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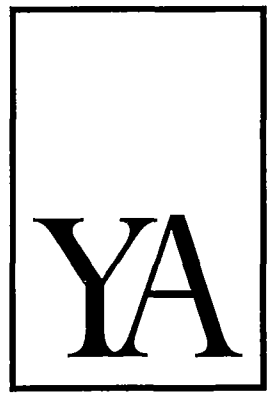
NATURAL HERITAGE DATA CATALOGUE

AND INFORMATION NEEDS -

AREA OFFICES



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NATURAL HERITAGE DATA CATALOGUE

AND INFORMATION NEEDS -

AREA OFFICES

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CONTENTS

Summary

This report summarises the findings of a review of Scottish Natural Heritage Area Office environmental information needs. It is based on visits to three Area Offices (Galashiels, Achantoul and Kilmory) in July 1998 during which staff were asked to discuss·

- Their information needs
- How necessary information is stored and accessed
- What data gaps exist
- How information is exchanged with other organisations
- What improvements they would wish to see

A number of common environmental information issues were raised during discussions as follows

- Most information is on paper which is vulnerable to loss and damage.
- The time spent locating information required for casework is significant
- There is considerable difficulty in assessing the context of local information at regional or national levels
- The existing range of data types is very large and variously catalogued Standardisation of organisation would clearly help, although there are distinct problems in identifying the most appropriate classification system

1 Introduction

1.1 Scope of the study

1 1 1 This report has been compiled as part of Scottish Natural Heritage's Information Strategy Review (ISR) which, as a whole, is intended to guide information strategy development in the coming years and to establish priorities for investment in information technology (IT) Terms of reference for the study are included as Appendix 1

1 1 2 This study is related to the functioning and requirements of SNH Area staff, and makes recommendations based on their needs The study is also concerned mainly with environmental data holdings and needs, although in many instances there is no clear boundary between information that can be catalogued as environmental and that which is predominantly administrative.

1 1.3 The study comprised visits to three Area Offices during July 1998, selected because they were expected to be faced with a wide range of issues relating to the local area, for example tourism and visitor management in the Cairngorms is a major issue for SNH at Achantoul It was considered essential that the study encompassed a representative sample of Offices in order to address this range of issues

1.1.4 The three Offices in the study were Galashiels in the Borders, Achantoul (Aviemore) Inverness-shire and Kilmory (Lochgilphead) Argyll and Bute. The author is grateful to Area staff for the time taken to discuss issues, explain data holdings and answer queries

1.2 Methods

1 2 1 At each Office, the same approach was taken This consisted of an informal (usually group) interview/discussion at which views were sought on a standard range of questions summarised in Table 1.1. The methodology for the study and the questions asked had been developed previously, to facilitate a more in-depth study, by interviewing staff from three further Area Offices. This report also takes account of the views expressed by staff at the earlier interviews.

1 2.2 The questions had been circulated to most of the staff interviewed before the Office visits, giving them time to consider their responses. The main points raised by staff are summarised in Appendix 2 Following the interviews, the major data holdings of the Office were investigated and catalogued A total of three days was spent in each of the Offices, with interviews and explanation of Office orientation taking place on the first, and compilation of the metadata catalogue on the two subsequent days

1.2.3 Results of the two parts of the study have been used to inform this report The following Sections deal in turn with the range of tasks undertaken by Area staff, followed by a summary of responses to each group of questions, recommendations for actions over the next five years and a summary of the information used in compilation of metadata catalogues.

Table 1.1 Standard questions used in interviews with Area staff

INFORMATION NEED
What types of environmental information have you found most useful? What categories/format of data were these? - *content* - *format* To what extent do current information sources meet you needs?
ACCESS TO INFORMATION
Have you had difficulty getting hold of information needed? What improvements in data quality/accessibility should be made? - *within SNH* - *externally*
INFORMATION GAPS
Are there gaps in the data? Are there operational difficulties that you cannot address because of lack of data? What needs to be done about the information gaps?
SHARING DATA/INTERACTIONS
Do you use data collected by national/local recording schemes? If so, which? Do you share/exchange data with others? How could your data needs be better supported by SNH?
KEY MESSAGES
What would you like to make known to the IS Strategy Review?

2 Staff Functions

2 1 This section briefly summarises Area staff functions, with a particular emphasis on the role of Area Officers (AOs) who were the majority of staff interviewed during Office visits A more detailed discussion of Area staff functions is provided by Downie, 1996[1] In discussion with staff, it was made clear that the main areas of work fall into two principal areas – within and outside designated sites. These are discussed briefly below

2.2 Designated sites

2.2 1 The amount of staff time spent on work related to designated sites (SSSIs, NNRs, N2K sites and ESAs) varies between individuals according to post and Area In a small sample of AOs in the Borders Area, less than 30% of time was expected to relate to designated sites (see Table 2.1). In Kilmory, staff estimated that less than 50% of time was spent working on designated sites, and further estimated that perhaps 1% of time might be spent visiting the sites. In Achantoul, it is likely that the figure for staff time working on and visiting designated sites will be higher, especially for the Cairngorms subarea Work on site related projects is more likely to involve contract supervision than actually undertaking in-house field surveys, research and monitoring.

2 2 2 Of the work related to designated sites, some is capable of being planned, such as routine surveillance and liaison with owners/occupiers Other parts of the work are reactive (e g damaging operations) and consequently unpredictable.

Table 2.1 Approximate percentage of time spent by Galashiels Area Officers on tasks related to designated sites

Task	Description	% of time
SSSIs		
Information and advice	E g. contact with owners/occupiers, advice to LAs on management	2-6
Management	E g. production of SMSs	3-10
Survey/monitoring	Projects	0-2
Consultations	E.g. statutory consultations and evidence to PLIs	2-5
N2K sites		
Designation	Consultation with owners, survey, notification and confirmation	5-9
Management	E.g planning consultations and casework	5-8
Natural Heritage Monitoring	Site Condition Monitoring and habitat/species surveillance	1-2
	TOTAL	**18-42**

[1] Downie, C 1996 Scottish Natural Heritage species data needs – analysis of requirements Scottish Natural Heritage Research, Survey and Monitoring Report No 79

2.3 Wider countryside

2.3 1 Outside designated sites there is a very wide range of potential areas of work which again vary considerably between Areas and individual staff, as shown in Table 2 2 which is based on the same small sample of Galashiels staff used for Table 2 1. Some tasks such as working towards pre-established targets for production of Local Biodiversity Action Plans (LBAPs) and routine work can be planned Other tasks, such as responding to planning applications are by nature reactive

2.3 2 Planning casework is a substantial part of most Area Officers workload and because of the strict deadlines for responding, it is frequently imperative that other tasks are set aside whilst an application is considered and a response developed Table 2 2 shows that in the Borders Area up to a quarter of staff time is devoted to planning casework In a wider analysis of the SNH Work Recording System, of 104 Area staff, this figure varied between 0 and 84%, with an average of 18%. The need for adequate information to deal with casework was highlighted by many staff, who expressed the view that their credibility and/or professional position could be undermined by inadequate availability of and access to information. Planning applications are seldom timed to coincide with appropriate period for survey, so inevitably SNH's responses are dependent on pre-existing information

Table 2.2 Approximate percentage of time spent by Galashiels Area Officers on tasks outside designated sites

Task	Description	% of time
Wider countryside stewardship		
Project delivery	E.g. Millennium Forest projects, support of Farming and Wildlife Advisory Group	0-3
Advice	E.g. practical advice to land managers, and to committees on EC/Lottery funded projects	4-11
Consultations	E g. on Woodland Grant Scheme and discharge consents	2-4
Habitats and species		
Advice	Under wildlife legislation	2-7
Licensing	Licensing functions	0-<1
Action Plans	Habitats and species action plans and LBAPs	1-3
Species management schemes	For species outside SNH action programme or BAP programme	0-1
Marine and coastal areas		
Advice/consultation	E g. to MPCU on likely impact of pollution	<1
Focus on Firths		
Advice/co-ordination	E g. strategy development, monitoring progress	<1
Project delivery	E g. education projects, research	<1
Rangers (LA)		
Advice/support	E.g. assessment of grant applications/general advice	3
Rangers (non LA)		

Task	Description	% of time
Advice/support	E g assessment of grant applications/general advice	0-2
Paths for all		
Advice/co-ordination	E.g. promotion, core funding and progress reporting	1
Project delivery	Financial support of Access Officers and network development	<1-2
Access and recreation		
Advice	E g development of access management plans	<1-2
Project delivery	E.g financial support for practical initiatives	0-2
Assisting local authorities		
Advice/support	E.g. grants for country parks, support for Local Nature Reserves	<1-4
Understanding the natural heritage		
Inventory/survey	E g baseline surveys	1-7
Information/reporting	State of the Natural Heritage reporting, audits and biological recording	0-<1
Environmental education		
Formal/vocational education	E.g. Schools Grant Scheme, curriculum support material, ranger training	0-1
Informal education/ interpretation	E g educational activities and products	0-1
Co-operation/networking	E.g. support for SEEC, liaison with SO	0-1
PR and Information		
Press and PR	E.g. informing and influencing the media, promoting SNH	1-4
Publications	Design and publication of leaflets etc.	0-1
Community projects		
CAT/urban projects	Advice and support	0-7
Zonal approach		
Development/ implementation	Development and promotion and production of strategies	0-2
Influencing partners on policy development		
Advice/consultation	Strategic advice	0-1
Town and country planning		
Advice/consultation	E.g. planning advice, and planning casework	12-24
	TOTAL	**28-67**

3 Environmental Data Needs in Area Offices

3.1 Types of environmental information used

Peer knowledge

3 1 1 Almost all staff indicated that the primary source of information was their own or peer knowledge. This could be used in several ways·

- Direct response from knowledge or experience.
- Personal knowledge of the existence of information from which to work and/or where such information is likely to be located.
- Knowledge of a second party who could be approached for that information (either Area or specialist staff in or outside SNH).

3 1.2 A major area in which staff are required to have expertise relates to sites and species The advantages of staff having in depth knowledge of their Area are manifold, including

- Time saving/efficiency.
- The ability to put sites and species into local context.
- The ability to make informed responses based on at least rudimentary knowledge of what has happened historically in the Area, such as grant applications on adjacent land

3.1.3 The disadvantages for SNH of its staff having this level of information self-sufficiency are that staff can (and do) leave, move or change responsibility, taking their accumulated knowledge with them Additionally, almost all staff have particular species or habitat interests, and if relying significantly on personal knowledge, may be prone to over emphasising the importance of their interests at the expense of less-favoured subjects and it is possible that objectivity is thereby compromised. As a result of a high level of personal knowledge, there is also less likely to be a comprehensive exchange of information within and between Areas and headquarters, and new Area staff have to have a very steep learning curve

Summary

Personal knowledge is the most important information source for Area staff This enables a rapid response to some issues but is likely to be an incomplete data source and is vulnerable to information loss from staff changes

Paper information sources

3 1 4 The second tier of useful environmental information is the diverse range of paper records, which may be related to specific sites, species, habitats, wider countryside or issues This is the most widely used data source, including published general reference books, survey reports, correspondence, maps and aerial photographs In some Areas, some information has been collated, e g the Borders Woodland Inventory in Galashiels, which brings together a wide range of information from a variety of sources For staff, the advantages of using paper records are that they are simple to use, update and replicate As data are added to the records, the historical record is built up, creating a valuable management resource

3 1.5 Disadvantages and problems relating to paper records include·

- The increasing volume of data which, for some sites such as the Cairngorms, is already almost unmanageable. The time required to locate and access information is substantial and there is a high probability that some potentially useful information will be missed.
- The need to use data in different ways means that environmental information ideally needs to be catalogued (and retrieved) in two formats, site information with species lists attached and species information with location attached
- Paper records can easily be lost. There is frequently no way of knowing that information has disappeared until it is next required.
- Comparison of different datasets and context evaluation is very difficult.
- Data holdings are vulnerable catastrophic loss. Even in 'secure' filing it is highly likely that there would be significant damage in the event of a fire
- Physical damage from handling and ageing is inevitable
- Once files have been archived, they tend to be used less frequently, especially if archived outside the Area Office.

Broad categories of paper information are summarised below

Designated site information

3 1.6 Each of the Offices visited had differences in the way information was organised, although designated site operational files were basically in the same format throughout. In addition to details of notification, management, and owner/occupier correspondence, these include a 'scientific' section which is used for details of surveys undertaken, and survey/research results, although bulky reports relating to designated sites are kept elsewhere in the office Site files can run to many volumes for large and complex sites or where there are contentious issues and/or pressures Abstracting relevant information may therefore be time consuming Site management information may be held in the form of site aerial or terrestrial photographs in addition to written and map-based records

3 1.7 The usefulness of the Earth Science Documentation Series was mentioned by many staff, who responded well to the consistent and clear approach taken in these documents It was regretted that they are only available for (some) earth science sites, as it was felt that this approach would be useful to biological sites. It was also noted that many biological sites have geological or geomorphological interest, which should ideally be documented in this series In Galashiels a series of summary files for biological SSSIs has been created, including many of the features incorporated into the Earth Science Documentation Series

3.1.8 Designated site information is used both for site management and for a range of other purposes· for example, as survey intensity is usually greater within designated sites than in the wider countryside, it is likely that species information needs to be extracted for use in setting LBAP targets. Site management statements provide a useful overview of a site, especially for advisers or new staff who need to become familiar with a site quickly

Habitat information

3.1 9 This is generally available in three formats.

- Broad land-cover surveys such as National Countryside Monitoring System (NCMS)

- Specific vegetation or habitat classification surveys e.g upland vegetation or lochs. This is typically Phase 1, Phase 2 or Natural Vegetation Classification (NVC) – vegetation maps
- Data collated from the range of existing information sources E.g. the Borders Woodland Inventory.

3.1.10 Coverage of information arranged by habitat is not comprehensive, e.g., grasslands have not been catalogued in this way in any of the Offices visited. Information on habitats is used for a variety of purposes such as in responding to planning applications. It may be necessary to put a site into context, assessing its relative importance and the impact of its loss on the extent and continuity of that habitat This is an area where digitised maps have a substantial analytical advantage over paper-based information

Species information

3.1.11 Like habitat information, species data can be results of specific surveys or collated from existing data and incidental records. Species records are usually held in the form of Biological Records Centre (BRC) record cards for information on a particular site and may have been transcribed into a card index of species with details of the sites where it has been recorded

3 1.12 Making and maintaining species records depends largely on immediate need, personal interests and diligence Species (especially rare or protected species) information is necessary for monitoring, planning casework and BAP targets It is important to be able to relate information on species within a site to the wider countryside in order to give context and assess importance.

Wider countryside information

3 1 13 This may be available in a range of formats, such as aerial photographs, maps (topographical, geology and soils), grant applications, land-cover data, planning applications, local structure plans, information on historic gardens and designed landscapes, in addition to the wide range of incidental species records and correspondence, any or all of which may be required for case work Wider countryside information may also be needed to put site data into context

3.1.14 Landscape character assessments have been completed for all of Scotland. The response to these amongst staff ranged from finding them useful to indicating that they largely state the obvious This is probably directly related to landscape complexity in different parts of Scotland. Area staff are likely to have difficulty in making best use of landscape information because they are generally not landscape specialists.

Other information

3.1.15 Other paper-based information in regular use includes general reference texts such as survey methods and identification guides, Botanical Society of the British Isles (BSBI) and British Trust for Ornithology (BTO) atlases, legislation and planning guidance documentation Maps at a range of scales are used, with most casework based on 1 10,000 scale

3 1.16 The question of whether existing information sources meet the needs of Area staff met with a variety of responses, from 'largely yes' to 'no because there are gaps in the databases' and

'no, because I can't find what I need' A series of common issues was raised which included·

- Updating records is done on an *ad hoc* basis or in response to specific surveys or projects
- There is no standard system for storing environmental information, with cataloguing methods having developed to suit local needs or arising out of the data sets themselves
- New staff, relocated staff and staff with new roles have a major struggle to find the information they need and are likely to be unaware of some potential data sources in many instances. This was apparent in the 'I didn't know we had that' response during the Office visits.

Summary
Paper records are very widely used for sites, species and the wider countryside
The effort required to locate the information needed for specific tasks is substantial
The effort required to keep records up-to-date in 'by site' and 'by species' format is also great
It is recommended that the Earth Science Documentation Series approach is extended to biological sites to provide clear summary information.

Digital information sources

3.1 17 Digital information sources have become available and practicable relatively recently, with the advent of greatly increased computer processing speeds. Site-based (e g. GIS) and species-based (*Recorder*) systems are utilised to varying extent in each of the Areas A degree of frustration was apparent in the responses of Area staff who are aware that software and systems exist, but either do not have access to them or feel that they are unable to make best use of them through lack of operational familiarity with the systems. Of the three Area Offices visited, *Recorder* was being used only in Galashiels, and here almost all species records have been transferred from record cards Clearly, ease of doing this depended on good existing card records, in addition to technical expertise with *Recorder*.

3.1.18 Comprehensive GIS appears to be a perceived need for most Area staff, although it may not be possible to deliver the system which staff indicated they needed in the short term The type of information currently available includes national datasets and (especially for the Cairngorms) information on some vegetation maps, species and management information Area staff need the Local GIS Facility (LGF) to provide a mixture of locally and nationally based datasets Hence, there is a need for local data to be available in digital format In Kilmory it was felt that the data available were not always of the required resolution and that apart from giving an overview of location, extent and overlapping of features, the GIS as it exists is not very useful In Achantoul, one of the problems was considered to be physical availability of GIS-specification (fast) machines and the expertise to use the system It was generally held, however, that as more datasets are digitised, the usefulness of GIS will increase

Summary
Wider access to GIS and more time to become familiar with it would be greatly appreciated
Recorder is not widely used, but has the potential to be a valuable tool for Area staff

3.2 Access

3.2 1 Getting all of the required information for a piece of work depends on·

- It existing (dealt with in Section 3.3)
- It being found
- Knowing that it exists

These problems are more likely to relate to paper than digital information and can result from non-systematic filing or under-use of cross-referencing Paper information may also have been lost or damaged or be in use elsewhere There was a general view amongst staff that time spent searching for material would be more productive if spent on analysis and interpretation. Furthermore, staff felt that this affects the impression of SNH that is given to outsiders. Information is frequently sought from (and by) external organisations and this is dealt with in Section 3.4.

3 2.2 Improvements to data accessibility depend largely on systematic and rigorous filing, cataloguing and cross-referencing of material, with the facility to undertake key word searches in information databases Staff in Galashiels also expressed the desire for a GIS-based system that could be interrogated to show all relevant information within a delimited area, for example all surveys or previous grant applications. This would enable a complete picture of the interest and history of an area to be traced. It was felt that this would increase efficiency significantly. It was also suggested that a system of paper maps used to record particular species or items of casework could be an effective lead into the available data for a site.

3.2.3 An issue raised by many staff was the sometimes-erratic flow of data from Areas to Headquarters and *vice versa.* In particular it was mentioned that information on marine subjects was not disseminated effectively. It was suggested that there needed to be greater rigour in copying abstracts of reports etc to the Area Offices and to Headquarters

3.2.4 Significant improvements in data accessibility could be made if environmental data handling was made the duty of a specific post within each Area Office This view was expressed by several of those interviewed, and was felt to equate to provision of an additional specialist within the team to complement the existing skill base The role of the Environmental Information Manager would be to ensure that data were held in an appropriate format or formats (digital or paper) and accessible for different purposes (by species and by site) It was considered imperative that this post was held by someone who understood the functions of Area staff, from an environmental rather than a technical background, but that suitable and enthusiastic staff already existed in the Areas

3 2.5 Galashiels had already considered the possibility of re-orienting staff responsibilities by subject rather than geographic area, in order to incorporate the role of Information Manager It had been concluded, however that at present there are significant knowledge and liaison benefits to be gained from Area Officers' association with a territory.

3.2 6 The library and search facilities within SNH are probably not used as frequently or efficiently as might be possible It was suggested that the interface between library and Area

staff could be formalised, enabling staff to make better use of sources of locally and nationally held information

Summary
GIS databases with information on previous grant or planning applications and management in the wider countryside would be very useful in developing a picture of the history and interest of an area
The presence of a dedicated Environmental Information Manager in each office would be beneficial for maintaining databases, providing a high degree of technical competence and a standard approach to information storage
Greater formality in the interface between library and Area staff is needed to ensure adequate resources are devoted to maintaining databases in Area Offices

3.3 Gaps

3.3.1 It is inevitable that there are gaps in the available information. The wide remit of SNH results in staff having to deal with a diverse range of issues within each Area, many of which cannot be prepared for in advance. Gaps in baseline biological information on designated sites are generally restricted to the more specialist taxa such as fungi and invertebrates although more basic data (e g NVC mapping) have not been collected for all designated sites.

3.3 2 The network of amateur recorders and collectors, who have previously contributed substantial amounts of data, is ageing and there are concerns about how a new generation of enthusiasts will be recruited. This may result in there being fewer records collected now than in the past. This lack of consistency of monitoring effort will directly cause the appearance of significant changes in species richness and population sizes. It is also possible that population trends may be missed For example, changes in the numbers of key species may not be detected until there has been a significant decline, whereas with more intensive monitoring, trends may become apparent much earlier

3.3.3 It was also of concern that the quality of data collected during some contracted surveys is not sufficiently high for staff to have confidence in them. It was noted that there needs to be a method of indicating the likely quality of data, and that this is particularly important when data are digitised. There is an inherent danger in wide access to digitised data if those data are not of a very high quality because such information tends to be trusted.

3.3 4 Wider countryside information tends to be sparse, as is geomorphological information, which can make responding to casework difficult, and does not provide the context for information on designated sites

Summary
Information on designated sites is more comprehensive than information about the wider countryside
Staff spend less time in the field than they would like to do
There are likely to be fewer amateur recorders and collectors in the future than there have been until recently

3.4 Sharing data/interactions

3 4.1 The principal organisations with which SNH Area staff may need to exchange information are:

- Scottish Office Agriculture, Environment and Fisheries Department (SOAEFD)
- Local Authorities
- Scottish Environment Protection Agency (SEPA)
- Royal Society for the Protection of Birds (RSPB)
- Forest Enterprise/Forest Authority

Other organisations include the Biological Records Centre (BRC), Local Records Centres, universities, specialist groups/recorders, the Scottish Wildlife Trust (SWT), British Trust for Ornithology (BTO), Deer Commission for Scotland (DCS) Institute of Terrestrial Ecology (ITE) etc

3.4.2 It was noted on several occasions that where there would once have been free exchange of information between statutory organisations, there was now either reluctance or a policy of charging for information. This is despite there being agreements between organisations such as SEPA and SNH to exchange data This is a significant problem in some Areas, particularly where management agreements are a major issue and agricultural data from SOAEFD are essential In some instances where information is required quickly to meet a deadline, organisations such as the BRC respond too slowly and it was felt that the level of service provided was not altogether adequate.

3.4 3 The existence of Local Record Centres is felt to be a major advantage where they exist Unfortunately, these have suffered funding problems exacerbated during local government reorganisation, and there is frequently difficulty ensuring their long-term viability Most Area staff would benefit from properly resourced record centres Clearly, Local Record Centres have to be a partnership between the organisations that are most likely to use them in each Area At Kilmory, for example, the partners could comprise SNH, Argyll and Bute Council and Forest Enterprise. It was suggested that the possibility of securing European funds to help establish and maintain Local Record Centres should be explored

3.4.4 Staff at Galashiels, who have had intermittent local authority co-operation for a local record centre suggested that the facilities offered should include promotion of greater public involvement, through the provision of interactive, computer-aided specimen identification to help generate enthusiasm for biological recording and start to fill the gaps left by the diminishing number of active recorders. They also felt that the resources of the local record centre would, if judiciously distributed, enable potential developers to bypass sensitive sites or design mitigation measures at an early stage in the development process. This would lead to a smaller number of confrontations with SNH.

3.4.5 Another area in which there is the possibility for streamlining functions is by improving access to and links with local authorities to ensure that SNH is more effectively involved in the structure plan process. By co-operating with local authorities and incorporating structure plan boundaries into the SNH GIS during the consultation phase, there would be increased

opportunity for negotiation. Staff at Kilmory were particularly aware of the potential benefits this could bring, and emphasised the importance of having the funds available to undertake surveys before structure plans are finalised Achantoul staff made a substantial contribution to the Badenoch and Strathspey district plan in the expectation that this would save time in the future In practice, however, planning authorities often seem to override their own plans, so the time savings have not been as great as were hoped. It would be useful if this approach was studied to see whether it does confer significant time savings

3.4.6 The exchange of information with universities, specialist groups and private recorders was considered fairly haphazard in most Areas Staff at Achantoul stated that university researchers do not always obtain the appropriate permit for working in designated sites and/or do not forward their findings to SNH. This issue was also raised elsewhere The frustration caused by recorders' reluctance to pass information to SNH was expressed strongly. It was suggested that the secretive attitude of recorders who refuse to submit locations of rare species because they were worried about information entering the public domain could be self-defeating – if SNH does not know what is there, they cannot effectively safeguard it.

3 4 7 Most staff admitted that they seldom submitted their own records to recording schemes, and realise that the biological recording system fails if systematic returns are not made However, most cited pressure of work as a major reason for not contributing fully This issue might be less significant if there were Local Record Centres. Maintaining contacts with external organisations and individuals was important for staff, for both personal development and professional credibility

Summary

There is a wide range of organisations with which information is or could be shared
Relationships with these organisations range from very good to less than adequate
Local Record Centres would be a substantial benefit for both SNH staff and external organisations
SNH needs to become more rigorous in obtaining data from collectors and recorders
A study to assess the impact on planning casework of making significant contributions to local structure plans would be useful

4 Summary of Information Accessed

4.1 Introduction

4.1.1 In each of the three Area Offices, some time was used for familiarisation with where the main datasets were located and what cataloguing systems were used. This time was usually an opportunity for staff to continue discussion of the questions raised during the interviews and to demonstrate issues or problems they had encountered during their work

4.2 Summary of information accessed

4.2 1 The information used in compiling metadata catalogues was primarily in the format of paper records and the majority fell into the following categories·

- Species surveys – reports/data
- Site surveys – reports/data
- Biological habitat surveys – report/data, e g River Corridor Surveys
- Physical surveys, e.g. geology/geomorphology and landscape assessment – reports/data
- Research projects – reports
- Management information
- Issues reports/information e g. impacts of oil pollution
- Site designation information
- Casework information
- Background information, e g. maps and legislation
- Incidental information, e g road kills

4.2.2 The limited time available in each Office, and staff workloads meant that computerised information could not be accessed for inclusion in the metadata catalogues It is suggested that this could take an additional day in each Office to accomplish

5 Recommendations

5 1 **Promotion of consistency in the databases and software used in each Area Office.** Currently use depends extensively on individual enthusiasm and knowledge, historical availability and *ad hoc* contacts with the staff in headquarters

5.2 **Further pressure to improve and/or formalise relationships with other statutory organisations with which SNH can or does exchange information.** This would include development of the relationship with SEPA and high-level pressure on SOAEFD for greater access to agricultural data.

5 3 **Promotion of Local Record Centres.** SNH should take the lead where there is local enthusiasm for establishing a record centre, forming links with potential funding partners and using the experience gained in Areas where record centres exist to the benefit of Areas where they do not. This could include supporting a costing exercise, guidance on application for European funds, workshops between staff in Areas with and without centres and resources for grant-aiding equipment and training.

5 4 **Investigation of the possibility of creating Environmental Information Officer posts within each Area.** The role of this post would be to create and maintain systematic environmental records, ensuring a standard approach between Areas and reducing the amount of time currently spent searching for material by staff. The post holders would bring an additional specialist technical skill to the existing teams, which would contribute to the level of job satisfaction for all Area staff. To be effective, the post-holder will need to have a wide view of the requirements of local staff, and be both reactive to their needs and proactive in making recommendations that are supported by Area staff. As the increases in efficiency for other staff that could result from the existence of an information manager would need to be demonstrated, it is suggested that this recommendation is tested in pilot Area(s) where there is a relatively high degree of existing organisation. A pilot scheme would need to be run for a minimum of two years in order to develop and use the databases SNH would also need to create a central system for managing Information Officers and to ensure national access to existing corporate datasets is co-ordinated.

5.5 **More rigorous and systematic dissemination of information to and from Area Offices.** This is needed to ensure that there are no major discrepancies in the holdings of libraries A minimum requirement should be that digital abstracts and key word lists are incorporated into the computer library catalogue of each Area Office to enable efficient searches for relevant material. SNH library is currently hoping to implement an organisation-wide automated library system, which would ensure that all offices had access to information on all library materials held within SNH. This would also bring the opportunity to share information using Web technology From 1997/98 local library support staff gained the potential to act as local 'managers' for library services. Whilst this is a positive move, there are a number of issues that remain to be addressed in order that support staff can provide this function·

- There should be a formal line management role from Bonnington library to Area staff to influence the type and level of service delivered.

- An appropriate amount of time should be designated to support staff for library duties
- The potential turnover of support staff must be recognised in order that a robust cataloguing system is developed which can withstand personnel changes

5 6 Area staff should also be aware that reports produced or received locally should be brought to the attention of library staff in Bonnington. This would be assisted by an additional requirement for contractors to supply a copy of final reports to the library at Bonnington In turn, all SNH reports should follow the same procedure as the Research, Survey and Monitoring, and Review Series These are advertised on the Publications Forum enabling Area staff to request copies required locally through the library. This would be especially valuable if it could be accessed electronically.

5.7 **A systematic digital catalogue of books, maps, reports, aerial photographs and GIS databases should be maintained by each Area Office.**

5 8 **Clear guidance should be given to Area staff on how and where to make permanent records of habitat and species information noted during the course of their work.** Whether information managers exist or not, there should be rigour in transcribing field notes and incidental records into databases to ensure that there is continual input of data. These data should be collated periodically so that changes in distribution or status can be assessed

5 9 **Access to internet/email facilities should be improved.** This will enable all Areas to be able to make use of wider contacts and aid rapid access to information

5.10 **Improvements should be made to the responsiveness of training provision.** There should be a particular emphasis on workshops to disseminate staff experiences in particular fields with the aim of developing standardised approaches to types of casework It is also recommended that there should be more training feedback and refresher courses to enable previous trainees to overcome problems and operational difficulties they have become aware of since training

5.11 **Resources should be provided for computerisation of species data.** In Areas where Local Record Centres are not a practical option and in the interim period before Local Record Centres become established, there is a pressing need to create and maintain species databases, particularly for setting and monitoring BAP targets. With greater use of both GIS and *Recorder*, the facility to display species data will be a significant benefit.

5 12 **There should be continued digitisation of spatial data.** Priority should be given to digitising information at a variety of scales to enable Area staff to assess the local, regional and national significance of sites, species and habitats.

5.13 **Field visit time provision should be increased for Area staff.** Area staff are concerned about their increasing isolation from designated sites and the wider countryside. This has an impact on their ability to provide a professional response to casework, affects the level of job satisfaction and may result in the level of field skill decreasing. Increased availability of time for field visits may result from increased efficiency in environmental data organisation

5.14 **Digital habitats and species data should be a standard requirement of research, survey and monitoring contract reports.** This would be best achieved by making it a standard part of the procurement process

5 15 **The cataloguing exercise started during this contract should be completed.** This should include a full listing of the contents of box files and the book collection in Area Offices An additional field on the database should be added to show the location of information

Appendix 1 Terms of Reference

Background

1.1 Scottish Natural Heritage (SNH) was established under the provisions of the Natural Heritage (Scotland) Act 1991 With information systems (IS) inherited from its predecessor organisations, in 1993 SNH developed an IS strategy to support its business needs Following delivery of the IS infrastructure and a number of major applications, attention is now being given to achieving the benefits from the investment in the IS infrastructure and applications

1.2 An Information Systems Strategy Review is underway in 1998 to project a future vision for IS This exercise will produce a new IS strategy and implementation plan that will give a firm basis for the use and development of IS and expenditure on IS in SNH in the next 3-5 years. It takes account of new approaches to working in which organisational changes have been made to improve operational efficiency, information flows, development of responsibilities and decision making.

1.3 A key component of this is the extent to which SNH's business needs for information about the natural heritage are being met To gain a better understanding of these needs, a pilot project to catalogue SNH's data holdings in a small sample of area offices will be undertaken Through discussions and interview, the study will also assess needs, priorities and gaps in information holdings.

1.4 The definition of natural heritage or environmental information, as opposed to, say, administrative information is not clear cut. Both can have spatial or location attributes, and administrative information may be as operationally important as information about the natural environment. In order to keep the study within deliverable bounds it will focus on descriptive information about the natural heritage.

2. Objectives

2.1 The objectives of the Natural Heritage Information Needs Assessment are to.

1 Catalogue key environmental data holdings according to a standard set of attributes (metadata).
2 Assess operational needs for environmental information, information accessibility, key gaps, data sharing arrangements and opportunities, and other information issues relevant to improving information availability.
3. Synthesise results into clear recommendations for the IS Strategy Review

2 2 The contractor will work at three Area Offices within mainland Scotland, for instance at Cupar/Airlie, Stirling/Oban and Aviemore/Dingwall (exact locations will be decided by the start of the contract)

2.3 Findings will be documented and presented to SNH's Environmental Data Group for input into the IS Strategy Review.

3. Method

3.1 The study will be facilitated by an experienced contractor working in collaboration with SNH staff

3.2 Initial briefing discussions will be held with staff from SNH co-ordinated by the Chief Scientist's Unit (CSU) in Edinburgh The contractor will then visit the three Area Offices in the study. Each site will have been informed by CSU staff in advance in order to allow for prior preparation.

3.3 Within each Area Office key datasets (e g. most important/biggest) will be documented in a summary metadata catalogue [Appendix 1]. This incorporates core attributes from the 'Discovery National Geospatial Framework' adopted for testing by the Scottish Government Sector GIS Users Group In the event that the task can not be completed an assessment will be made of the size of the task remaining in each Area office studied.

3.4 Each site will be completed within three working days (accepting that it may not be possible to complete the metadata catalogue)

3 5 Interviews at each location will take the form of dialogue and discussion, framed around key points identified in Appendix 2. In addition to ongoing discussions, around two hours should be set aside for this.

4. Outputs

4 1 The contractor will be required to submit a fully documented report of findings and recommendations (in hard copy and electronic form) to the Environmental Data Group This will comprise.

1. A metadata catalogue in both hard copy and digital formats (on 3 5 inch disk in Excel 5 worksheets - structured as in Appendix 1) for each Area office visited

2. Draft and final reports to SNH (5 copies bound and page numbered, one additional copy unbound) comprising:
   - an account of the project, describing the objectives and the approach, and lessons which may help to inform such an exercise elsewhere;
   - a summary of responses to the questions asked, structured according to the sections in Appendix 1,
   - comments on issues relevant to the marshaling of information, taking account of SNH priorities;
   - suggestions of options for developing approaches for future computerisation of data,
   - a summary of information accessed, and a bibliography of relevant source material,
   - recommendations for action(s) over the next five years

Diagrams and tables must be of a standard suitable for publishing and photocopying Decisions on whether to publish the report will be made at the discretion of SNH

3 Two digital copies of the final report on 3.5 inch disk in Microsoft Word for Windows v 6.0a format will also be required. One must include the report as one document, the other must provide text, diagrams and tables in separate files (not interleaved in a single document).

Appendix 2 Summary of points raised by Area staff during discussions on information needs

Galashiels 17th July 1998 – Chris Badenoch, Pip Tabor Andrew Parker

Information needs

Fundamental need for locally-based information with a national context e.g status of species

Needs to be accessed in 'what is where' and 'where is what' formats

Need to be able to get hold of data, need to be able to store data and need to be sure all data on site/species are together

Stressed value of historical data

Use *Recorder* extensively, but are aware that it could generate more sophisticated outputs. Need to have more training in order to use this and other databases to their full potential and would like to see greater integration between the databases.

Would like to see an IT Officer in each Area Office with a major support role – not just a 'computer-junkie', but someone who understands the operational needs of staff.

Have mixture of paper and database records with ongoing digitisation process Phase 1 maps from 70s, and Phase 2 for approx. 800 sites across the Area (some in an early version of method) Maps generally high quality, but some are photocopies/sellotaped. Because of the mixture of data formats updating is done on a very *ad hoc* basis

Information arranged by km grid square – mainly vegetation with some fauna records

There can be problems with records not kept up to date, and issues over data quality (e g. Phase 1 surveys carried out by trainee teams).

There is probably only a three year window left in which to get information system sorted out before everyone who was involved with site designation has moved on Staff turnover is less of a problem in this Area than in others but is seen as a major issue together with changing roles.

Providing a response to a planning application would depend on (i) personal knowledge of the site (ii) grid square files which may be very extensive for some squares (iii) *Recorder* for species information (iv) site visit.

There is frequently a problem with timing of contracts being let owing to financial year constraints – too late for proper planning of summer field work.

Access

Getting the right information depends on knowing what is there. Providing the right response depends primarily on personal knowledge of a site

Need to be able to select area and find what information is held about that area in GIS format Even if all the information is not included in database, it should indicate what data exist and where it is held. It should also include information on events (management etc.) in that area and prompt at correct monitoring intervals/review periods to reduce the need for staff to remember what is needed (less margin of error). Would make casework much more efficient i e because of disparate data sources, checking even a brief citation takes at least a day

Gaps

Fundamental problem with not enough survey being done. Have to concentrate on monitoring protected species, so can easily miss trends that are shown earlier in common species. There is no community level monitoring. Also records may appear to show big declines in some species which is artefact of much less frequent survey/monitoring than there used to be. Needs to be consistency of effort in monitoring to get a true picture.

Wider countryside monitoring is essential because of the need to address a wide variety of issues, not just those connected with protected species/sites.

Problems arise when databases are not maintained. Local BRC was doing a good job with financial/equipment and training support from SNH, but recent staff changes and lack of support from the local authorities have resulted in less enthusiasm for maintaining/building on the records that are already held. There is no LA ecologist.

There has been no facility on *Recorder* to include marine species.

Updating databases is probably not being done thoroughly There needs to be a formal process for making additional records e.g badger sett locations found whilst doing site visit for another purpose

Sharing data/interactions

Are fortunate in having a variety of amateur specialists in the Area. However many are old. Needs to be an SNH policy decision to get wider recording done/data added to records NBN seen as crucial to this

When specialist groups visit, do get species lists in exchange for providing landowner information etc. Have found that some specialists don't want to release information because this may prompt a rush of visitors to sensitive sites Needs to be an understanding that SNH can't do its job properly without this information

There is probably a lot of information being collected and not passed on. When contracts are done for SNH, information needs to be supplied in correct digital format for addition to *Recorder* etc.

Had an agreement to provide data to the local BRC Would like to see an interactive BRC with the facility for the public to bring data in for input to the system or specimens in for on-screen identification guidance, with information on status /distribution as a 'reward' This would need to be carefully designed so that sensitive information was not released. BRC would also act as a source of information for SNH and others (e g developers/consultants) so that time could be saved preparing cases for planning inquiries etc and all would be working from same information base Needs to be pushed to LAs from central SNH sold on mutual benefits.

There needs to be agreement on confidential information – damage caused by releasing sensitive data e.g. raptor information.

There is an issue of what to do about using/exchanging data which are known to be unreliable – there needs to be a way of coding records according to confidence in accuracy This is a particular problem with national recording schemes which would be used more if there was greater confidence in the data

Key messages

Must be a push from the centre to get all Areas using the same databases and recording systems.

Need to have greater co-ordination between datasets. Would like GIS with links to *Recorder* etc so that all habitat and management information was linked to species records. *Recorder* is essential – *Recorder* for Windows would be better/more user-friendly.

Could demonstrate (20% ?) greater efficiency in work with GIS system holding all relevant information. Would ensure more professional response, and greater job satisfaction

Needs to provide information on NVC, Phase 1 and 2, habitats, and species presence/status Must relate to Area level or it will not be useful

There needs to be greater guidance from central SNH on use of systems and databases and on level of information required for decisions on management/planning applications (e g. differences in how applications for bracken spraying are dealt with in Borders and D&G)

Achantoul 22nd July 1998 – Doug Evans, Anne Elliott, Ross Lilley and Dave Carstairs

Information needs

Personal knowledge is the most useful source of information, particularly related to local issues Local staff often have prior knowledge of the Area through holidays etc.

If information on rare plants is needed would consult the atlas to see if it is in the vicinity and then go to the specific literature (a data search hierarchy).

Information is needed in two formats – by site e.g for planning applications and by species e g for rare/protected species work.

Habitat surveys/NVC/ black files data are being digitised (part done) and are used a lot e g for consultation on N2K sites, but only by a few staff at present.

MLURI land use data are useful for areas where there is no other information e.g used for N2K data forms. % cover of broad habitat classes is better than nothing It is also used to extract information for the GIS (context) e.g. could use it for woodlands ITE land classification survey data could also be mis-used if it was available

CIS is not used

Earth science/landscape character reports are not used much because the information is stating the obvious, although text would be used for official site descriptions This applies to the landscape assessment and in the context of Cairngorm which is a relatively simple but very dramatis landscape

Earth science documentation series is very good, but has limited extent – only geological SSSIs It would be a useful approach for biological sites (which often have geological/geomorphological interest which could be damaged by, say, forestry operations)

Staff are struggling with information for wider countryside issues – there needs to be a variety of databases to ensure that some information is located

BSBI information (10 km square level) is useful for big sites like Cairngorms, but less so for smaller sites. Ancient and Semi-Natural Woodland inventory is good at all scales and is available on the GIS

Information doesn't always meet needs e.g application for sewage works discharge consent at Kincraig is difficult to respond to because information of pearl mussel locations is not known and there is no information on whether the discharge is likely to affect them. There is also no collated information on RDB invertebrates etc (except for the ISR). Peer knowledge is vital

Information sources don't always meet needs because they are too badly organised

Site management depends on staff knowing the sites, but as less time is spent on site now, staff site knowledge levels are declining. Part of the management problem arises because the sites are very large and complex with multiple land owners, problems with absentee landlords etc.

Access

The major difficulty is knowing what information exists Contacts outside SNH are important e g Royal Botanic Gardens, universities are used and an (informal) two-way information flow operates

Staff stressed that it is important it is to keep relationships going with external organisations, both for personal development and job satisfaction Staff need to know what is going on outside to maintain professional credibility

Databases need to be simple with key word searches and navigational clues

Problems have arisen because all the government departments have become agencies – information that would once have been made available FOC now costs

Site Condition Monitoring will generate large amounts of information (e g estimate 75 staff days for the Cairngorms SCM) and there is currently no logical way of collating it. There is a staff resource issue here

Use of the GIS is physically limited because there are few suitable PCs. Ideally it should be on every desk Alternatively there should be a 'spare machine' in a communal space. The GIS machines must be fast. It is also not very user friendly – staff could get more out of it if they were better trained and had the time to practice and develop skills

GIS would be more useful if there was more site-based information on it

Having *Recorder* linked to the GIS would be good.

If Area staff had access to the internet they would be better equipped to put local data into context

Gaps

There is much less information outside designated sites. What information exists needs to be collated and made accessible to all staff because it is often more useful than Phase 1 data There is no systematic way of adding species records to the non designated site register

Data collecting needs to be a consistent effort It is difficult to compare old and new data sets

Wider area information is needed for SNH input into several projects e.g. production of local interpretative plans e.g visitor management plan for the Glen More area needs tourism, FE data etc collated.

A member of staff in a previous post had maps of the with all sites and site-based interest marked This became the first place to search for information. Here (at Aviemore), staff are building their own data sets because it takes too long to find information.

Invertebrates data distribution relates to visitor/recorder effort. This makes it difficult to assess the importance of a site because other sites haven't had the same level of survey effort or have not been surveyed at all Other species groups such as fungi are also not well covered

There is no earth science information on the GIS – there is not full coverage of appropriate scale data digitally and this is likely to be expensive

There is very little geomorphological information available – tends to be scattered throughout reports and is difficult to find Where to look relies on personal knowledge of what has gone on previously

Sharing data/interactions

RSPB data are used. National recording scheme data are also used but Area staff don't systematically submit their own records

The benefits that accrue from systematically kept records need to be assessed against the resources required to make/maintain records

The information flow within SNH has room for improvement

Staff need access to BRC data for an instant 'professional' response

Data needs could be better supported within SNH – there is a feeling that the situation has got worse because expectations for spread of information have risen (internally and externally).

Visiting experts can sometimes be steered into looking at specific sites but often tend to visit RSPB owned sites because there are fewer problems with access etc.

University research/projects frequently go on in designated sites without SNH being informed. It is very hit-and-miss whether SNH receive any information, even though this is a requirement of NNR site permit. Relevant projects also occur in the wider countryside, e g. recent work on rare pinewood herbs.

Student projects can sometimes be steered e.g arctic willow autecology at Creag Meagidh This works best if benefits in kind are available e g. accommodation (NB there is a central system for approving student projects)

Record Centres make a big difference. Inverness is OK for what it has, but there is a cash and staff time commitment problem LRCs need to have equipment.

There needs to be good/maintained contact with BSBI recorders.

Key messages

Make better use of the what we've got.

Needs to be a better information flow/communication within/between organisations.

A Local Records Centre is very important.

Staff must have the right equipment to use the available data sources.

Kilmory, 28th July 1998 - Lynne Farrel, Dan Hunt and Richard Pollitt

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The need for information

Area Officers need to develop target-led management plans which necessitates having information on the extent and distribution of habitats and species on a regional/national scale. Prescriptive advice requires spatial and management information to be integrated – this enables targets to be set and worked towards rather than simply reacting to situations/enquiries Woodland data have been collated and it is possible to assess their importance at a local and national scale, but this is not possible in other habitats.

The information required for context is frequently scattered throughout a number of reports and it is difficult to know whether all the relevant information has been found

Aerial photographs are very useful, particularly because there is a full set of 1988 photos in addition to partial 1945 and 1977 sets and selected SSSIs.

Landscape character assessment reports are available for Argyll and Firth of Clyde and Knapdale NSA The maps are not of great quality, but would work well as an overlay with other information e g for wind farm applications (with appropriate processing power) it would be possible to assess the impact on adjacent landscape blocks.

Staff are cautious about using/interpreting this information because they are not landscape experts, although it seems to work well at a local level.

Peer knowledge is extremely important for getting information about sites There has been a degree of staff turnover, but some staff have been there for sufficiently long to be useful information sources

Prioritising information needs is difficult in this region because of the diversity of habitats and species – there are seven Natural Heritage Zones

Access

Finding all the relevant information for a piece of casework is a detective job which is wasted time It needs to be made easier so that staff have to spend less time tracking down information and can spend more time interpreting/analysing it

Training in use of GIS needs to be ongoing – the provision of a help-desk would be most useful (N B A LGF help-desk exists but was not known about in Kilmory) Landscape interpretation training also needs to be ongoing. It would be most efficient if one/more members of staff in the Area were fully conversant with GIS. There are people in the Area who are keen to learn more and these could be made better use of

Area Officers are not necessarily the best people to organise and collate data, but staff whose role is data organisation need to have a good understanding of the work of technical staff An information manager should have keeping abreast of training needs as part of their role

Access to information is sometimes constrained because of the geographic dispersal of Offices in the Area – including the islands Offices

Access to the internet would be very useful.

Staff don't make best use of library/search facilities – these are not properly promoted The 'front-end' of the library facility needs to be better developed with a dedicated help desk

Best use is not made of national datasets because it is not always clear how access to them can be effected – e.g is there a central contact in SNH for administering the BRC contract?

Datasets need to be accessible and easy to use or they won't be used. E g *Recorder* has potential but requires too much help.

Training is poorly structured with no feedback Whilst basic skills training is good, these need to be developed further and followed up

Gaps

Many of the large (national) datasets don't have the necessary resolution for practical use For example wind farm turbine locations with eight figure grid references overlaid with a wide scale land use database doesn't enable any meaningful analysis.

There is currently no way of assessing the significance of a site (with confidence) – its importance at Argyll and Bute scale. This has implications for assessing the impact of developments

Most work requires 1:10,000 maps which are not currently widely available on GIS because expensive. Whilst the money is available to put the NVC of Argyll uplands onto the GIS, the lack of 1·10,000 maps means that digitised data would not be useful. These data were collected to inform the forestry strategy. (N.B. Digital 1:10,000 maps are available through the Cartograpohic Unit)

GIS has the potential to be very useful – especially if management agreement information could be integrated with site information (currently filed separately), but there needs to be a major effort in digitising more data to enable the types of analyses that are likely to make a difference to staff efficiency. Other datasets which would be useful include local planning Area boundaries, completed/updated rare plants site locations (a summarised form of this would be useful for local authorities to flag-up sites that are likely to be sensitive in relation to planning applications).

NVC maps are not available for all SSSIs, Phase 1 surveys also only have partial coverage (full coverage of Mull and Tiree). Filling the gaps is particularly important because of the continuity of SSSIs in western Scotland

Most of the data gaps appear to relate to cataloguing and cross referencing than to a lack of basic information, although there are clear gaps

There are also gaps in some taxonomic groups· fungi, many invertebrate groups and bats – specific survey data are reported, but ad hoc records are not systematically transferred to record cards – information is amassed in site files for designated sites Records are only collated if a project requires it.

Recorder is not used, and would need to be adopted throughout SNH if it was to be used to assess species data at a Scotland-wide scale.

Marine sites are seriously under-recorded, except for some N2K sites and seal surveys – MNCR sites are just dots on the map. Marine information does not filter out from central SNH at all except in published reports. There is no marine biologist on the staff at Lochgilphead and no good contact in AS to facilitate keeping up to date with information

There is some reluctance on the part of landowners to let surveyors onto land because of the fear of sites being designated. There is also a concern that biodiversity monitoring gives the general public the right to have access onto private land

Sharing data

Two way information flow depends on personal diligence – e g sending squirrel records to the national recording scheme. There is also no current systematic copying of reports/ abstracts of reports to the SNH library

There needs to be a long-term priority attached to sending data from Area Offices to a central recording scheme directed from the centre

There is enormous potential for sharing datasets with Forest Enterprise/Forest Authority – this would fill a lot of the gaps in SNHs own survey data Their WGS data would be particularly useful (but would need 1 10,000 digitised maps). The FA/FE would also find SNH data useful

It would be useful to feed into external bodies e.g. tying local plan boundaries to landscape boundaries and/or NVC information. This would enable greater influence on the development of local plans which would result in greater efficiency over a long period Survey and data collation effort should therefore be linked to/constrained by not only the financial year but also longer return periods

Relations with Argyll and Bute council are generally good, they are financially limited and would benefit from increased data sharing with other organisations such as SNH They are keen to do this

Whilst block data are available for birds, the BTO would be approached if more specific information was essential

Relations have not been particularly good with SEPA despite the Memorandum of Understanding – they have information which would be useful e.g. discharge consents for fish farms.

There are considerable difficulties with SOAEFD – no access to IACS data etc this makes setting management agreements very difficult This is a totally different situation from access to WGS information from the FA Suggested that a test case would be the best way of resolving this. There are185 management agreements throughout the Area.

There is no Argyll Records Centre. This would be useful in getting specialists to interact more – e.g mammal people don't talk to entomologists. There may be a possibility of getting European money to match funds contributed by SNH, LA etc. (possible RSPB – islands, SEPA, not SWT/NTS) IT needs to be an SNH target and for one dynamic person to push, following an Argyll feasibility study

Key messages

Data need to be available at a range of scales (local, regional, national) for context, availability at national level is only useful if it is matched by local level – co-ordination of distribution of effort

Digitised 1.10,000 maps are essential.

More information is needed on what is going on in the marine field.

Integration of vegetation cover datasets – partnerships with other organisations would be useful

Access is needed to SOAEFD databases

There are ongoing training needs (co-ordination).

Library facilities need to be developed/made more use of.