <i>Recorder</i> User Group through <i>BRISC</i> - address above	





**APPENDIX B** Tasks and roles for different types of centres. Consult *BRISC* for accreditation.

	<b>Local Records Centre</b>	<b>Satellite Centre</b>	<b>Species 'expert' Recorder</b>	<b>Countryside Park</b>
<b>Purpose</b>	Planning, local societies, research, general public interest, others.	Feed into LRC, personal interest, others.	Personal interest, feed into national BRC, ISR and LRC, others.	Interest of the general public, feed into LRC, BRC, etc. others.
<b>Structure of centre</b>	Steering Committee and Network of experts to advise.	Part of the parent centre's structure.	Contact LRC to see how your centre fits in.	Contact LRC to see how your centre fits in - possibly satellite centre status.
<b>Data collection and availability of data</b>	Collect through experts, general public, surveys, historical data, published data, others.	From parent centre, though may combine with single species 'expert'.	Personal collection, also historical data and published accounts.	Rangers, general public, special surveys, others.
<b>Species</b>	Comprehensive, or at least as many species as possible.	One or more scientific orders, depending on parent centre.	One or more scientific orders.	All species, or as many as are manageable.
<b>Verification</b>	Network of local experts, museums national experts, others.	Through LRC.	For difficult species: museums and national experts.	Local experts or LRC.
<b>Likely output</b>	Reports, feedback, newsletters, publications, transfer of data to national centres, schemes, others.	Transfer data to LRC.	Exchange with other experts, publications, transfer of data to local and national organisations.	Leaflets, publications, lists, transfer to data to LRC.
<b>Priority for data input</b>	Decisions likely to depend on future output.	Decisions made in co-operation with parent centre.	All data.	All data.
<b>Next centre up on the national network</b>	Monks Wood (BRC), BSBI Invertebrate sites Register (ISR), national schemes, etc.	LRC	LRC; relevant national species organisations.	LRC if there is one, otherwise BRC at Monks Wood.
<b>Access to system</b>	System manager; Network manager Staff Volunteers? General Public?	System manager = satellite owner, Network manager	System manager = 'expert', Network manager	System manager; Network manager Rangers, Volunteers? General public?



## APPENDIX C

Sample agreement between LRCs and DATA suppliers

# Scottish Borders Biological Records Centre

## Conditions for use of information supplied by SBBRC

- 1 ..... , having received information from the Scottish Borders Biological Records Centre (SBBRC) towards a project involving ..... will retain that information solely for the purposes of that project and for no other project.
- 2 Any data or part of the information supplied will not be published by the aforementioned party or any related body or third party without the written permission of SBBRC unless such use is a stipulated part of the aforementioned project.
- 3 Any part of the information supplied will not be passed or sold to any third party without the written permission of SBBRC. Exception(s) to this may be detailed separately.
- 4 Part or all of the information supplied may be of a strictly confidential nature and, as such, the aforementioned party will respect that confidentiality and not divulge the specified information or records but may refer to it in general terms only.
- 5 The aforementioned party shall only retain the information supplied by SBBRC for the period of the aforementioned project or for one year, whichever period is the shorter. Any further use of this information after the specified date will require further written permission from SBBRC.
- 6 SBBRC will be acknowledged in any published or written work based on any of the information supplied for the aforementioned project and any other project subsequently agreed by SBBRC. Additional acknowledgements may be required if the information supplied involves a large number of records from any particular recorder(s).
- 7 The cost of retrieving and providing this information will be £ ..... to be paid by a cheque made payable to Scottish Borders Council within 21 days of receipt of the information.
- 8 SBBRC reserves the right to impose any other conditions on the provision and use of the information supplied for this project if it wishes to do so.

Signed on behalf of .....  
Name .....  
Designation .....  
Date .....

Signed on behalf of Scottish Borders Council

Name .....  
Designation .....  
Date .....

SBBRC, Hawick Museum, Wilton Lodge Park, Hawick TD9 7JL



APPENDIX D

Sample survey form to be used with *Recorder*



FIFE NATURE

Fife Nature, BRC, Planning Service, Fife House, North Street, Glenrothes KY7 5LT  
Tel 01592 413793



WILDLIFE RECORD SHEET						
Collector's Name						
Address						
Species	G Fig - Grid Ref	Habitat Code (see Below)	Location	Numbers	Date	Comments
e.g. Red Squirrel	NO451145	A1.2	Kingsk	1		Feeding on Cones
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						

**HABITAT CODE:**  
A1.1 Broadleaved Woodland; A1.2 Conifer Woodland; A1.3 Mixed Woodland; A2 Scrub; A3 Parkland/scattered trees  
B1-3 Grassland - rough; B4 Improved/reseeded grassland; B5 Marshy Grassland C Bracken/tall herbs  
D1-3 Heathland - lowland; D4 Heathland - upland; D5-6 Heathland/grassland mosaic E1 Bog F1-2 Swamp and Fen  
G1 Standing water (ponds - lakes); G2 Running water (springs - rivers) H1 Beaches (sand, mud, shingle, rocks);  
H2 Coastal marsh (saltmarsh); H6 Sand dunes I1-2 Rock exposures J1 Cultivated land (arable); J2 Boundaries (hedges,  
walls, fences); J3 Buildings; J4 Bare ground; J5 Other (state)

Please fill in all columns where possible and return to FIFE NATURE at the above address.

The information on this sheet will be used by Fife Nature for conservation purposes at the discretion of the Recorder for Fife Nature.



## APPENDIX E

# ***BRISC*** ***BIOLOGICAL RECORDING IN SCOTLAND***

### CRITERIA FOR CATEGORIES 1-4

#### **CATEGORY ONE**

This describes the **minimum** standards for the centre. Location will be in a museum, library, or similar public building with the following minimum facilities:

1. Easy access on a daily or frequent basis
2. Adequate work space to permit visitors to examine the material
3. Facilities for storage of specimens relating to the data, or convenient access to a nearby specimen storage facility;
4. The supervision by at least one person with a recognised degree of professional responsibility for the centre.

#### **The following elements should be considered essential**

1. an active habitat/site mapping scheme covering the specified recording area;
2. a site documentation facility covering the specified recording area;
3. a database of botanical groups (or immediate access to one);
4. at least three other biological groups as active data banks;
5. facilities for accepting, and storing in systematic order, data from any recording project or from individual recorders;
6. facilities for outputting data in a synthesised form.

#### **The following are most desirable and should be set as definite targets:**

1. co-ordinated involvement of one or more local naturalist organisation;
2. recognition by the appropriate planning departments as a legitimate consultee;
3. ability to act as sponsor for the publication of material based on local recording.

#### **CATEGORY TWO**

This would describe similar set-ups to the above, but at less developed stages. It would be appropriate for newly established centres still in development. Location would normally be in the same kind of place as Category One.

#### **The minimum provision of facilities are:**

1. safe storage for data;
2. access to the data at least once a week plus work area facilities;
3. facilities for storage of specimens relating to the data, or convenient access to a nearby specimen storage facility;
4. the supervision by at least one person with a recognised degree of professional responsibility for the centre;
5. organised access to a suitable repository for voucher collections.

#### **The following are considered to be essential subjects:**

1. species registers covering at least **four** major biological groups;
2. habitat/site mapping scheme active in the area;
3. site documentation facilities;
4. all other subject areas and service provisions would be immediate targets.

There should be the clear intention to progress to Category One level.



**The following is desirable:**

Co-ordinated involvement of local naturalists' groups

**CATEGORY THREE**

This category gives recognition to those areas where location in a 'public' building with professional supervision is not an immediate possibility. This should still be the aim of the organisers of Category Three LRCs.

This will be a centre based in a Countryside Park visitor centre, university department, school, etc., where the presence may be the initiative of an individual as much as a group. It should be considered to be essential that in these situations there is some more involvement of amateur organisations to give the centre an existence beyond the interest of the initiating individual. A formal committee might well be a priority.

**To qualify as a Category Three centre there should be provided:**

1. a room or other defined area with adequate space to store card indexes, maps and a site documentation file;
2. public access by arrangement.

**The essential facilities should be:**

1. species registers covering at least four biological groups;
2. a site documentation scheme;
3. co-ordinated involvement of local naturalists, planning departments, etc.
4. arrangements for collection of appropriate voucher material and deposition in a recognised repository.

**CATEGORY FOUR**

This recognises situations where there is not a recognisable centre with the minimum of data storage provision required for Category Three, but there is an organised effort to provide the kind of data collection, storage and synthesis to which LRCs aim. This category would include situations where a local society practised, in essence, the principles of recording, but the activities and collected data were distributed between members.

This might be entitled a Local Records Network and would cater for areas without population centres where the designation of a proper centre is not an immediate prospect.

**The essential minimum requirements would be:**

1. the formal commitment of the group involved in the administration of the network. This would include some recognised method of assessing data input, amalgamating it where needed and providing some means of distributing or using the information for both local and national needs;
2. data collection and storage of the data relating to **three** minimum areas of interest, i.e. species, sites, habitat;
3. provision for secure storage of any collected material in a situation where it remains permanently available to the group and to users (i.e. does not remain in any one individual's possession so that it ceases to be available).

**CATEGORY FIVE**

A site specific category for Countryside Parks, large Wildlife Reserves where there is a full or part time Ranger/Warden (or equivalent) presence.

**Desired facilities:**

- a) Defined, secure storage area with maps, cards, files. **A requirement**
- b) Person(s) actively responsible for operating the Centre. The site must have at least on full time Ranger/Warden or equivalent. **A requirement**
- c) Daily public access to information. Access by arrangement. Not essential (No access to sensitive information)

- d) Work space. Not essential
- e) Specimen storage. Not essential

#### **Activities**

- a) Active habitat/site mapping/surveys/monitoring. **A requirement**
- b) Site documentation scheme. **A requirement**
- c) Botanical data. **A requirement** (Species lists/record cards)
- d) Other groups. All other groups, active/casual collection and storage of data
- e) Open data storage facility, all records accepted. Encourage visitors/public to submit records (Records to be strictly vetted)
- f) Data outputting facilities. Not a requirement
- g) Active participation in recording network. Should tie in with national/local surveys as a requirement

#### **Desirable targets**

- a) Co-ordinated involvement of local groups. Wherever possible.
- b) Recognition by the local planning department as a legitimate consultee. Provide local expertise wherever possible.
- c) Ability to sponsor local publications. Not essential. However, own published data should be available.



**BRISC ACCREDITATION SCHEME**

**APPLICATION FOR ACCREDITATION**

**General**

1. Name of Biological Records Centre . . . . .
2. Address . . . . .
3. Telephone/Fax Number . . . . .
4. What organisation runs/funds the Records Centre ? . . . . .
5. Name of person (s) who supervises the records centre . . . . .
- & Position (s) held (Job Title) . . . . .
6. Paid/Voluntary . . . . .
7. Full time/Part time . . . . .
8. Qualifications (Degrees etc.) . . . . .
9. How many other staff are involved with the Records Centre ? . . . . .
10. Does the Record Centre hold other (non -biological) environmental records ? . . . . .
11. When is the Records Centre open/accessible ? . . . . .

**Facilities**

12. What work area facilities are available for visitors ?  
.....  
.....  
  
.....  
.....  
  
.....  
.....  
  
.....  
.....  
  
.....  
.....
13. What storage facilities for voucher specimens are available ? . . . . .  
.....  
.....  
  
.....  
.....  
  
.....  
.....
14. If none, where are relevant voucher specimens lodged ? . . . . .  
.. .  
  
.....  
.....

**Records**

15. What geographical area does the Record Centre cover ? . . . . .  
.. .  
  
.....  
.....
16. Vice-county number (s) . . . . .  
.....
17. Does the Record Centre currently run or access to a habitat recording scheme ?  
  
Yes/No . . . . .
18. If so, what percentage of your area has been mapped ? . . . . .  
.. .
19. Does the Record Centre hold site records ? Yes/No ; . . . . .  
.. .

20. If so, how many sites do you have records for ? . . . . .  
 . . . . .
21. Does the record Centre hold botanical records? . . . . .  
 . . . . .
22. If yes, which major and taxonomic groups of plants are covered (Give number of records)  
 . . . . .  
 . . . . .  
 . . . . .  
 . . . . .  
 . . . . .
23. If no, do you have easy access to records from your local BSBI recorder (s)?
24. Please list all other biological groups (with approximate numbers of records) for which you hold data . . .  
 . . . . .  
 . . . . .  
 . . . . .  
 . . . . .  
 . . . . .  
 . . . . .  
 . . . . .  
 . . . . .  
 . . . . .  
 . . . . .
25. How are your records organised (by site, species etc.)? . . . . .  
 . . . . .  
 . . . . .
26. How is the data stored ? (File cards/computer/other - please specify) . . . . .  
 . . . . .  
 . . . . .
27. If the data is stored on computer (a) Which hardware do you use? . . . . .  
 (b) What software do you use ? . . . . .  
 . . . . .  
 . . . . .  
 . . . . .

28. What facilities are available to output data ? (e.g. printer, photocopier etc.)

.....

.....

29. Has the Records Centre published any of its data ? (e.g. Local Reports/National lists/short notes etc.)  
Yes/No .....

30. If so, please specify .....

.....

.....

.....

31. What arrangements have been made for the relocation of records should the Records Centre cease to exist ?  
.....

.....

.....

.....

.....

32. Which category of Record Centre do you wish to be accredited as ?

1                      2                      3                      4

33. If the above questions do not cover all aspects of your Biological Records Centre, please give more information here : .....

Signature : .....

Date : .....

## APPENDIX G

### The Legislative Framework for Handling Information

The legislative framework for handling environmental data is complex (Table A), and covers a number of grey areas of law within which there is little case law to provide precedent. Notable pieces of legislation include: The Copyright Designs and Patents Act 1988; The Data Protection Act 1984; and the Environmental Information Regulations 1992.

The Environmental Information Regulations and Government's Code of Practice on access to information both advocate and provide for release of information. These are balanced by the requirements of the laws of confidentiality, copyright and data protection, which provide for with-holding information or delivering 'property rights' over information. The law is such that it can be difficult to decide where the balance lies. There is also a real issue of technological advances running ahead of the law. It is to be hoped that the Government's proposals for a Freedom of Information Act (White Paper Your Right to Know Cm 3818) can untangle the complexities of the current legal situation rather than adding to them. The Government is advocating expanding the electronic delivery of Governments services (Green Paper Government.direct Cm 3438) as part of its Information Society Initiative.

Copyright law can be summarised as follows: possession of data does not imply ownership. This is important if an organisation or individual wishes to hold copies of information gathered by others (such as biological records collected by volunteers), because if they have not obtained the data, they do not have the right to copy them to anyone else. Data may only be copied if the copyright subsists with the individual or organisation, or if they have obtained a licence to copy it. This means that it may not be possible to answer all requests for information held; in some cases it may be appropriate to ask the enquirer to contact the copyright holder instead.

The Data Protection Act provides legislative control on the *personal* information which can be held in computer files and the uses to which those data may be put. All users of such information are required under the Act to register with the Data Protection Registrar, and must comply with the Act's provisions when considering the release of personal information. The Act entitles individuals to be informed about any personal data held on computer for which that person is the data subject. If the data have not been registered as available for disclosure, then they **must not** be released. Use or release of personal information for which registration has not taken place is a criminal offence. It is possible for employees to be held individually responsible for the unauthorised release of personal information.

The Environmental Information Regulations apply to 'information relating to the environment', in whatever form it is held (including written, visual, oral and electronic media). Information relates to the environment if it concerns the state of water, air, soil, fauna, flora, land and natural sites, activities or measures which are likely to either adversely affect, or protect, the environment. The regulations are therefore extremely wide ranging, and apply to much of the information held by public bodies, including biological records. The regulations impose a duty to provide information to anyone who asks for it. A request can be refused on a number of grounds, such as confidentiality or where release would in the circumstances lead to damage to the environment, but there is a clear presumption in favour of release unless there are compelling and substantive reasons for refusing. Where the provision of information will involve a substantial amount of extra work which would not otherwise have been undertaken, the regulations allow a reasonable charge to be made for that work. This charge has generally been taken as the costs of collating, copying and interpreting the information, not the costs of its original collection.

The regulations also specify that information provided by individuals or organisations, where there was no obligation to provide the information, and it was not provided on the understanding that it would be made public, and where their consent for release has not been obtained **must** be treated as confidential. These conditions are likely to apply to information supplied by volunteers. As a matter of best practice, the situation of information having to be regarded as confidential can be avoided by obtaining a written license to use the data from the volunteer who supplied it. In such cases it may be possible to provide summarised rather than raw data.





**Table A. The legislative framework for handling information  
table of UK and EU relevant legislation**

<b>UK Legislation and policy</b>	
Environmental Information Regulations 1992	Implements in the UK the EC Directive on Freedom of Access to Information on the Environment (90/313/EC).
Copyright (Computer Programs) Regulations 1992	Provides protection for computer software
Copyright, Designs and Patents Act 1988	Provides protection for all published and unpublished works, including database compilations
Data Protection Act 1984	Provides legislative control on the personal information which can be held in computer files and the uses to which those data may be put.
Supply of Goods and Services Act 1982	Regulates contracts to supply goods and services.
Sale of Goods Act 1979	If goods are supplied, the provider is bound to ensure their fitness for the purpose intended.
Public Register and Records (Scotland) Act 1948	Governs the storage and archiving of information held by public bodies.
Code of Practice on Access to Government Information	Gives the public a right of access to information about "the policies, actions and decisions of Government departments, agencies and public bodies".
Tradable Information Initiative	DTI initiative to create an information market. Potential conflicts with freedom of access to environmental information.
Government.direct (Green paper Cm 3438)	Prospectus for the electronic delivery of Government services.
Your Right to Know (White paper Cm 3818)	Proposals for the creation of a Freedom of Information Act.
<b>International Legislation</b>	
EC Directive on Freedom of Access to Information on the Environment (90/313/EC).	Gives the public a right of access to environmental information.
EC Directive on European harmonisation of copyright protection(93/C 27/09)	Harmonises the period of copyright protection to 70 years. UK legislation to implement the Directive is expected.
EC Directive on data protection (95/46/EC)	Harmonises data protection across Europe, and extends data protection principles to paper files. UK legislation to implement the Directive is expected by October 1998.
EC Amended proposal for the Legal Protection of Databases (93/C 308/01)	EU proposal to provide legal protection to the compilers of databases against unfair extraction (which is not protected under EC copyright law). UK legislation to implement the Directive is expected.



*BRISC* (Biological Recording In Scotland) is an organisation that represents, supports and co-ordinates biological recording in Scotland.

The history of the organisation goes back to 1975 when *BRISC* developed from a conference in Dundee supported by a group of enthusiasts, notably Scottish Wildlife Trust and museum curators.

*BRISC* is run by a Committee whose members are elected at the Annual General Meeting. This usually takes place as part of the annual conference which is hosted by members in different parts of Scotland. Membership is open to anyone with an interest in biological recording, and the organisation counts among its members Local Records Centre (LRC) staff, amateurs with a varying degree of expertise, professional biologists, museum curators and others.

*BRISC* has 129 members (July 1997). Currently there are 23 LRCs in Scotland, some of which are based in Countryside Parks. 13 centres have achieved some level of accreditation. A Scottish *Recorder* User Group was formed in 1995. This group arranges training courses from beginner to advanced levels and the network provides mutual assistance and support.

*BRISC* counts among its priorities to

- encourage new LRCs where none exist
- achieve full coverage of Scotland, including the islands
- assist all LRCs to achieve the highest professional standards
- promote the efficient use of biological information

For further information and a membership form, please write to :  
Anne Marie Smout, Chesterhill, Shore Road, Anstruther. Fife. KY10 3DZ.



## SCOTTISH NATURAL HERITAGE

Scottish Natural Heritage is an independent body established by Parliament in 1992, responsible to the Secretary of State for Scotland.

Our task is to secure the conservation and enhancement of Scotland's unique and precious natural heritage - the wildlife, the habitats, the landscapes and the seascapes - which has evolved through the long partnership between people and nature.

We advise on policies and promote projects that aim to improve the natural heritage and support its sustainable use.

Our aim is to help people to enjoy Scotland's natural heritage responsibly, understand it more fully and use it wisely so that it can be sustained for future generations.