

**A Review of the  
Biological Recording Infrastructure in Scotland  
by the Scottish Biodiversity Information Forum**

**APPENDICES TO THE QUESTIONNAIRE FINDINGS**

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**Note on redactions**

All comments are reproduced verbatim except where personal information has been redacted by the SBIF Review Working Group to protect the identity of the questionnaire participant and/or their organisation.

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14 November 2018

## APPENDIX 1: List of questions used in the SBIF Review Questionnaire [<back to contents>](#)

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### Introduction [<back to list of sections>](#)

\*\*\*Questionnaire Now Closed \*\*\*

Dear Questionnaire Participant

Many people are involved in the collection or use of biological records - together we are a vital network with a shared desire to understand, enjoy and protect the biodiversity around us. We are needed more than ever as pressures on the environment are growing and biological records are essential for monitoring species and habitat change, informing planning and conservation decision making and bringing people closer to the natural world. Yet the complexity of our biological recording communities and infrastructure for collecting and sharing biological records, along with the difficulties of securing long term funding, may mean that we are less effective collectively than we could be.

Through this questionnaire we are aiming to understand how our network is working and where there are opportunities to strengthen it further, both locally and nationally. Your responses will help us to identify and bring about the improvements we need to achieve our vision:

*"High quality species and habitat data will be collected and managed through a sustainable, co-ordinated and integrated local and national framework of organisations, partnerships and initiatives. These data will be available to ensure that Scotland's biodiversity, ecosystems and people benefit."*

Please tell us how you are involved in collecting, managing or using biological records, what problems you have and your ideas for improvements. Although our primary remit is for Scotland, we are interested in hearing from people from across the UK as the issues and improvements needed could be common to us all. If sufficient responses are received from beyond Scotland, we will summarise our findings by country. The results of the questionnaire will be published in due course on the SBIF pages of the NBN website.

Thank you for taking part – your input is greatly appreciated.

Ellen Wilson (SBIF Chair)  
Scottish Biodiversity Information Forum

For more details about SBIF and the SBIF Review please visit the SBIF pages on the NBN website

### Use of your information [<back to list of sections>](#)

To complete the questionnaire you must be aged 18 or over and happy for your response to be used in the ways outlined below (if you are under 18 please ask your parent or guardian to complete the questionnaire on your behalf). The information that you provide will only be used to inform the Review of the Biological Recording Infrastructure in Scotland. Your response will enable us to:

- identify what is working well and less well, and to discover what ideas you might have for where worthwhile improvements could be made.
- categorise and summarise responses by sector, role and country so that your information is not used in a way that would identify you or your organisation individually.
- inform options for what could be local, national or central to facilitate the selection of a preferred option and the overall recommendations of this Review.

All responses will be held confidentially and securely by the SBIF Working Group and archived for up to 3 years once the recommendations of the Review have been published.

By ticking the box below I agree that:

- I understand that the information that I provide will be used to inform the SBIF Review of Biological Recording Infrastructure in Scotland.
- I understand that my response will be treated confidentially and retained for no more than 3 years after the findings of the Review have been published.
- I understand that the information I provide will not be used in a way that could identify me or my organisation individually.
- I am at least 18 years of age.

☐ PLEASE TICK HERE TO CONFIRM YOUR AGREEMENT WITH THE ABOVE STATEMENTS.

## SECTION A: For Everyone [<back to list of sections>](#)

Please complete all questions in this section:

### Q1 1/5 How are you currently involved within our biological recording network or infrastructure?

Tick all that apply:

I am employed or in full time education within one or more of the sectors listed below

I volunteer within one or more of the sectors listed below

I am an affiliated member of an organisation within one or more of the sectors listed below

I am a member of the general public with no particular association with the sectors listed below

### Q2 2/5 Which sector do you primarily belong to?

Recorders or Recording Groups

National Recording Schemes

Environmental/conservation Non-Governmental Organisations

Local Environmental Records Centres

Commercial companies and environmental consultancies

Museums, zoos and botanic gardens

Academia and education

Local authorities and national park authorities

National or central government departments, agencies or public bodies

Cross-sectoral partnership or secretariat organisations - e.g. the National Biodiversity Network (NBN) Secretariat

None of these - I'm a member of the general public

Other (please specify):

### Q3 3/5 Which of the following roles do you personally have?

The questionnaire will provide one section of about 20 questions (almost all multiple choice) for each role that you tick. However many roles you have, you only need to complete the questionnaire once. Please complete it from your own personal perspective whether or not you have any particular association with a relevant organisation.

The questionnaire sections are labelled A (this section for everyone) to N (final questions for everyone) and so you will only receive Section B if you tick 'Recorder or Data Collector' below, Section C if you tick 'Verifier or County Recorder', and so on until Section M if you tick 'Facilitator'.

\* LERC = Local Environmental Records Centre; NBN = National Biodiversity Network

Tick all that apply:

RECORDER OR DATA COLLECTOR: you collect biological records for your own or others' use

VERIFIER OR COUNTY RECORDER: you verify the accuracy of biological records collected and identified by others

COLLECTION CURATOR: you curate biological samples or specimens for analysis, exhibition or reference

RECORDING GROUP OPERATOR: you manage the activities and administration of a recording group

RECORDING SCHEME OPERATOR: you manage the activities and administration of a recording scheme

DATA PROVIDER: you publish datasets or derived data products and manage their metadata and licensing

DATA DEVELOPER: you create new value-added datasets or derived data products such as enriched data or trends

DATA USER: you use biological records, added-value datasets or data products for your own purposes

SERVICE PROVIDER: you supply services such as those provided by LERCs or the NBN Trust\*

SERVICE USER: you use services such as those provided by LERCs or the NBN Trust\*

FUNDER: you provide funding to support or commission key activities in our network

FACILITATOR: you act as a secretariat to coordinate, and communicate across, our whole network

### Q4 4/5 Which Local Authority area are you based in?

We are asking this question so that we can map where questionnaire responses have been received from for each of the sectors and roles above. We will not use this information in any way that will identify you or your organisation individually. Please select the local authority area that contains the postal address for your home or office, whichever is appropriate.

Local Authority areas are listed in the following order: 1 Scotland, 2 Northern Ireland, 3 Wales, 4 England, 5 Crown Dependencies, 6 UK Overseas Territories, and 7 the Republic of Ireland.

### Q5 5/5 Do you have a particular interest in any of the following?

Tick all that apply:

Wildlife conservation

Development planning and environmental impact assessment  
Invasive non-native species  
Public health and well-being  
Disease control  
Pollution  
Climate change  
Sustainable management of land, water or sea  
Producing peer-reviewed scientific papers  
Species taxonomy  
No - not in any of these in particular

## **SECTION B: For Recorders or Data Collectors** [<back to list of sections>](#)

RECORDER OR DATA COLLECTOR: YOU COLLECT BIOLOGICAL RECORDS FOR YOUR OWN OR OTHERS' USE

Please complete all questions in this section:

### **Q6 1/19 Which of the following activities do you do as a Recorder or Data Collector?**

Tick all that apply:

Finding out what citizen science projects, Recording Groups and Recording Schemes exist and how to join them  
Participating as an active member of a citizen science project, Recording Group or National Recording Scheme  
Casual collection of ad hoc records  
Formal collection of records following standard methods  
Data management of your own records  
Use of reference materials to check known species distributions or to aid species identification  
Submission of your own records to Recording Groups, Recording Schemes or other Data Providers  
Obtaining, using and maintaining specialist equipment such as binoculars, moth traps or microscopes  
Training or self-study to increase your own skills as a Recorder or Data Collector  
Training or mentoring others to share your skills as a Recorder or Data Collector  
This role is not relevant to me after all (if so, ignore the remaining questions in this section)  
Other (please specify):

### **Q7 2/19 For the activities that you ticked above, what is already working well and what makes it so effective?**

We are asking this to find out what we should celebrate and encourage more of to help Recorders and Data Collectors in particular.

### **Q8 3/19 For the activities that you ticked above, what is working less well and how is it problematic for you?**

We are asking this to find out what we can address to improve things for Recorders and Data Collectors in particular.

### **Q9 4/19 What ideas do you have for specific changes or general improvements that could help resolve any of these issues for you as a Recorder or Data Collector?**

We are asking this to find ideas that we can take forward to help Recorders and Data Collectors in particular.

### **Q10 5/19 In which of the following places do you primarily collect biological records?**

Tick all that apply:

Scotland  
Northern Ireland  
England  
Wales  
Isle of Man  
The Channel Islands  
Republic of Ireland  
UK Overseas Territories  
British Territorial Waters  
Elsewhere on land  
Elsewhere at sea

### **Q11 6/19 In which of the following environments do you primarily collect biological records?**

Tick all that apply:

Terrestrial  
Freshwater  
Marine

### **Q12 7/19 For which of the following taxonomic groups do you primarily collect biological records?**

If the groups you are interested in are not listed, or if the groups below are not sufficiently specific, please use the 'Other' option to name the specific groups of interest to you.

Tick all that apply:

>>> All or any species or species groups  
>>> All or any species or species groups of conservation concern

Amphibians (e.g. frogs, newts and toads)  
 Reptiles (e.g. snakes and lizards)  
 Birds  
 Mammals - marine  
 Mammals - terrestrial or freshwater  
 Fishes  
 Insects - dragonflies and damselflies  
 Insects - bugs  
 Insects - butterflies and moths  
 Insects - beetles  
 Insects - true flies  
 Insects - sawflies, bees, wasps and ants  
 Arachnids (e.g. spiders, ticks and mites)  
 Myriapods (e.g. millipedes and centipedes)  
 Crustaceans (e.g. crabs, barnacles and woodlice)  
 Molluscs (e.g. snails, slugs, squids and octopuses)  
 Annelid worms (e.g. earthworms and leeches)  
 Other worms (e.g. flatworms and nematodes)  
 Cnidarians (e.g. jellyfish, corals and sea anemones)  
 Echinoderms (e.g. starfish, sea urchins and sea cucumbers)  
 Seaweeds  
 Fungi  
 Lichens  
 Mosses and liverworts  
 Ferns  
 Flowering plants  
 Other (please specify):  
 If you would like to add any information to explain your answer please do so here:

**Q13 8/19 How many biological records have you collected in the last year?**

None  
 1 to 100 records  
 101 to 1,000 records  
 1,001 to 10,000 records  
 Over 10,000 records

**Q14 9/19 How do you capture your biological records in the field?**

Tick all that apply:  
 On paper e.g. in a notebook  
 Using a structured survey form on paper or card  
 Using a spreadsheet or database on a computer or tablet  
 Using a notes app on a phone or tablet  
 Using a bespoke recording app such as iRecord or BirdTrack  
 As a digital photograph, video or other image format  
 As a voice memo  
 As a sound recording  
 As a physical specimen or sample  
 By memory  
 Other (please specify):

**Q15 10/19 How do you hold and manage the biological records that you collect?**

Tick all that apply:  
 On paper  
 In a document in Microsoft Word or Notepad  
 In an Excel spreadsheet of your own design  
 In an Excel spreadsheet designed and supplied by a particular Recording Scheme or Recording Group  
 In an Access database  
 In a spatial layer in QGIS, ArcGIS or MapInfo  
 In iRecord  
 In BirdTrack  
 In Recorder  
 In Marine Recorder  
 In MapMate  
 In a bespoke system developed and managed by you or your organisation  
 I give my records to another Recorder or Data Collector who holds and manages them for me  
 Other (please specify):

**Q16 11/19 Where do you send or submit your biological records?**

If you publish your records directly on the NBN Gateway/NBN Atlas or elsewhere, please also complete the Data Provider section of this questionnaire (to add this section go back to Section A and tick 'Data Provider' under Question 3). If you fulfil individual requests for your data, e.g. for commercial or academic use, please indicate this using the options below. To iRecord

Tick all that apply:

To BirdTrack

To iSpot

Directly to another Recorder or Data Collector who will pass your records on appropriately

Directly to your followers on social media

Directly to the relevant Verifier or County Recorder

Directly to your local Recording Group

Directly to relevant other Recording Groups

Directly to relevant National Recording Schemes

Directly to Local Environmental Records Centres

Directly to private land owners

Directly to museums, zoos or botanic gardens

Directly to environmental/conservation Non-Governmental Organisations

Directly to commercial companies/environmental consultancies

Directly to staff or students in academia or education

Directly to local authorities or national park authorities

Directly to national or central government departments, agencies or public bodies

Directly to cross-sectoral partnership or secretariat organisations

I don't know as someone else does this for me

I have not yet submitted my records

Other (please specify):

**Q17 12/19 In what formats do you send or submit your biological records?**

*Tick all that apply:*

Online via the iRecord website

Online via the iRecord app

Online via the BirdTrack website

Online via the BirdTrack app

Online via the iSpot website

Online via a Recording Group's website

Online via a National Recording Scheme's website

Online via a Local Environmental Records Centre's website

Online via an environmental/conservation Non-Governmental Organisation's website

Online via social media

As an Excel spreadsheet designed and supplied by a particular Recording Group

As an Excel spreadsheet designed and supplied by a particular Recording Scheme

As an Excel spreadsheet of your own design

As structured survey forms or cards

As physical specimens or samples

As digital photos, images, videos or sound recordings

As a MapMate sync file

As an Access database

As a spatial layer from QGIS, ArcGIS or MapInfo

In conversation or voicemail

As a hand drawn illustration, written note or letter

As an email message or text

As a document in Microsoft Word or Notepad

I don't know as someone else does this for me

I have not yet submitted my records

Other (please specify):

**Q18 13/19 In which format do you most prefer to send or submit your biological records?**

Online via the iRecord website

Online via the iRecord app

Online via the BirdTrack website

Online via the BirdTrack app

Online via the iSpot website

Online via a Recording Group's website

Online via a National Recording Scheme's website

Online via a Local Environmental Records Centre's website

Online via an environmental/conservation Non-Governmental Organisation's website

Online via social media

As an Excel spreadsheet designed and supplied by a particular Recording Group

As an Excel spreadsheet designed and supplied by a particular Recording Scheme

As an Excel spreadsheet of your own design

As structured survey forms or cards

As physical specimens or samples  
As digital photos, images, videos or sound recordings  
As a MapMate sync file  
As an Access database  
As a spatial layer from QGIS, ArcGIS or MapInfo  
In conversation or voicemail  
As a hand drawn illustration, written note or letter  
As an email message or text  
As a document in Microsoft Word or Notepad  
I don't know as someone else does this for me  
I have not yet submitted my records

**Q19 14/19 Are you happy for the biological records that you collect to be openly available (with appropriate caveats for sensitive records) for use by anyone?**

"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]

Yes

No

Not sure/don't know

If you would like to add any information to explain your answer please do so here:

**Q20 15/19 In the last year, how many hours a month on average have you acted as a Recorder or Data Collector in an employed, i.e. paid, capacity?**

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q21 16/19 In the last year, how many hours per month on average have you acted as a Recorder or Data Collector in a voluntary, i.e. unpaid, capacity?**

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q22 17/19 In the last year, what level of expenses have you yourself incurred while acting as a Recorder or Data Collector in some way?**

INCLUDE COSTS SUCH AS: fuel, accommodation when away from home; hire, licensing or purchase of specialist kit, clothing or software; relevant subscriptions and training course costs.

EXCLUDE COSTS SUCH AS: general costs of running a home, car or office (unless you run that car, home or office solely for the purpose of acting as a Recorder or Data Collector); any costs that are externally funded or reimbursed.

£0

£1 to £500

£501 to £1,000

£1,001 to £5,000

Over £5,000

If you received any funding or expenses that in some way covered your costs, please tell us about this here:

**Q23 18/19 What motivates you to be a Recorder or Data Collector?**

**Q24 19/19 Regarding the part that you play as a Recorder or Data Collector in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?**

I know what to do to play my part well

I've got what I need to be able to play my part

I've received recognition and appreciation for the part that I play

People listen to, and value, my ideas and suggestions

Within the last year I have had the chance to learn and grow

People I liaise with are committed to doing a good job

If you would like to add any information to explain your answer please do so here:

**SECTION C: For Verifiers or County Recorders** [\*<back to list of sections>\*](#)

VERIFIER OR COUNTY RECORDER: YOU VERIFY THE ACCURACY OF RECORDS COLLECTED AND IDENTIFIED BY OTHERS

Please complete all questions in this section:

**Q25 1/19 Which of the following activities do you do as a Verifier or County Recorder?**

*Tick all that apply:*

Discovery of biological records to find any of interest that need verification  
Formal verification of biological records with a physical specimen, photograph or other evidence  
Formal verification of biological records without a specimen, photograph or other evidence  
Data management of biological records being verified  
Liaison with the original recorders of the biological records being verified  
Use of reference materials to check known species distributions or to aid species identification  
Alerting the Non-Native Species Secretariat or UK Species Inventory to records of new or invasive species  
Obtaining, using and maintaining specialist equipment such as reference specimens, sample pots or microscopes  
Training or self-study to increase your own skills as a Verifier or County Recorder  
Training or mentoring others to share your skills as a Verifier or County Recorder  
This role is not relevant to me after all (if so, ignore the remaining questions in this section)  
Other (please specify):

**Q26 2/19 For the activities that you ticked above, what is already working well and what makes it so effective?**

We are asking this to find out what we should celebrate and encourage more of to help Verifiers and County Recorders in particular.

**Q27 3/19 For the activities that you ticked above, what is working less well and how is it problematic for you?**

We are asking this to find out what we can address to improve things for Verifiers and County Recorders in particular.

**Q28 4/19 What ideas do you have for specific changes or general improvements that could help resolve any of these issues for you as a Verifier or County Recorder?**

We are asking this to find ideas that we can take forward to help Verifiers and County Recorders in particular.

**Q29 5/19 In which of the following places do you primarily act as a Verifier or County Recorder?**

*Tick all that apply:*

Scotland  
Northern Ireland  
England  
Wales  
Isle of Man  
The Channel Islands  
Republic of Ireland  
UK Overseas Territories  
British Territorial Waters  
Elsewhere on land  
Elsewhere at sea

**Q30 6/19 From which of the following environments do you primarily receive biological records for verification?**

*Tick all that apply:*

Terrestrial  
Freshwater  
Marine

**Q31 7/19 For which of the following taxonomic groups do you primarily verify biological records?**

*If the groups you are interested in are not listed, or if the groups below are not sufficiently specific, please use the 'Other' option to name the specific groups of interest to you.*

*Tick all that apply:*

>>> All or any species or species groups  
>>> All or any species or species groups of conservation concern  
Amphibians (e.g. frogs, newts and toads)  
Reptiles (e.g. snakes and lizards)  
Birds  
Mammals - marine  
Mammals - terrestrial or freshwater  
Fishes  
Insects - dragonflies and damselflies  
Insects - bugs  
Insects - butterflies and moths  
Insects - beetles  
Insects - true flies  
Insects - sawflies, bees, wasps and ants  
Arachnids (e.g. spiders, ticks and mites)  
Myriapods (e.g. millipedes and centipedes)  
Crustaceans (e.g. crabs, barnacles and woodlice)  
Molluscs (e.g. snails, slugs, squids and octopuses)  
Annelid worms (e.g. earthworms and leeches)



Other worms (e.g. flatworms and nematodes)  
Cnidarians (e.g. jellyfish, corals and sea anemones)  
Echinoderms (e.g. starfish, sea urchins and sea cucumbers)  
Seaweeds  
Fungi  
Lichens  
Mosses and liverworts  
Ferns  
Flowering plants

Other (please specify):

If you would like to add any information to explain your answer please do so here:

**Q32 8/19 How many biological records have you verified in the last year?**

None

1 to 100 records

101 to 1,000 records

1,001 to 10,000 records

Over 10,000 records

**Q33 9/19 From whom do you receive biological records for verification?**

*Tick all that apply:*

From users of iRecord

From users of BirdTrack

From users of iSpot

From members of the general public

From your followers on social media

From Recorders or Recording Groups who are affiliated with Recording Scheme(s) whose data you verify

From Recorders or Recording Groups who are not affiliated with Recording Scheme(s) whose data you verify

From the Recording Scheme Operator(s) for whom you act as a Verifier or County Recorder

From other National Recording Schemes

From other Verifiers or County Recorders

From Local Environmental Records Centres

From museums, zoos or botanic gardens

From environmental/conservation Non-Governmental Organisations

From commercial companies/environmental consultancies

From staff or students in academia or education

From local authorities or national park authorities

From national or central government departments, agencies or public bodies

From cross-sectoral partnership or secretariat organisations

Other (please specify):

**Q34 10/19 In which formats do you receive biological records for verification?**

*Tick all that apply:*

Online via the iRecord website

Online via the iRecord app

Online via the BirdTrack website

Online via the BirdTrack app

Online via the iSpot website

Online via a Recording Group's website

Online via a National Recording Scheme's website

Online via a Local Environmental Records Centre's website

Online via an environmental/conservation Non-Governmental Organisation's website

Online via social media

As an Excel spreadsheet of your own design

As an Excel spreadsheet designed and supplied by the Recording Scheme for which you verify records

As an Excel spreadsheet of a Recorder's own design

As structured survey forms or cards

As physical specimens or samples

As digital photos, images, videos or sound recordings

As a MapMate sync file

As an Access database

As a spatial layer from QGIS, ArcGIS or MapInfo

In conversation or voicemail

As a hand drawn illustration, written note or letter

As an email message or text

As a document in Microsoft Word or Notepad

I don't know as someone else does this for me

Other (please specify):

**Q35 11/19 In which format do you most prefer to receive biological records for verification?**

Online via the iRecord website  
Online via the iRecord app  
Online via the BirdTrack website  
Online via the BirdTrack app  
Online via the iSpot website  
Online via a Recording Group's website  
Online via a National Recording Scheme's website  
Online via a Local Environmental Records Centre's website  
Online via an environmental/conservation Non-Governmental Organisation's website  
Online via social media  
As an Excel spreadsheet of your own design  
As an Excel spreadsheet designed and supplied by the Recording Scheme for which you verify records  
As an Excel spreadsheet of a Recorder's own design  
As structured survey forms or cards  
As physical specimens or samples  
As digital photos, images, video or sound  
As a MapMate sync file  
As an Access database  
As a spatial layer from QGIS, ArcGIS or MapInfo  
In conversation or voicemail  
As a hand drawn illustration or written note or letter  
As an email message or text  
As a document in Microsoft Word or Notepad  
I don't know as someone else does this for me  
Other (please specify):

**Q36 12/19 How do you hold or manage the biological records that you verify?**

*Tick all that apply:*

On paper  
In a document in Microsoft Word or Notepad  
In an Excel spreadsheet designed by you  
In an Excel spreadsheet designed and supplied by the Recording Scheme for which you verify records  
In an Access database  
In a spatial layer in QGIS, ArcGIS or MapInfo  
In iRecord  
In BirdTrack  
In Recorder  
In Marine Recorder  
In MapMate  
In a bespoke system developed and managed by you or your organisation  
Other (please specify):

**Q37 13/19 When necessary, how do you liaise or correspond with the original Recorders of the records that you verify?**

*Tick all that apply:*

Online via iRecord  
Online via BirdTrack  
Online via iSpot  
Online via social media  
In person  
By written letter  
By phone or text  
By email  
Via the Recording Scheme Operator  
I don't need to contact the original Recorders  
Someone else contacts the original Recorders for me  
Other (please specify):

**Q38 14/19 Are you happy for the biological records that you verify to be openly available (with appropriate caveats for sensitive records) for use by anyone?**

"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]

Yes  
No  
Not sure/don't know

If you would like to add any information to explain your answer please do so here:

**Q39 15/19 In the last year, how many hours a month on average have you acted as a Verifier or County Recorder in an employed, i.e. paid, capacity?**

Note: anyone working full time for 7.5-8 hours per day is working 37.5-40 hours per week and so about 150-160 hours per month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q40 16/19 In the last year, how many hours per month on average have you acted as a Verifier or County Recorder in a voluntary, i.e. unpaid, capacity?**

Note: anyone volunteering full time for 7.5-8 hours per day is volunteering for 37.5-40 hours per week and so about 150-160 hours a month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q41 17/19 In the last year, what level of expenses have you yourself incurred while acting as a Verifier or County Recorder in some way?**

INCLUDE COSTS SUCH AS: fuel, accommodation when away from home; hire, licensing or purchase of specialist kit, clothing or software; relevant subscriptions and training course costs.

EXCLUDE COSTS SUCH AS: general costs of running a home, car or office (unless you run that car, home or office solely for the purpose of acting as a Verifier or County Recorder); any costs that are externally funded or reimbursed.

£0

£1 to £500

£501 to £1,000

£1,001 to £5,000

Over £5,000

If you received any funding or expenses that in some way covered your costs, please tell us about this here:

**Q42 18/19 What motivates you to be a Verifier or County Recorder?**

**Q43 19/19 Regarding the part that you play as a Verifier or County Recorder in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?**

Strongly agree    Agree    Neither agree nor disagree    Disagree    Strongly disagree

I know what to do to play my part well

I've got what I need to be able to play my part

I've received recognition and appreciation for the part that I play

People listen to, and value, my ideas and suggestions

Within the last year I have had the chance to learn and grow

People I liaise with are committed to doing a good job

If you would like to add any information to explain your answer please do so here:

## **SECTION D: For Collection Curators** <[back to contents](#)>

Please complete all questions in this section:

**COLLECTION CURATOR: YOU CURATE BIOLOGICAL SAMPLES OR SPECIMENS FOR ANALYSIS, EXHIBITION OR REFERENCE**

**Q44 1/19 Which of the following activities do you do as a Collection Curator?**

*Tick all that apply:*

Discovery, acquisition and loan of samples or specimens

Preservation and storage of samples or specimens

Digitisation and cataloguing of samples or specimens

Display and exhibition of samples or specimens

Data management of collection records and associated biological records

Submission of biological records to National Recording Schemes or other Data Providers

Alerting the Non-Native Species Secretariat or UK Species Inventory to records of new or invasive species

Obtaining, using and maintaining specialist equipment such as storage cabinets or microscopes

Training or self-study to increase your own skills as a Collection Curator

Training or mentoring others to share your skills as a Collection Curator

This role is not relevant to me after all (if so, ignore the remaining questions in this section)

Other (please specify):

**Q45 2/19 For the activities that you ticked above, what is already working well and what makes it so effective?**

We are asking this to find out what we should celebrate and encourage more of to help Collection Curators in particular.

**Q46 3/19 For the activities that you ticked above, what is working less well and how is it problematic for you?**

We are asking this to find out what we can address to improve things for Collection Curators in particular.

**Q47 4/19 What ideas do you have for specific changes or general improvements that could help resolve any of these issues for you as a Collection Curator?**

We are asking this to find ideas that we can take forward to help Collection Curators in particular.

**Q48 5/19 From which of the following places do you primarily obtain or receive biological samples or specimens?**

*Tick all that apply:*

Scotland  
Northern Ireland  
England  
Wales  
Isle of Man  
The Channel Islands  
Republic of Ireland  
UK Overseas Territories  
British Territorial Waters  
Elsewhere on land  
Elsewhere at sea

**Q49 6/19 From which of the following environments do you primarily obtain or receive biological samples or specimens?**

*Tick all that apply:*

Terrestrial  
Freshwater  
Marine

**Q50 7/19 For which of the following taxonomic groups do you primarily obtain or receive biological samples or specimens?**

*If the groups you are interested in are not listed, or if the groups below are not sufficiently specific, please use the 'Other' option to name the specific groups of interest to you.*

*Tick all that apply:*

>>> All or any species or species groups  
>>> All or any species or species groups of conservation concern  
Amphibians (e.g. frogs, newts and toads)  
Reptiles (e.g. snakes and lizards)  
Birds  
Mammals - marine  
Mammals - terrestrial or freshwater  
Fishes  
Insects - dragonflies and damselflies  
Insects - bugs  
Insects - butterflies and moths  
Insects - beetles  
Insects - true flies  
Insects - sawflies, bees, wasps and ants  
Arachnids (e.g. spiders, ticks and mites)  
Myriapods (e.g. millipedes and centipedes)  
Crustaceans (e.g. crabs, barnacles and woodlice)  
Molluscs (e.g. snails, slugs, squids and octopuses)  
Annelid worms (e.g. earthworms and leeches)  
Other worms (e.g. flatworms and nematodes)  
Cnidarians (e.g. jellyfish, corals and sea anemones)  
Echinoderms (e.g. starfish, sea urchins and sea cucumbers)  
Seaweeds  
Fungi  
Lichens  
Mosses and liverworts  
Ferns  
Flowering plants  
Other (please specify):  
If you would like to add any information to explain your answer please do so here:

**Q51 8/19 How many biological samples or specimens do you have in total in your collection(s)?**

1 to 100 samples or specimens  
101 to 1,000 samples or specimens  
1,001 to 10,000 samples or specimens  
10,001 to 1,000,000 samples or specimens  
Over 1,000,000 samples or specimens

**Q52 9/19 From whom do you obtain biological samples or specimens for your collection(s)?**

*Tick all that apply:*

From donations or bequests from the general public  
 From Recorders or Recording Groups  
 From Verifiers or County Recorders  
 From National Recording Schemes  
 From Local Environmental Records Centres  
 From environmental/conservation Non-Governmental Organisations  
 From commercial companies/environmental consultancies  
 From museums, zoos or botanic gardens  
 From staff or students in education or academia  
 From local authorities or national park authorities  
 From national or central government departments, agencies or public bodies  
 From cross-sectoral partnership or secretariat organisations  
 From your own activities and projects  
 Other (please specify):

**Q53 10/19 How do you manage your collection(s) and the biological records arising from them?**

*Tick all that apply:*

On paper  
 In a document in Microsoft Word or Notepad  
 In an Excel spreadsheet of your own design  
 In an Excel spreadsheet designed and supplied by a particular Recording Scheme  
 In an Access database  
 In a spatial layer in QGIS, ArcGIS or MapInfo  
 In iRecord  
 In BirdTrack  
 In Ke Emu  
 In Adlib  
 In Recorder  
 In Marine Recorder  
 In MapMate  
 In a bespoke system developed and managed by you or your organisation  
 Other (please specify):

**Q54 11/19 Where do you send or submit the biological records that arise from your collection(s)?**

*If you publish your records directly on the NBN Gateway/NBN Atlas or elsewhere, please also complete the Data Provider section of this questionnaire (to add this section go back to Section A and tick 'Data Provider' under Question 3). If you fulfil individual requests for your data, e.g. for commercial or academic use, please indicate this using the options below.*

*Tick all that apply:*

To iRecord  
 To BirdTrack  
 To iSpot  
 Directly to another Collection Curator who will pass your records on appropriately  
 Directly to your followers on social media  
 Directly to the relevant Verifier or County Recorder  
 Directly to relevant Recording Groups  
 Directly to relevant National Recording Schemes  
 Directly to Local Environmental Records Centres  
 Directly to private land owners  
 Directly to museums, zoos or botanic gardens  
 Directly to environmental/conservation Non-Governmental Organisations  
 Directly to commercial companies/environmental consultancies  
 Directly to staff or students in education or academia  
 Directly to local authorities or national park authorities  
 Directly to national or central government departments, agencies or public bodies  
 Directly to cross-sectoral partnership or secretariat organisations  
 Directly to the original collector of the biological sample or specimen  
 I don't know as someone else does this for me  
 I haven't yet submitted records to any of the above  
 Other (please specify):

**Q55 12/19 In which formats do you send or submit the biological records that arise from your collection(s)?**

*Tick all that apply:*

Online via the iRecord website  
 Online via the iRecord app  
 Online via the BirdTrack website  
 Online via the BirdTrack app  
 Online via the iSpot website  
 Online via a Recording Group's website  
 Online via a National Recording Scheme's website

Online via an environmental/conservation Non-Governmental Organisation's website  
 Online via a Local Environmental Records Centre's website  
 Online via social media  
 As an Excel spreadsheet designed and supplied by a particular Recording Scheme  
 As an Excel spreadsheet of your own design  
 As structured survey forms or cards  
 As physical specimens or samples  
 As digital photos, images, videos or sound recordings  
 As a MapMate sync file  
 As an Access database  
 As a spatial layer from QGIS, ArcGIS or MapInfo  
 In conversation or voicemail  
 As a hand drawn illustration or written note or letter  
 As an email message or text  
 As a document in Microsoft Word or Notepad  
 I don't know as someone else does this for me  
 I haven't yet submitted any records from my collection(s)  
 Other (please specify):

**Q56 13/19 In which format do you most prefer to send or submit the biological records that arise from your collection(s)?**

For this question, please indicate the format that you prefer for textual or numeric information (rather than for supporting evidence such as a photo or physical sample or specimen).

Online via the iRecord website  
 Online via the iRecord app  
 Online via the BirdTrack website  
 Online via the BirdTrack app  
 Online via the iSpot website  
 Online via a Recording Group's website  
 Online via a National Recording Scheme's website  
 Online via an environmental/conservation Non-Governmental Organisation's website  
 Online via a Local Environmental Records Centre's website  
 Online via social media  
 As an Excel spreadsheet designed and supplied by a particular Recording Scheme  
 As an Excel spreadsheet of your own design  
 As structured survey forms or cards  
 As physical specimens or samples  
 As digital photos, images, videos or sound recordings  
 As a MapMate sync file  
 As an Access database  
 As a spatial layer from QGIS, ArcGIS or MapInfo  
 In conversation or voicemail  
 As a written note or letter  
 As an email message or text  
 As a document in Microsoft Word or Notepad  
 I don't know as someone else does this for me  
 I haven't yet submitted any records from my collection(s)  
 Other (please specify):

**Q57 14/19 Are you happy for the biological records that arise from your collection(s) to be openly available (with appropriate caveats for sensitive records) for use by anyone?**

"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]

Yes

No

Not sure/don't know

If you would like to add any information to explain your answer please do so here:

**Q58 15/19 In the last year, how many hours a month on average have you acted as a Collection Curator in an employed, i.e. paid, capacity?**

Note: anyone working full time for 7.5-8 hours per day is working 37.5-40 hours per week and so about 150-160 hours per month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q59 16/19 In the last year, how many hours per month on average have you acted as a Collection Curator in a voluntary, i.e. unpaid, capacity?**

Note: anyone volunteering full time for 7.5-8 hours per day is volunteering for 37.5-40 hours per week and so about 150-160 hours a month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q60 17/19 In the last year, what level of expenses have you yourself incurred while acting as a Collection Curator in some way?**

INCLUDE COSTS SUCH AS: fuel, food and accommodation when away from home; hire, licensing or purchase of specialist kit, clothing or software; relevant subscriptions and training course costs.

EXCLUDE COSTS SUCH AS: general costs of running a home, car or office (unless you run that car, home or office solely for the purpose of acting as a Collection Curator); any costs that are externally funded or reimbursed.

£0

£1 to £500

£501 to £1,000

£1,001 to £5,000

Over £5,000

If you received any funding or expenses that in some way covered your costs, please tell us about this here:

**Q61 18/19 What motivates you to be a Collection Curator?**

**Q62 19/19 Regarding the part that you play as a Collection Curator in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?**

Strongly agree    Agree    Neither agree nor disagree    Disagree    Strongly disagree

I know what to do to play my part well

I've got what I need to be able to play my part

I've received recognition and appreciation for the part that I play

People listen to, and value, my ideas and suggestions

Within the last year I have had the chance to learn and grow

People I liaise with are committed to doing a good job

If you would like to add any information to explain your answer please do so here:

**SECTION E: For Recording Group Operators** *<back to list of sections>*

RECORDING GROUP OPERATOR: YOU MANAGE THE ACTIVITIES AND ADMINISTRATION OF A RECORDING GROUP

Please complete all questions in this section:

**Q63 1/22 Which of the following activities do you do as a Recording Group Operator?**

Tick all that apply:

Prioritisation of what records to collect or what surveys to run

Recruiting, supporting, training or mentoring your Group's Recorders

Running and attending field excursions and other activities with your Group's Recorders

Data management of your Group's records

Administration of your Group's activities and accounts

Fundraising and grant reporting

Submission of your Group's records to National Recording Schemes or other Data Providers

Obtaining, using and maintaining specialist equipment such as boats, mammal traps or microscopes

Training or self-study to increase your own skills as a Recording Group Operator

Training or mentoring others to share your skills as a Recording Group Operator

This role is not relevant to me after all (if so, ignore the remaining questions in this section)

Other (please specify):

**Q64 2/22 For the activities that you ticked above, what is already working well and what makes it so effective?**

We are asking this to find out what we should celebrate and encourage more of to help Recording Groups in particular.

**Q65 3/22 For the activities that you ticked above, what is working less well and how is it problematic for you?**

We are asking this to find out what we can address to improve things for Recording Groups in particular.

**Q66 4/22 What ideas do you have for specific changes or general improvements that could help resolve any of these issues for you as a Recording Group Operator?**

We are asking this to find ideas that we can take forward to help Recording Groups in particular.

**Q67 5/22 In which of the following places does your Recording Group primarily collect biological records?**

Tick all that apply:

Scotland

Northern Ireland

England  
Wales  
Isle of Man  
The Channel Islands  
Republic of Ireland  
UK Overseas Territories  
British Territorial Waters  
Elsewhere on land  
Elsewhere at sea

**Q68 6/22 In which of the following environments does your Recording Group primarily collect biological records?**

Tick all that apply:

Terrestrial  
Freshwater  
Marine

**Q69 7/22 For which of the following taxonomic groups does your Recording Group primarily collect biological records?**

If the groups you are interested in are not listed, or if the groups below are not sufficiently specific, please use the 'Other' option to name the specific groups of interest to you.

Tick all that apply:

>>> All or any species or species groups  
>>> All or any species or species groups of conservation concern

Amphibians (e.g. frogs, newts and toads)  
Reptiles (e.g. snakes and lizards)  
Birds  
Mammals - marine  
Mammals - terrestrial or freshwater  
Fishes  
Insects - dragonflies and damselflies  
Insects - bugs  
Insects - butterflies and moths  
Insects - beetles  
Insects - true flies  
Insects - sawflies, bees, wasps and ants  
Arachnids (e.g. spiders, ticks and mites)  
Myriapods (e.g. millipedes and centipedes)  
Crustaceans (e.g. crabs, barnacles and woodlice)  
Molluscs (e.g. snails, slugs, squids and octopuses)  
Annelid worms (e.g. earthworms and leeches)  
Other worms (e.g. flatworms and nematodes)  
Cnidarians (e.g. jellyfish, corals and sea anemones)  
Echinoderms (e.g. starfish, sea urchins and sea cucumbers)  
Seaweeds  
Fungi  
Lichens  
Mosses and liverworts  
Ferns  
Flowering plants  
Other (please specify):  
If you would like to add any information to explain your answer please do so here:

**Q70 8/22 How many biological records has your Recording Group collected in the last year?**

None  
1 to 1,000 records  
1,001 to 10,000 records  
10,001 to 100,000 records  
100,001 to 1,000,000 records  
Over 1,000,000 records

**Q71 9/22 How many Recorders or members belong to your Recording Group?**

Under 10 recorders or members  
11 to 100 recorders or members  
101 to 1,000 recorders or members  
1,001 to 10,000 recorders or members  
Over 10,000 recorders or members

**Q72 10/22 Who collects biological records on behalf of (or submits records to) your Recording Group?**

Tick all that apply:

Local Recorders and/or other affiliated members of your Group



Local Recorders who are not affiliated with your Group  
 Visiting Recorders or Recording Groups with records of interest to your Group  
 Recorders or Recording Groups of other taxa with records for taxa of interest to your Group  
 National Recording Schemes  
 Members of the general public  
 Local Environmental Records Centres  
 Environmental/conservation Non-Governmental Organisations  
 Commercial companies/environmental consultancies  
 Museums, zoos or botanic gardens  
 Staff or students in academia or education  
 Local authorities or national parks  
 National or central government departments, agencies or public bodies  
 Cross-sectoral partnership or secretariat organisations  
 Other (please specify):

**Q73 11/22 Who manages the biological records that your Recording Group collects?**

Tick all that apply:

Our recorders manage their own records and there is no central copy  
 One or more Recording Group volunteers have the role of managing the Group's records  
 One or more Recording Group employees have the role of managing the Group's records  
 The relevant Recording Scheme Operator manages our records for us  
 An environmental/conservation Non-Governmental Organisation manages our records for us  
 A Local Environmental Records Centre manages our records for us  
 The Biological Records Centre manages our records for us  
 A local authority or national park authority manages our records for us  
 A national or central government department, agency or public body manages our records for us  
 A school, college or university manages our records for us  
 A commercial company/environmental consultancy manages our records for us  
 A cross-sectoral partnership or secretariat organisation manages our records for us  
 Other (please specify):

If the Recording Group incurs any costs for the management of its biological records, please indicate the approximate cost to the Group per year and the extent to which the Group receives external funding against these costs:

**Q74 12/22 How do your staff or volunteers manage the biological records that your Recording Group collects?**

Tick all that apply:

Not applicable - someone else does this for us (as indicated in the previous question)  
 On paper  
 In a document in Microsoft Word or Notepad  
 In an Excel spreadsheet of your own design  
 In an Excel spreadsheet designed and supplied by a particular Recording Scheme  
 In a Microsoft Access database  
 In a spatial layer in QGIS, ArcGIS or MapInfo  
 In iRecord  
 In BirdTrack  
 In Recorder  
 In Marine Recorder  
 In MapMate  
 In a bespoke system developed for use by your Recording Group  
 Other (please specify):

**Q75 13/22 Where do you send or submit the biological records that your Recording Group collects?**

If you publish your records directly on the NBN Gateway/NBN Atlas or elsewhere, please also complete the Data Provider section of this questionnaire (to add this section go back to Section A and tick 'Data Provider' under Question 3). If you fulfil individual requests for your data, e.g. for commercial or academic use, please indicate this using the options below.

Tick all that apply:

To iRecord  
 To BirdTrack  
 To iSpot  
 To your followers on social media  
 To the relevant Verifier or County Recorder  
 To relevant other Recording Groups  
 To relevant National Recording Schemes  
 To Local Environmental Records Centres  
 To private land owners  
 To museums, zoos or botanic gardens  
 To environmental/conservation Non-Governmental Organisations  
 To commercial companies/environmental consultancies  
 To students in academia or education  
 To local authorities or national park authorities

To national or central government departments, agencies or public bodies  
To cross-sectoral partnership or secretariat organisations  
I haven't yet sent or submitted records to any of the above  
Not applicable - our recorders submit their own records  
Other (please specify):

**Q76 14/22 In what formats do you send or submit your Recording Group's biological records?**

Tick all that apply:

Online via the iRecord website  
Online via the iRecord app  
Online via the BirdTrack website  
Online via the BirdTrack app  
Online via the iSpot website  
Online via a National Recording Scheme's website  
Online via an environmental/conservation Non-Governmental Organisation's website  
Online via a Local Environmental Records Centre's website  
Online via social media  
As an Excel spreadsheet designed and supplied by a particular Recording Scheme  
As an Excel spreadsheet of your own design  
As structured survey forms or cards  
As physical specimens or samples  
As digital photos, images, videos or sound recordings  
As a MapMate sync file  
As an Access database  
As a spatial layer from QGIS, ArcGIS or MapInfo  
In conversation or voicemail  
As a hand drawn illustration or written note or letter  
As an email message or text  
As a document in Microsoft Word or Notepad  
Not applicable as our Recorders submit their own records  
Not applicable as the organisation that manages our biological records does this for us  
Other (please specify):

**Q77 15/22 In which format do you most prefer to send or submit the biological records that your Group collects?**

For this question, please indicate the format that you prefer for textual information (rather than for supporting evidence such as a photo or physical sample or specimen).

Online via the iRecord website  
Online via the iRecord app  
Online via the BirdTrack website  
Online via the BirdTrack app  
Online via the iSpot website  
Online via a National Recording Scheme's website  
Online via an environmental/conservation Non-Governmental Organisation's website  
Online via a Local Environmental Records Centre's website  
Online via social media  
As an Excel spreadsheet designed and supplied by a particular Recording Scheme  
As an Excel spreadsheet of your own design  
As structured survey forms or cards  
As physical specimens or samples  
As digital photos, images, videos or sound recordings  
As a MapMate sync file  
As an Access database  
As a spatial layer from QGIS, ArcGIS or MapInfo  
In conversation or voicemail  
As a hand drawn illustration or written note or letter  
As an email message or text  
As a document in Microsoft Word or Notepad  
Not applicable as our Recorders submit their own records  
Not applicable as the organisation that manages our biological records does this for us  
Other (please specify):

**Q78 16/22 Who acts as a Data Provider to publish the biological records collected by your Recording Group?**

No one - our records are not yet publicly available  
We do as the Recording Group Operator - through the NBN Gateway/NBN Atlas  
We do as the Recording Group Operator - through our own website  
We do as the Recording Group Operator - through both our own website and the NBN Gateway/NBN Atlas  
The relevant National Recording Schemes do on our behalf  
Other (please specify):

**Q79 17/22 Are you happy for the biological records collected by your Recording Group to be openly available (with appropriate caveats for sensitive records) for use by anyone?**

"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]

Yes

No

Not sure/don't know

If you would like to add any information to explain your answer please do so here:

**Q80 18/22 In the last year, how many hours a month on average have you acted as a Recording Group Operator in an employed, i.e. paid, capacity?**

Note: anyone working full time for 7.5-8 hours per day is working 37.5-40 hours per week and so about 150-160 hours per month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q81 19/22 In the last year, how many hours per month on average have you acted as a Recording Group Operator in a voluntary, i.e. unpaid, capacity?**

Note: anyone volunteering full time for 7.5-8 hours per day is volunteering for 37.5-40 hours per week and so about 150-160 hours a month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q82 20/22 In the last year, what level of expenses have you yourself incurred while acting as a Recording Group Operator in some way?**

INCLUDE COSTS SUCH AS: fuel, accommodation when away from home; hire, licensing or purchase of specialist kit, clothing or software; relevant subscriptions and training course costs.

EXCLUDE COSTS SUCH AS: general costs of running a home, car or office (unless you run that car, home or office solely for the purpose of acting as a Recording Group Operator); any costs that were externally funded or reimbursed.

£0

£1 to £500

£501 to £1,000

£1,001 to £5,000

Over £5,000

If you received any funding or expenses that in some way covered your costs, please tell us about this here:

**Q83 21/22 What motivates you to be a Recording Group Operator?**

**Q84 22/22 Regarding the part that you play as a Recording Group Operator in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?**

Strongly agree   Agree   Neither agree nor disagree   Disagree   Strongly disagree

I know what to do to play my part well

I've got what I need to be able to play my part

I've received recognition and appreciation for the part that I play

People listen to, and value, my ideas and suggestions

Within the last year I have had the chance to learn and grow

People I liaise with are committed to doing a good job

If you would like to add any information to explain your answer please do so here:

**SECTION F: For Recording Scheme Operators** [\*<back to list of sections>\*](#)

RECORDING SCHEME OPERATOR: YOU MANAGE THE ACTIVITIES AND ADMINISTRATION OF A RECORDING SCHEME

Note: if you operate more than one Recording Scheme, please consider your schemes to be one collective scheme when answering the questions in this section - there is no need to respond to this questionnaire multiple times on behalf of each one.

Please complete all questions in this section:

**Q85 1/24 Which of the following activities do you do as a Recording Scheme Operator?**

Tick all that apply:

Prioritisation of what records to encourage or what surveys to run

Recruiting, supporting, training and mentoring your Scheme's Recorders and Verifiers

Running and attending field excursions and other activities with your Scheme's Recorders and Verifiers

Data management of your Scheme's records

Administration of your Scheme's activities and accounts  
Fundraising and grant reporting  
Preparing your datasets and metadata for publication by your Scheme or another Data Provider  
Recommending or stocking specialist equipment for use by your Scheme's Recorders and Verifiers  
Training or self-study to increase your own skills as a Recording Scheme Operator  
Training or mentoring others to share your skills as a Recording Scheme Operator  
This role is not relevant to me after all (if so, ignore the remaining questions in this section)  
Other (please specify):

**Q86 2/24 For the activities that you ticked above, what is already working well and what makes it so effective?**

We are asking this to find out what we should celebrate and encourage more of to help Recording Schemes in particular.

**Q87 3/24 For the activities that you ticked above, what is working less well and how is it problematic for you?**

We are asking this to find out what we can address to improve things for Recording Schemes in particular.

**Q88 4/24 What ideas do you have for specific changes or general improvements that could help resolve any of these issues for you as a Recording Scheme Operator?**

We are asking this to find ideas that we can take forward to help Recording Schemes in particular.

**Q89 5/24 For which of the following places does your Recording Scheme primarily receive or generate biological records?**

Tick all that apply:

Scotland  
Northern Ireland  
England  
Wales  
Isle of Man  
The Channel Islands  
Republic of Ireland  
UK Overseas Territories  
British Territorial Waters  
Elsewhere on land  
Elsewhere at sea

**Q90 6/24 For which of the following environments does your Recording Scheme primarily receive or generate biological records?**

Tick all that apply:

Terrestrial  
Freshwater  
Marine

**Q91 7/24 For which of the following taxonomic groups does your Recording Scheme primarily receive or generate biological records?**

If the groups you are interested in are not listed, or if the groups below are not sufficiently specific, please use the 'Other' option to name the specific groups of interest to you.

Tick all that apply:

>>> All or any species or species groups  
>>> All or any species or species groups of conservation concern  
Amphibians (e.g. frogs, newts and toads)  
Reptiles (e.g. snakes and lizards)  
Birds  
Mammals - marine  
Mammals - terrestrial or freshwater  
Fishes  
Insects - dragonflies and damselflies  
Insects - bugs  
Insects - butterflies and moths  
Insects - beetles  
Insects - true flies  
Insects - sawflies, bees, wasps and ants  
Arachnids (e.g. spiders, ticks and mites)  
Myriapods (e.g. millipedes and centipedes)  
Crustaceans (e.g. crabs, barnacles and woodlice)  
Molluscs (e.g. snails, slugs, squids and octopuses)  
Annelid worms (e.g. earthworms and leeches)  
Other worms (e.g. flatworms and nematodes)  
Cnidarians (e.g. jellyfish, corals and sea anemones)  
Echinoderms (e.g. starfish, sea urchins and sea cucumbers)  
Seaweeds  
Fungi  
Lichens  
Mosses and liverworts

Ferns  
Flowering plants  
Other (please specify):

**Q92 8/24 How many biological records has your Recording Scheme received or generated in the last year?**

If you or your organisation run a number of Recording Schemes, please answer this question using the total number of records from all of your Recording Schemes.

None  
1 to 1,000 records  
1,001 to 10,000 records  
10,001 to 100,000 records  
100,001 to 1,000,000 records  
Over 1,000,000 records

**Q93 9/24 What level of annual operating costs does your Recording Scheme currently incur?**

If you or your organisation run a number of Recording Schemes, please answer this question using the combined cost of operating all of your Recording Schemes.

Under £100 per year  
£101 to £1,000 per year  
£1,001 to £10,000 per year  
£10,001 to £100,000 per year  
£100,001 to £500,000 per year  
Over £500,000 per year

If you would like to add any information to explain your answer please do so here:

**Q94 10/24 From which of the following sources do you receive funding that contributes towards, or fully covers, the annual operating costs of your Recording Scheme(s)?**

Tick all that apply:

From core funding provided by your own organisation  
From contributions received from participants in your Recording Scheme  
From environmental/conservation Non-Governmental Organisations  
From Local Environmental Records Centres  
From museums, zoos or botanic gardens  
From commercial companies/environmental consultancies  
From academic or educational institutions or funding bodies  
From local authorities or national parks  
From national or central government departments, agencies or public bodies  
From cross-sectoral partnership or secretariat organisations

Other (please specify):

If you would like to add any information to explain your answer please do so here:

**Q95 11/24 From whom do you receive biological records for inclusion in your Recording Scheme?**

Tick all that apply:

From Recorders, Recording Groups or County Recorders who are affiliated with your Recording Scheme  
From Recorders, Recording Groups or County Recorders who are not affiliated with your Recording Scheme  
From other National Recording Schemes  
From members of the general public  
From Local Environmental Records Centres  
From environmental/conservation Non-Governmental Organisations  
From commercial companies/environmental consultancies  
From museums, zoos or botanic gardens  
From staff or students in academia or education  
From local authorities or national parks  
From national or central government departments, agencies or public bodies  
Other (please specify):

**Q96 12/24 In which formats do you receive biological records for your Recording Scheme?**

Tick all that apply:

Online via the iRecord website  
Online via the iRecord app  
Online via the BirdTrack website  
Online via the BirdTrack app  
Online via the iSpot website  
Online via your Recording Scheme's own website  
Online via a Recording Group's website  
Online via an environmental/conservation Non-Governmental Organisation's website  
Online via a Local Environmental Records Centre's website  
Online via social media  
As an Excel spreadsheet designed and supplied by your Recording Scheme

As an Excel spreadsheet of a Recorder or Recording Group's own design  
 As structured survey forms or cards  
 As physical specimens or samples  
 As digital photos, images, videos or sound recordings  
 As a MapMate sync file  
 As an Access database  
 As a spatial layer from QGIS, ArcGIS or MapInfo  
 In conversation or voicemail  
 As a hand drawn illustration or written note or letter  
 As an email message or text  
 As a document in Microsoft Word or Notepad

**Q97 13/24 In which format do you most prefer to receive biological records for your Recording Scheme?**

Please indicate the format that you prefer for textual information (rather than for supporting evidence such as a photo or physical sample or specimen).

Online via the iRecord website  
 Online via the iRecord app  
 Online via the BirdTrack website  
 Online via the BirdTrack app  
 Online via the iSpot website  
 Online via your Recording Scheme's own website  
 Online via a Recording Group's website  
 Online via an environmental/conservation Non-Governmental Organisation's website  
 Online via a Local Environmental Records Centre's website  
 Online via social media  
 As an Excel spreadsheet designed and supplied by your Recording Scheme  
 As an Excel spreadsheet of a Recorder, Recording Group, or Verifier or County Recorder's own design  
 As structured survey forms or cards  
 As physical specimens or samples  
 As digital photos, images, videos or sound recordings  
 As a MapMate sync file  
 As an Access database  
 As a spatial layer from QGIS, ArcGIS or MapInfo  
 In conversation or voicemail  
 As a hand drawn illustration or written note or letter  
 As an email message or text  
 As a document in Microsoft Word or Notepad

**Q98 14/24 Who manages the biological records that your Recording Scheme receives or generates?**

Tick all that apply:

Our recorders manage their own records and there is no central copy  
 One or more Recording Scheme volunteers have the role of managing the Scheme's records  
 One or more Recording Scheme employees have the role of managing the Scheme's records  
 An environmental/conservation Non-Governmental Organisation manages our records for us  
 A Local Environmental Records Centre manages our records for us  
 The Biological Records Centre manages our records for us  
 A local authority or national park authority manages our records for us  
 A national or central government department, agency or public body manages our records for us  
 An academic or educational institution manages our records for us  
 A commercial company/environmental consultancy manages our records for us  
 A cross-sectoral partnership or secretariat organisation manages our records for us

Other (please specify):

If the Recording Scheme incurs any costs for the management of its biological records, please indicate the approximate cost to the Scheme per year and the extent to which the Scheme receives external funding against these costs:

**Q99 15/24 How do your staff or volunteers manage the biological records that your Recording Scheme receives or generates?**

Tick all that apply:

Not applicable - someone else does this for us (as indicated in the previous question)  
 On paper  
 In a document in Microsoft Word or Notepad  
 In an Excel spreadsheet of your own design  
 In an Excel spreadsheet designed specifically for your Recording Scheme  
 In a Microsoft Access database  
 In a spatial layer in QGIS, ArcGIS or MapInfo  
 In iRecord  
 In BirdTrack  
 In Recorder  
 In Marine Recorder  
 In MapMate

In a bespoke system developed for use by your Recording Scheme  
Other (please specify):

**Q100 16/24 Where do you send or submit the biological records that your Recording Scheme receives or generates?**

If you publish your records directly on the NBN Gateway/NBN Atlas or elsewhere, please complete the Data Provider section of this questionnaire (to add this section tick 'Data Provider' under Question 3 in Section A). If you fulfil individual requests for your data, e.g. for commercial or academic use, please indicate this using the options below.

Tick all that apply:

- To iRecord
- To BirdTrack
- To iSpot
- To your followers on social media
- To Verifiers or County Recorders who act as the Verifiers for your Recording Scheme
- To Verifiers or County Recorders who are not associated with your Recording Scheme
- To relevant Recording Groups
- To other National Recording Schemes
- To Local Environmental Records Centres
- To private land owners
- To museums, zoos or botanic gardens
- To environmental/conservation Non-Governmental Organisations
- To commercial companies/environmental consultancies
- To staff or students in academia or education
- To local authorities or national park authorities
- To national or central government departments, agencies or public bodies
- To cross-sectoral partnership or secretariat organisations
- I haven't yet sent or submitted records to any of the above
- Other (please specify):

**Q101 17/24 In what formats do you send or submit your Recording Scheme's biological records?**

Tick all that apply:

- Online via the iRecord website
- Online via the iRecord app
- Online via the BirdTrack website
- Online via the BirdTrack app
- Online via the iSpot website
- Online via your Recording Scheme's own website
- Online via a Recording Group's website
- Online via an environmental/conservation Non-Governmental Organisation's website
- Online via a Local Environmental Records Centre's website
- Online via social media
- As an Excel spreadsheet designed and supplied by your Recording Scheme
- As an Excel spreadsheet of a Recorder, Recording Group, or Verifier or County Recorder's own design
- As structured survey forms or cards
- As physical specimens or samples
- As digital photos, images, videos or sound recordings
- As a MapMate sync file
- As an Access database
- As a spatial layer from QGIS, ArcGIS or MapInfo
- In conversation or voicemail
- As a hand drawn illustration or written note or letter
- As an email message or text
- As a document in Microsoft Word or Notepad
- Not applicable - our Recorders submit their own records
- Not applicable as the organisation that manages our biological records does this for us
- Other (please specify):

**Q102 18/24 Are you happy for the biological records collected by your Recording Scheme to be openly available (with appropriate caveats for sensitive records) for use by anyone?**

"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]

Yes

No

Not sure/don't know

If you would like to add any information to explain your answer please do so here:

**Q103 19/24 Who acts as a Data Provider to publish the biological records received or generated by your Recording Scheme?**

No one - our records are not yet publicly available

We do as the Recording Scheme Operator - through the NBN Gateway/NBN Atlas

We do as the Recording Scheme Operator - through our own website

We do as the Recording Scheme Operator - through both our own website and the NBN Gateway/NBN Atlas  
The Biological Records Centre do - through the NBN Gateway/NBN Atlas  
Other (please specify):

**Q104 20/24 In the last year, how many hours a month on average have you acted as a Recording Scheme Operator in an employed, i.e. paid, capacity?**

Note: anyone working full time for 7.5-8 hours per day is working 37.5-40 hours per week and so about 150-160 hours per month.

- None  
0.1 to 20 hours  
20.1 to 40 hours  
40.1 to 80 hours  
80.1 to 160 hours  
Over 160 hours

**Q105 21/24 In the last year, how many hours per month on average have you acted as a Recording Scheme Operator in a voluntary, i.e. unpaid, capacity?**

Note: anyone volunteering full time for 7.5-8 hours per day is volunteering for 37.5-40 hours per week and so about 150-160 hours a month.

- None  
0.1 to 20 hours  
20.1 to 40 hours  
40.1 to 80 hours  
80.1 to 160 hours  
Over 160 hours

**Q106 22/24 In the last year, what level of expenses have you yourself incurred while acting as a Recording Scheme Operator in some way?**

INCLUDE COSTS SUCH AS: fuel, accommodation when away from home; hire, licensing or purchase of specialist kit, clothing or software; relevant subscriptions and training course costs.

EXCLUDE COSTS SUCH AS: general costs of running a home, car or office (unless you run that car, home or office solely for the purpose of acting as a Recording Scheme Operator); any costs that are externally funded or reimbursed.

- £0  
£1 to £500  
£501 to £1,000  
£1,001 to £5,000  
Over £5,000

If you received any funding or expenses that in some way covered your costs, please tell us about this here:

**Q107 23/24 What motivates you to be a Recording Scheme Operator?**

**Q108 24/24 Regarding the part that you play as a Recording Scheme Operator in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?**

Strongly agree   Agree   Neither agree nor disagree   Disagree   Strongly disagree

I know what to do to play my part well

I've got what I need to be able to play my part

I've received recognition and appreciation for the part that I play

People listen to, and value, my ideas and suggestions

Within the last year I have had the chance to learn and grow

People I liaise with are committed to doing a good job

If you would like to add any information to explain your answers please do so here:

**SECTION G: For Data Providers** [\*<back to list of sections>\*](#)

DATA PROVIDER: YOU PUBLISH DATASETS OR DERIVED PRODUCTS AND MANAGE THEIR METADATA AND LICENSING

Please complete all questions in this section:

**Q109 1/20 Which of the following activities do you do as a Data Provider?**

Tick all that apply:

- Discovering, digitising and mobilising the biological records that you hold on your own or others' behalf  
Data management of your data holdings and preparation of your datasets and metadata for publication  
Compliance with regulations for relevant legislation, standards, contractual obligations or branding  
Administration and maintenance of licences and metadata for each dataset that you publish  
Fulfilment of data requests and responding to requests for higher levels of access  
Development of your own portal or supporting material to supply and showcase your datasets  
Seeking, responding to and using feedback on the quality and availability of your data holdings  
Fundraising and grant reporting  
Training or self-study to increase your own skills as a Data Provider  
Training or mentoring others to share your skills as a Data Provider  
This role is not relevant to me after all (if so, ignore the remaining questions in this section)



Other (please specify):

**Q110 2/20 For the activities that you ticked above, what is already working well and what makes it so effective?**

We are asking this to find out what we should celebrate and encourage more of to help Data Providers in particular.

**Q111 3/20 For the activities that you ticked above, what is working less well and how is it problematic for you?**

We are asking this to find out what we can address to improve things for Data Providers in particular.

**Q112 4/20 What ideas do you have for specific changes or general improvements that could help resolve any of these issues for you as a Data Provider?**

We are asking this to find ideas that we can take forward to help Data Providers in particular.

**Q113 5/20 For which of the following places do you primarily have biological records for publication?**

Tick all that apply:

Scotland  
Northern Ireland  
England  
Wales  
Isle of Man  
The Channel Islands  
Republic of Ireland  
UK Overseas Territories  
British Territorial Waters  
Elsewhere on land  
Elsewhere at sea

**Q114 6/20 For which of the following environments do you primarily have biological records for publication?**

Tick all that apply:

Terrestrial  
Freshwater  
Marine

**Q115 7/20 For which of the following taxonomic groups do you primarily have biological records for publication?**

If the groups you are interested in are not listed, or if the groups below are not sufficiently specific, please use the 'Other' option to name the specific groups of interest to you.

Tick all that apply:

>>> All or any species or species groups  
>>> All or any species or species groups of conservation concern  
Amphibians (e.g. frogs, newts and toads)  
Reptiles (e.g. snakes and lizards)  
Birds  
Mammals - marine  
Mammals - terrestrial or freshwater  
Fishes  
Insects - dragonflies and damselflies  
Insects - bugs  
Insects - butterflies and moths  
Insects - beetles  
Insects - true flies  
Insects - sawflies, bees, wasps and ants  
Arachnids (e.g. spiders, ticks and mites)  
Myriapods (e.g. millipedes and centipedes)  
Crustaceans (e.g. crabs, barnacles and woodlice)  
Molluscs (e.g. snails, slugs, squids and octopuses)  
Annelid worms (e.g. earthworms and leeches)  
Other worms (e.g. flatworms and nematodes)  
Cnidarians (e.g. jellyfish, corals and sea anemones)  
Echinoderms (e.g. starfish, sea urchins and sea cucumbers)  
Seaweeds  
Fungi  
Lichens  
Mosses and liverworts  
Ferns  
Flowering plants  
Other (please specify):

If you would like to add any information to explain your answer please do so here:

**Q116 8/20 How many biological records have you published to date?**

None

1 to 10,000 records  
10,001 to 100,000 records  
100,001 to 1,000,000 records  
1,000,001 to 10,000,000 records  
Over 10,000,000 records

**Q117 9/20 Overall, what proportion of all of the biological records that you hold have you published so far?**

We are asking this question to find out whether Data Providers have further biological records that are yet to be mobilised and published. When deciding your answer, please consider all data holdings that are, or could be, of sufficient quality for publication. Do 'guesstimate'! If you don't yet know what data holdings you may have, give an estimate on the low side to allow for future discovery of data holdings that you could publish.

100%  
66.7% to 99.9%  
33.4% to 66.6%  
0.1% to 33.3%

0%  
Not sure/don't know

If you have data holdings that have not been published, what, if anything, is preventing their publication and what would help to overcome this?

**Q118 10/20 How do you manage the biological records that you publish?**

Tick all that apply:

On paper  
In a document in Microsoft Word or Notepad  
In an Excel spreadsheet of your own design  
In an Excel spreadsheet designed by the originators or suppliers of the biological records that you publish  
In Microsoft Access database format  
In spatial layers in QGIS, ArcGIS or MapInfo  
In iRecord  
In BirdTrack  
In Recorder  
In Marine Recorder  
In MapMate  
In an enterprise database such as Oracle, PostGres or SQLServer  
In a bespoke or in-house system developed and managed by you or your organisation  
Other (please specify):

**Q119 11/20 Where do you publish the datasets or derived data products that you make available as a Data Provider?**

Tick all that apply:

Through books, leaflets or other printed material  
Through peer-reviewed journals  
On your own website  
On a partnership project website  
On the NBN Gateway or NBN Atlas  
On SEWeb (Scotland's Environment Web)  
On the SNHi Natural Spaces portal for Scotland  
On the Lle Geo Portal for Wales  
On the NIVCA DetailData Portal for Northern Ireland  
On the INSPIRE geoportal for Ireland  
On the MAGIC portal for Great Britain  
On GBIF (Global Biodiversity Information Facility)  
On DASHH (Data Archive for Seabed Species and Habitats)  
On MEDIN (Marine Environmental Data & Information Network)  
On EMODnet (European Marine Observation and Data Network)  
On EurOBIS (European Ocean Biogeographic Information System)  
On the Marine Data Exchange portal (from the Crown Estate)  
On NMPi (National Marine Plan interactive from Marine Scotland)  
On data.gov portals  
Other (please specify):

**Q120 12/20 On whose behalf do you act as a Data Provider?**

Tick all that apply:

On your own behalf  
On behalf of your organisation  
On behalf of your followers on social media  
On behalf of multi-organisation projects or partnerships within the same sector  
For one or more Recording Groups  
For one or more National Recording Schemes  
For one or more environmental/conservation Non-Governmental Organisations

For one or more Local Environmental Records Centres  
For one or more commercial companies or environmental consultancies  
For one or more museums, zoos or botanic gardens  
For one or more educational or academic institutions  
For one or more local authorities or national park authorities  
For one or more national or central government departments, agencies or public bodies  
For cross-sectoral partnership or secretariat organisations  
Other (please specify):

**Q121 13/20 Does anyone else publish some or all of the biological records that you publish?**

Tick all that apply:

No - I/we are the sole publisher of the biological records that I/we publish

Yes - at least some of the records that I/we publish are also published by other Data Providers

Don't know/not sure

If you answered yes, please describe the circumstances in which this happens:

**Q122 14/20 Aside from the publication channels in the question above, where else do you send or submit the added-value datasets or derived data products that you hold?**

If you fulfil individual requests for your data, e.g. for commercial or academic use, please indicate this using the options below.

Directly to your followers on social media

Directly to the relevant Verifier or County Recorder

Directly to relevant other Recording Groups

Directly to relevant National Recording Schemes

Directly to Local Environmental Records Centres

Directly to private land owners

Directly to museums, zoos or botanic gardens

Directly to environmental/conservation Non-Governmental Organisations

Directly to commercial companies/environmental consultancies

Directly to students in academia or education

Directly to local authorities or national park authorities

Directly to national or central government departments, agencies or public bodies

Directly to cross-sectoral partnership or secretariat organisations

Not applicable - I/we only supply records as published datasets or products

**Q123 15/20 Are you happy for the biological records that you publish to be openly available (with appropriate caveats for sensitive records) for use by anyone?**

"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]

Yes

No

Not sure/don't know

If you would like to add any information to explain your answer please do so here:

**Q124 16/20 In the last year, how many hours a month on average have you acted as a Data Provider in an employed, i.e. paid, capacity?**

Note: anyone working full time for 7.5-8 hours per day is working 37.5-40 hours per week and so about 150-160 hours per month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q125 17/20 In the last year, how many hours per month on average have you acted as a Data Provider in a voluntary, i.e. unpaid, capacity?**

Note: anyone volunteering full time for 7.5-8 hours per day is volunteering for 37.5-40 hours per week and so about 150-160 hours a month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q126 18/20 In the last year, what level of expenses have you yourself incurred while acting as a Data Provider in some way?**

INCLUDE COSTS SUCH AS: fuel, accommodation when away from home; hire, licensing or purchase of specialist kit, clothing or software; relevant subscriptions and training course costs.

EXCLUDE COSTS SUCH AS: general costs of running a home, car or office (unless you run that car, home or office solely for the purpose of acting as a Data Provider); any costs that are externally funded or reimbursed.

£0

£1 to £500

£501 to £1,000  
£1,001 to £5,000  
Over £5,000

If you received any funding or expenses that in some way covered your costs, please tell us about this here:

**Q127 19/20 What motivates you to be a Data Provider?**

**Q128 20/20 Regarding the part that you play as a Data Provider in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?**

Strongly agree    Agree    Neither agree nor disagree    Disagree    Strongly disagree

I know what to do to play my part well

I've got what I need to be able to play my part

I've received recognition and appreciation for the part that I play

People listen to, and value, my ideas and suggestions

Within the last year I have had the chance to learn and grow

People I liaise with are committed to doing a good job

If you would like to add any information to explain your answers please do so here:

**SECTION H: For Data Developers** [<back to list of sections>](#)

DATA DEVELOPER: YOU CREATE NEW ADDED-VALUE DATASETS OR DERIVED DATA PRODUCTS

Such as: enriched or augmented data, distribution maps and atlases, hotspot maps, models, trends and indicators, web maps or automated and bespoke data feeds.

Please complete all questions in this section:

**Q129 1/21 Which of the following activities do you do as a Data Developer?**

Tick all that apply:

Discovery and acquisition or procurement of biological records and other content

Market research, innovation and development of added-value datasets and derived data products

Reporting to others what biological records you have enhanced and where, how or why you enhanced them

Data management of your added-value datasets and new data products and preparation of them for publication

Seeking, responding to and using feedback on the quality and availability of your datasets and data products

Compliance with regulations for relevant legislation, standards, contractual obligations and branding

Development of your own portal or supporting material to supply and showcase your products

Tendering, fundraising and grant reporting

Training or self-study to increase your own skills as a Data Developer

Training or mentoring others to share your skills as a Data Developer

This role is not relevant to me after all (if so, ignore the remaining questions in this section)

Other (please specify):

**Q130 2/21 For the activities that you ticked above, what is already working well and what makes it so effective?**

We are asking this to find out what we should celebrate and encourage more of to help Data Developers in particular.

**Q131 3/21 For the activities that you ticked above, what is working less well and how is it problematic for you?**

We are asking this to find out what we can address to improve things for Data Developers in particular.

**Q132 4/21 What ideas do you have for specific changes or general improvements that could help resolve any of these issues for you as a Data Developer?**

We are asking this to find ideas that we can take forward to help Data Developers in particular.

**Q133 5/21 For which of the following places do you primarily develop added-value datasets or derived data products?**

Tick all that apply:

Scotland

Northern Ireland

England

Wales

Isle of Man

The Channel Islands

Republic of Ireland

UK Overseas Territories

British Territorial Waters

Elsewhere on land

Elsewhere at sea

**Q134 6/21 For which of the following environments do you primarily develop added-value datasets or derived data products?**

Tick all that apply:

Terrestrial

Freshwater  
Marine

**Q135 7/21 For which of the following taxonomic groups do you primarily develop added-value datasets or derived data products?**

If the groups you are interested in are not listed, or if the groups below are not sufficiently specific, please use the 'Other' option to name the specific groups of interest to you.

Tick all that apply:

>>> All or any species or species groups  
>>> All or any species or species groups of conservation concern  
Amphibians (e.g. frogs, newts and toads)  
Reptiles (e.g. snakes and lizards)  
Birds  
Mammals - marine  
Mammals - terrestrial or freshwater  
Fishes  
Insects - dragonflies and damselflies  
Insects - bugs  
Insects - butterflies and moths  
Insects - beetles  
Insects - true flies  
Insects - sawflies, bees, wasps and ants  
Arachnids (e.g. spiders, ticks and mites)  
Myriapods (e.g. millipedes and centipedes)  
Crustaceans (e.g. crabs, barnacles and woodlice)  
Molluscs (e.g. snails, slugs, squids and octopuses)  
Annelid worms (e.g. earthworms and leeches)  
Other worms (e.g. flatworms and nematodes)  
Cnidarians (e.g. jellyfish, corals and sea anemones)  
Echinoderms (e.g. starfish, sea urchins and sea cucumbers)  
Seaweeds  
Fungi  
Lichens  
Mosses and liverworts  
Ferns  
Flowering plants  
Other (please specify):  
If you would like to add any information to explain your answer please do so here:

**Q136 8/21 Are any of the value-added datasets or derived data products have you developed to date publicly available for use by others?**

Yes

No

Please give one or two examples of added-value datasets or derived data products that you have created and are happy for the SBIF Review to cite:

**Q137 9/21 On whose behalf do you act as a Data Developer?**

Tick all that apply:

On your own behalf  
On behalf of your organisation  
On behalf of your followers on social media  
On behalf of multi-organisation projects or partnerships within the same sector  
For one or more Recording Groups  
For one or more National Recording Schemes  
For one or more environmental/conservation Non-Governmental Organisations  
For one or more Local Environmental Records Centres  
For one or more museums, zoos or botanic gardens  
For one or more educational or academic institutions  
For one or more commercial companies or environmental consultancies  
For one or more local authorities or national park authorities  
For one or more national or central government departments, agencies or public bodies  
For cross-sectoral partnership or secretariat organisations  
Other (please specify):

**Q138 10/21 Where do you go to source or obtain biological records for use in developing added-value datasets or derived data products?**

Tick all that apply:

To the NBN Gateway or NBN Atlas  
To an online data portal other than the NBN Gateway or NBN Atlas  
To bookshops or libraries  
To your own data holdings  
To your organisation's own data holdings

To social media  
 Directly to individual Recorders  
 Directly to local Recording Groups  
 Directly to County Recorders  
 Directly to National Recording Schemes  
 Directly to Local Environmental Records Centres  
 Directly to museums, zoos or botanic gardens  
 Directly to environmental/conservation Non-Governmental Organisations  
 Directly to commercial companies/environmental consultancies  
 Directly to staff or students in education or academia  
 Directly to local authorities or national park authorities  
 Directly to national or central government departments, agencies or public bodies  
 Directly to cross-sectoral partnership or secretariat organisations  
 Directly to private land owners  
 Directly to members of the general public  
 Other (please specify):

**Q139 11/21 If you ticked 'To an online data portal other than the NBN Gateway or NBN Atlas' in the question above, please indicate which online portals you use:**

Tick all that apply:  
 SEWeb (Scotland's Environment Web)  
 SNHi Natural Spaces portal for Scotland  
 Lle Geo Portal for Wales  
 NIVCA DetailData Portal for Northern Ireland  
 INSPIRE geoportal for Ireland  
 MAGIC portal for Great Britain  
 GBIF (Global Biodiversity Information Facility)  
 DASHH (Data Archive for Seabed Species and Habitats)  
 MEDIN (Marine Environmental Data & Information Network)  
 EMODnet (European Marine Observation and Data Network)  
 EurOBIS (European Ocean Biogeographic Information System)  
 Marine Data Exchange Portal (from the Crown Estate)  
 NMPI (National Marine Plan interactive from Marine Scotland)  
 data.gov portals  
 Other (please specify):

**Q140 12/21 Where are your added-value datasets or derived data products published?**

Tick all that apply:  
 In bookshops and libraries  
 In peer-reviewed journals  
 On your own website  
 On a partnership project website  
 On the NBN Gateway or NBN Atlas  
 On SEWeb (Scotland's Environment Web)  
 On the SNHi Natural Spaces portal for Scotland  
 On the Lle Geo Portal for Wales  
 On the NIVCA DetailData Portal for Northern Ireland  
 On the INSPIRE geoportal for Ireland  
 On the MAGIC portal for Great Britain  
 On GBIF (Global Biodiversity Information Facility)  
 On DASHH (Data Archive for Seabed Species and Habitats)  
 On MEDIN (Marine Environmental Data & Information Network)  
 On EMODnet (European Marine Observation and Data Network)  
 On EurOBIS (European Ocean Biogeographic Information System)  
 On the Marine Data Exchange Portal (from the Crown Estate)  
 On NMPI (National Marine Plan interactive from Marine Scotland)  
 On data.gov portals  
 Other (please specify):

**Q141 13/21 Who acts as a Data Provider to publish the added-value datasets or derived data products that you create?**

If you publish your added-value datasets or new data products on your own behalf, please also complete the Data Provider section of this questionnaire (to add this section go back to Section A and tick 'Data Provider' under Question 3). If you provide the products that you develop as a service, please also complete the Service Provider section.

No one - they are not yet publicly available  
 I/we do on my/our own behalf  
 A book or journal publishing company does this for me/us  
 Other (please specify):

**Q142 14/21 Aside from the publication channels in the question above, where else do you send or submit the added-value datasets or derived data products that you hold?**

If you fulfil individual requests for your data, e.g. for commercial or academic use, please indicate this using the options below.

- Directly to your followers on social media
- Directly to the relevant Verifier or County Recorder
- Directly to relevant other Recording Groups
- Directly to relevant National Recording Schemes
- Directly to Local Environmental Records Centres
- Directly to private land owners
- Directly to museums, zoos or botanic gardens
- Directly to environmental/conservation Non-Governmental Organisations
- Directly to commercial companies/environmental consultancies
- Directly to students in academia or education
- Directly to local authorities or national park authorities
- Directly to national or central government departments, agencies or public bodies
- Directly to cross-sectoral partnership or secretariat organisations
- Not applicable - I/we only supply records as published datasets or products
- Other (please specify):

**Q143 15/21 How is any income that you make from added-value datasets or derived data products used?**

- To cover your own operating and product development costs
- To provide a commercial return
- To fund activities in support of your organisation's wider purpose
- To fund original biological recording
- To fund the National Biodiversity Network Secretariat
- To fund education and training for new recorders
- Not applicable - my/our data development activities do not make an income or profit
- Other (please specify):

**Q144 16/21 Are you happy for the added-value datasets and derived data products that you develop to be openly available (with appropriate caveats for sensitive records) for use by anyone?**

"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]

- Yes
- No
- Not sure/don't know
- If you would like to add any information to explain your answer please do so here:

**Q145 17/21 In the last year, how many hours a month on average have you acted as a Data Developer in an employed, i.e. paid, capacity?**

Note: anyone working full time for 7.5-8 hours per day is working 37.5-40 hours per week and so about 150-160 hours per month.

- None
- 0.1 to 20 hours
- 20.1 to 40 hours
- 40.1 to 80 hours
- 80.1 to 160 hours
- Over 160 hours

**Q146 18/21 In the last year, how many hours per month on average have you acted as a Data Developer in a voluntary, i.e. unpaid, capacity?**

Note: anyone volunteering full time for 7.5-8 hours per day is volunteering for 37.5-40 hours per week and so about 150-160 hours a month.

- None
- 0.1 to 20 hours
- 20.1 to 40 hours
- 40.1 to 80 hours
- 80.1 to 160 hours
- Over 160 hours

**Q147 19/21 In the last year, what level of expenses have you yourself incurred while acting as a Data Developer in some way?**

INCLUDE COSTS SUCH AS: fuel, accommodation when away from home; hire, licensing or purchase of specialist kit, clothing or software; relevant subscriptions and training course costs.

EXCLUDE COSTS SUCH AS: general costs of running a home, car or office (unless you run that car, home or office solely for the purpose of acting as a Data Developer); any costs that are externally funded or reimbursed.

- £0
- £1 to £500
- £501 to £1,000
- £1,001 to £5,000
- Over £5,000

If you received any funding or expenses that in some way covered your costs, please tell us about this here:

**Q148 20/21 What motivates you to be a Data Developer?**

**Q149 21/21 Regarding the part that you play as a Data Developer in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?**

Strongly agree    Agree    Neither agree nor disagree    Disagree    Strongly disagree

I know what to do to play my part well

I've got what I need to be able to play my part

I've received recognition and appreciation for the part that I play

People listen to, and value, my ideas and suggestions

Within the last year I have had the chance to learn and grow

People I liaise with are committed to doing a good job

If you would like to add any information to explain your answers please do so here:

**SECTION I: For Data Users** [\*<back to list of sections>\*](#)

DATA USER: YOU USE BIOLOGICAL RECORDS, ADDED-VALUE DATASETS OR DERIVED DATA PRODUCTS FOR YOUR OWN PURPOSES

Please complete all questions in this section:

**Q150 1/18 Which of the following activities do you do as a Data User?**

Tick all that apply:

Discovery of available biological records, datasets or data products

Understanding, negotiating and complying with licence conditions and access arrangements

Accessing, downloading, formatting and validating biological records, datasets or data products

Understanding collection methods, use limitations and content of biological records, datasets or data products

Giving feedback on the quality or suitability of particular biological records, datasets or data products

Obtaining value from use of biological records, datasets or data products for your own/your organisation's benefit

Obtaining value from use of biological records, datasets or data products for public benefit

Reporting to others what biological records you have used and where, how or why you used them

Training or self-study to increase your own skills as a Data User

Training or mentoring others to share your skills as a Data User

This role is not relevant to me after all (if so, ignore the remaining questions in this section)

Other (please specify):

**Q151 2/18 For the activities that you ticked above, what is already working well and what makes it so effective?**

We are asking this to find out what we should celebrate and encourage more of to help Data Users in particular.

**Q152 3/18 For the activities that you ticked above, what is working less well and how is it problematic for you?**

We are asking this to find out what we can address to improve things for Data Users in particular.

**Q153 4/18 What ideas do you have for specific changes or general improvements that could help resolve any of these issues for you as a Data User?**

We are asking this to find ideas that we can take forward to help Data Users in particular.

**Q154 5/18 Which of the following places are of primary interest for you as a Data User?**

Tick all that apply:

Scotland

Northern Ireland

England

Wales

Isle of Man

The Channel Islands

Republic of Ireland

UK Overseas Territories

British Territorial Waters

Elsewhere on land

Elsewhere at sea

**Q155 6/18 Which of the following environments are of primary interest for you as a Data User?**

Tick all that apply:

Terrestrial

Freshwater

Marine

**Q156 7/18 Which of the following taxonomic groups are of primary interest for you as a Data User?**

If the groups you are interested in are not listed, or if the groups below are not sufficiently specific, please use the 'Other' option to name the specific groups of interest to you.

Tick all that apply:



>>> All or any species or species groups  
 >>> All or any species or species groups of conservation concern  
 Amphibians (e.g. frogs, newts and toads)  
 Reptiles (e.g. snakes and lizards)  
 Birds  
 Mammals - marine  
 Mammals - terrestrial or freshwater  
 Fishes  
 Insects - dragonflies and damselflies  
 Insects - bugs  
 Insects - butterflies and moths  
 Insects - beetles  
 Insects - true flies  
 Insects - sawflies, bees, wasps and ants  
 Arachnids (e.g. spiders, ticks and mites)  
 Myriapods (e.g. millipedes and centipedes)  
 Crustaceans (e.g. crabs, barnacles and woodlice)  
 Molluscs (e.g. snails, slugs, squids and octopuses)  
 Annelid worms (e.g. earthworms and leeches)  
 Other worms (e.g. flatworms and nematodes)  
 Cnidarians (e.g. jellyfish, corals and sea anemones)  
 Echinoderms (e.g. starfish, sea urchins and sea cucumbers)  
 Seaweeds  
 Fungi  
 Lichens  
 Mosses and liverworts  
 Ferns  
 Flowering plants  
 Other (please specify):  
 If you would like to add any information to explain your answer please do so here:

**Q157 8/18 How often do you make use of biological records, added-value datasets or derived data products in some way?**

Continuously  
 Very frequently  
 Frequently  
 Sporadically  
 Infrequently  
 Very infrequently

**Q158 9/18 Where do you go to source or obtain biological records, added-value datasets or derived data products that you can use for your own purposes?**

Tick all that apply:  
 To the NBN Gateway or NBN Atlas  
 To an online data portal other than the NBN Gateway or NBN Atlas  
 To bookshops or libraries  
 To your own personal data holdings  
 To your organisation's own data holdings  
 Directly to individual Recorders  
 Directly to local Recording Groups  
 Directly to County Recorders  
 Directly to relevant National Recording Schemes  
 Directly to Local Environmental Records Centres  
 Directly to museums, zoos or botanic gardens  
 Directly to environmental/conservation Non-Governmental Organisations  
 Directly to commercial companies/environmental consultancies  
 Directly to staff or students in education or academia  
 Directly to local authorities or national park authorities  
 Directly to national or central government departments, agencies or public bodies  
 Directly to cross-sectoral partnership or secretariat organisations  
 Directly to private land owners  
 Directly to members of the general public  
 Other (please specify):

**Q159 10/18 If you ticked 'To an online data portal other than the NBN Gateway or NBN Atlas' in the question above, please indicate which online portals you use:**

Tick all that apply:  
 SEWeb (Scotland's Environment Web)  
 SNHi Natural Spaces portal for Scotland  
 Lle Geo Portal for Wales

NIVCA DetailData Portal for Northern Ireland  
 INSPIRE geoportal for Ireland  
 MAGIC portal for Great Britain  
 GBIF (Global Biodiversity Information Facility)  
 DASHH (Data Archive for Seabed Species and Habitats)  
 MEDIN (Marine Environmental Data & Information Network)  
 EMODnet (European Marine Observation and Data Network)  
 EurOBIS (European Ocean Biogeographic Information System)  
 Marine Data Exchange Portal (from the Crown Estate)  
 NMPi (National Marine Plan interactive from Marine Scotland)  
 data.gov portals  
 Other (please specify):

**Q160 11/18 How do you manage the biological records that you use while you are using them?**

Tick all that apply:

On paper  
 In a document in Microsoft Word or Notepad  
 In an Excel spreadsheet of your own design  
 In an Excel spreadsheet designed or supplied by Data Providers of the biological records that you use  
 In a Microsoft Access database  
 In a spatial layer in QGIS, ArcGIS or MapInfo  
 In iRecord  
 In BirdTrack  
 In Recorder  
 In Marine Recorder  
 In MapMate  
 In a bespoke system developed for use by you or your organisation  
 Other (please specify):

**Q161 12/18 Are you happy for all of the biological records, datasets and data products that you use for your own purposes to be openly available (with appropriate caveats for sensitive records) for use by anyone?**

"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]

Yes  
 No  
 Not sure/don't know

If you would like to add any information to explain your answer please do so here:

**Q162 13/18 How satisfied are you with the biological records, added-value datasets or derived data products that are available for your use through our biological recording communities and infrastructure?**

Please answer this question for each dimension below:

Very satisfied	Satisfied	Neither satisfied nor unsatisfied	Unsatisfied	Very unsatisfied
Range of datasets				
Ease of discovery				
Accessibility				
Quality				
Currency				

If you would like to add any information to explain your answer please do so here:

**Q163 14/18 In the last year, how many hours a month on average have you acted as a Data User in an employed, i.e. paid, capacity?**

Note: anyone working full time for 7.5-8 hours per day is working 37.5-40 hours per week and so about 150-160 hours per month.

None  
 0.1 to 20 hours  
 20.1 to 40 hours  
 40.1 to 80 hours  
 80.1 to 160 hours  
 Over 160 hours

**Q164 15/18 In the last year, how many hours per month on average have you acted as a Data User in a voluntary, i.e. unpaid, capacity?**

Note: anyone volunteering full time for 7.5-8 hours per day is volunteering for 37.5-40 hours per week and so about 150-160 hours a month.

None  
 0.1 to 20 hours  
 20.1 to 40 hours  
 40.1 to 80 hours  
 80.1 to 160 hours  
 Over 160 hours

**Q165 16/18 In the last year, what level of expenses have you yourself incurred while acting as a Data User in some way?**

INCLUDE COSTS SUCH AS: fuel, accommodation when away from home; hire, licensing or purchase of specialist kit, clothing or software; relevant subscriptions and training course costs.

EXCLUDE COSTS SUCH AS: general costs of running a home, car or office (unless you run that car, home or office solely for the purpose of acting as a Data User); any costs that are externally funded or reimbursed.

£0

£1 to £500

£501 to £1,000

£1,001 to £5,000

Over £5,000

If you received any funding or expenses that in some way covered your costs, please tell us about this here:

**Q166 17/18 What motivates you to be a Data User?**

**Q167 18/18 Regarding the part that you play as a Data User in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?**

Strongly agree    Agree    Neither agree nor disagree    Disagree    Strongly disagree

I know what to do to play my part well

I've got what I need to be able to play my part

I've received recognition and appreciation for the part that I play

People listen to, and value, my ideas and suggestions

Within the last year I have had the chance to learn and grow

People I liaise with are committed to doing a good job

If you would like to add any information to explain your answers please do so here:

**SECTION J: For Service Providers** [\*<back to list of sections>\*](#)

SERVICE PROVIDER: YOU SUPPLY SERVICES SUCH AS THOSE PROVIDED BY LERCs OR THE NBN TRUST

Such as: training and support for local recorders or national recording schemes, digitising and mobilisation of data, fulfilling data requests, data analysis, talks or outdoor activities for the public, ecological advice, designation of local biodiversity sites, screening of planning applications, data management of biological records or provision of shared systems for managing, aggregating, viewing, querying and analysing biological records online.

Please complete all questions in this section:

**Q168 1/21 Which of the following activities do you do as a Service Provider?**

Tick all that apply:

Market research, design, prioritisation and continual improvement for new and existing services

Discovery, procurement and licensing of biological records or other content for use in your services

Data management of the biological records made available through, or used in, your services

Technical development of the systems and tools made available as a service or used in your services

Development of your own portal or supporting material to supply and showcase your services

Compliance with regulations for relevant legislation, standards, contractual obligations and branding

Tendering, invoicing, fundraising, project or contract management and grant reporting

Management of your staff or volunteers, services, budgets, risks, data, IT systems, equipment and offices

Training or self-study to increase your skills as a Service Provider

Training or mentoring of others to share your skills as a Service Provider

This role is not relevant to me after all (if so, ignore the remaining questions in this section)

Other (please specify):

**Q169 2/21 For the activities that you ticked above, what is already working well and what makes it so effective?**

We are asking this to find out what we should celebrate and encourage more of to help Service Providers in particular.

**Q170 3/21 For the activities that you ticked above, what is working less well and how is it problematic for you?**

We are asking this to find out what we can address to improve things for Service Providers in particular.

**Q171 4/21 What ideas do you have for specific changes or general improvements that could help resolve any of these issues for you as a Service Provider?**

We are asking this to find ideas that we can take forward to help Service Providers in particular.

**Q172 5/21 In which of the following places do you primarily provide your services?**

Tick all that apply:

Scotland

Northern Ireland

England

Wales

Isle of Man

The Channel Islands

Republic of Ireland

UK Overseas Territories  
British Territorial Waters  
Elsewhere on land  
Elsewhere at sea

**Q173 6/21 Which of the following environments are primarily of interest for you as a Service Provider?**

Tick all that apply:

Terrestrial  
Freshwater  
Marine

**Q174 7/21 Which of the following taxonomic groups are primarily of interest for you as a Service Provider?**

If the groups you are interested in are not listed, or if the groups below are not sufficiently specific, please use the 'Other' option to name the specific groups of interest to you.

Tick all that apply:

>>> All or any species or species groups  
>>> All or any species or species groups of conservation concern  
Amphibians (e.g. frogs, newts and toads)  
Reptiles (e.g. snakes and lizards)  
Birds  
Mammals - marine  
Mammals - terrestrial or freshwater  
Fishes  
Insects - dragonflies and damselflies  
Insects - bugs  
Insects - butterflies and moths  
Insects - beetles  
Insects - true flies  
Insects - sawflies, bees, wasps and ants  
Arachnids (e.g. spiders, ticks and mites)  
Myriapods (e.g. millipedes and centipedes)  
Crustaceans (e.g. crabs, barnacles and woodlice)  
Molluscs (e.g. snails, slugs, squids and octopuses)  
Annelid worms (e.g. earthworms and leeches)  
Other worms (e.g. flatworms and nematodes)  
Cnidarians (e.g. jellyfish, corals and sea anemones)  
Echinoderms (e.g. starfish, sea urchins and sea cucumbers)  
Seaweeds  
Fungi  
Lichens  
Mosses and liverworts  
Ferns  
Flowering plants  
Other (please specify):  
If you would like to add any information to explain your answer please do so here:

**Q175 8/21 In which of the following areas do you provide services that support our biological recording community and infrastructure?**

Tick all that apply:

FACILITATION: supporting partners to play their part, defining standards and providing common systems  
INTRODUCTION: introducing people to biological recording and enjoyment of the natural world  
COLLECTION: encouraging, training and supporting people to collect, digitise or mobilise biological records  
VERIFICATION: checking the accuracy of biological records or developing capacity to do so on a wider scale  
CURATION: managing and showcasing biological records on your own behalf or on behalf of others  
PROVISION: publishing, aggregating and sharing biological records as easily available resources for all  
DISCOVERY: enabling people to identify, locate and extract the biological records that they need  
ENHANCEMENT: configuring, analysing or enhancing records to increase their value or aid their interpretation  
USE: using biological records to obtain value or benefit yourself, for colleagues or customers, or for public good  
If you would like to add any information to explain your answer please do so here:

**Q176 9/21 What level of annual operating costs does your organisation currently incur to provide its services?**

Under £50,000  
£50,001 to £150,000  
£150,001 to £300,000  
£300,001 to £450,000  
Over £450,000

If you would like to add any information to explain your answer please do so here:

**Q177 10/21 From which of the following sources do you receive income or funding that contributes towards, or fully covers, the annual operating costs of providing the services that you provide?**

Tick all that apply:

- From core funding provided by your own organisation
  - From individual Recorders or Recording Groups
  - From Recording Schemes
  - From environmental/conservation Non-Governmental Organisations
  - From Local Environmental Records Centres
  - From museums, zoos or botanic gardens
  - From commercial companies/environmental consultancies
  - From academic or educational institutions or funding bodies
  - From local authorities or national parks
  - From national or central government departments, agencies or public bodies
  - From cross-sectoral partnership or secretariat organisations
- If you would like to add any information to explain your answer please do so here:

**Q178 11/21 Do you provide your services locally, nationally or centrally?**

Tick all that apply:

- Locally - my/our services are for a local or regional area and are delivered from within that local or regional area
  - Nationally - my/our services are for a nation (e.g. Scotland or the UK) and are delivered from within that nation
  - Centrally - my/our services are not place-based, they can be delivered from anywhere or to anyone
- If you would like to add any information to explain your answer please do so here:

**Q179 12/21 Who uses your services?**

Tick all that apply:

- You or your organisation
- Individual Recorders
- Recording Groups
- Verifiers or County Recorders
- National Recording Schemes
- Local Environmental Records Centres
- Museums, zoos or botanic gardens
- Environmental/conservation Non-Governmental Organisations
- Commercial companies/environmental consultancies
- Staff or students in education or academia
- Local authorities or national park authorities
- National or central government departments, agencies or public bodies
- Cross-sectoral partnership or secretariat organisations
- Private land owners
- Members of the general public
- Other (please specify):

**Q180 13/21 Where do you go to source or obtain the biological records, added-value datasets or derived data products that you make available through, or use as a component of, your services in some way?**

Tick all that apply:

- To the NBN Gateway or NBN Atlas
- To an online data portal other than the NBN Gateway or NBN Atlas
- To bookshops or libraries
- To your own data holdings or those of your organisation
- Directly to relevant Data Providers
- Directly to individual Recorders
- Directly to local Recording Groups
- Directly to County Recorders
- Directly to relevant Recording Schemes
- Directly to Local Environmental Records Centres
- Directly to museums, zoos or botanic gardens
- Directly to environmental/conservation Non-Governmental Organisations
- Directly to commercial companies/environmental consultancies
- Directly to staff or students in education or academia
- Directly to local authorities or national park authorities
- Directly to national or central government departments, agencies or public bodies
- Directly to cross-sectoral partnership or secretariat organisations
- Directly to private land owners
- Directly to members of the general public
- Not applicable - the services I provide don't use biological records, datasets or products in this way
- Other (please specify):

**Q181 14/21 If you ticked 'To an online data portal other than the NBN Gateway or NBN Atlas' in the question above, please indicate which online portals you use:**

Tick all that apply:

- SEWeb (Scotland's Environment Web)

SNHi Natural Spaces portal for Scotland  
Lle Geo Portal for Wales  
NIVCA DetailData Portal for Northern Ireland  
INSPIRE geoportal for Ireland  
MAGIC portal for Great Britain  
GBIF (Global Biodiversity Information Facility)  
DASHH (Data Archive for Seabed Species and Habitats)  
MEDIN (Marine Environmental Data & Information Network)  
EMODnet (European Marine Observation and Data Network)  
EurOBIS (European Ocean Biogeographic Information System)  
Marine Data Exchange Portal (from the Crown Estate)  
NMPi (National Marine Plan interactive from Marine Scotland)  
data.gov portals  
Other (please specify):

**Q182 15/21 How is the income that you make, if any, from the provision of your services used?**

Tick all that apply:

To cover your own operating and service development costs  
To provide a commercial return  
To fund activities in support of your organisation's wider purpose  
To fund original biological recording  
To fund the National Biodiversity Network Secretariat  
To fund the Association of Local Environmental Records Centres  
To fund education and training for new recorders  
Not applicable - the service does not make an income or profit  
Other (please specify):

**Q183 16/21 Are you happy for all of the biological records, datasets or data products that arise from, or are used in, your services to be openly available (with appropriate caveats for sensitive records) for use by anyone?**

"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]

Yes

No

Not sure/don't know

If you would like to add any information to explain your answer please do so here:

**Q184 17/21 In the last year, how many hours a month on average have you acted as a Service Provider in an employed, i.e. paid, capacity?**

Note: anyone working full time for 7.5-8 hours per day is working 37.5-40 hours per week and so about 150-160 hours per month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q185 18/21 In the last year, how many hours per month on average have you acted as a Service Provider in a voluntary, i.e. unpaid, capacity?**

Note: anyone volunteering full time for 7.5-8 hours per day is volunteering for 37.5-40 hours per week and so about 150-160 hours a month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q186 19/21 In the last year, what level of expenses have you yourself incurred while acting as a Service Provider in some way?**

INCLUDE COSTS SUCH AS: fuel, accommodation when away from home; hire, licensing or purchase of specialist kit, clothing or software; relevant subscriptions and training course costs.

EXCLUDE COSTS SUCH AS: general costs of running a home, car or office (unless you run that car, home or office solely for the purpose of acting as a Service Provider); any costs that are externally funded or reimbursed.

£0

£1 to £500

£501 to £1,000

£1,001 to £5,000

Over £5,000

If you received any funding or expenses that in some way covered your costs, please tell us about this here:

**Q187 20/21 What motivates you to be a Service Provider?**

**Q188 21/21 Regarding the part that you play as a Service Provider in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?**

Strongly agree    Agree    Neither agree nor disagree    Disagree    Strongly disagree

I know what to do to play my part well

I've got what I need to be able to play my part

I've received recognition and appreciation for the part that I play

People listen to, and value, my ideas and suggestions

Within the last year I have had the chance to learn and grow

People I liaise with are committed to doing a good job

If you would like to add any information to explain your answers please do so here:

**SECTION K: For Service Users** *<back to list of sections>*

SERVICE USER: YOU USE SERVICES SUCH AS THOSE PROVIDED BY LERCs OR THE NBN TRUST

Such as: training and support for local recorders or national recording schemes, digitising and mobilisation of data, fulfilling data requests, data analysis, talks or outdoor activities for the public, ecological advice, designation of local biodiversity sites, screening of planning applications, data management of biological records or provision of shared systems for managing, aggregating, viewing, querying and analysing biological records online.

Please complete all questions in this section:

**Q189 1/19 Which of the following activities do you do as a Service User?**

Tick all that apply:

Discovering, evaluating and registering for services of interest to you

Booking or procuring a service and complying with its terms and conditions of use

Configuring a service so that it meets your needs

Hosting a Service Provider, periodically or permanently, to better access their services

Giving feedback on the quality and suitability of existing services

Fundraising or budgeting to cover the costs of using a service

Obtaining value from use of a service for your own/your organisation's benefit

Obtaining value from use of a service for public benefit

Training or self-study to increase your skills as a Service User

Training or mentoring others to share your skills as a Service User

This role is not relevant to me after all (if so, ignore the remaining questions in this section)

Other (please specify):

**Q190 2/19 For the activities that you ticked above, what is already working well and what makes it so effective?**

We are asking this to find out what we should celebrate and encourage more of to help Service Users in particular.

**Q191 3/19 For the activities that you ticked above, what is working less well and how is it problematic for you?**

We are asking this to find out what we can address to improve things for Service Users in particular.

**Q192 4/19 What ideas do you have for specific changes or general improvements that could help resolve any of these issues for you as a Service User?**

We are asking this to find ideas that we can take forward to help Service Users in particular.

**Q193 5/19 In which of the following places do you primarily make use of the services that you use?**

Tick all that apply:

Scotland

Northern Ireland

England

Wales

Isle of Man

The Channel Islands

Republic of Ireland

UK Overseas Territories

British Territorial Waters

Elsewhere on land

Elsewhere at sea

**Q194 6/19 Which of the following environments are primarily of interest for you as Service User?**

Tick all that apply:

Terrestrial

Freshwater

Marine

**Q195 7/19 Which of the following taxonomic groups are primarily of interest for you as a Service User?**

If the groups you are interested in are not listed, or if the groups below are not sufficiently specific, please use the 'Other' option to name the specific groups of interest to you.

Tick all that apply:

>>> All or any species or species groups

>>> All or any species or species groups of conservation concern

Amphibians (e.g. frogs, newts and toads)

Reptiles (e.g. snakes and lizards)

Birds

Mammals - marine

Mammals - terrestrial or freshwater

Fishes

Insects - dragonflies and damselflies

Insects - bugs

Insects - butterflies and moths

Insects - beetles

Insects - true flies

Insects - sawflies, bees, wasps and ants

Arachnids (e.g. spiders, ticks and mites)

Myriapods (e.g. millipedes and centipedes)

Crustaceans (e.g. crabs, barnacles and woodlice)

Molluscs (e.g. snails, slugs, squids and octopuses)

Annelid worms (e.g. earthworms and leeches)

Other worms (e.g. flatworms and nematodes)

Cnidarians (e.g. jellyfish, corals and sea anemones)

Echinoderms (e.g. starfish, sea urchins and sea cucumbers)

Seaweeds

Fungi

Lichens

Mosses and liverworts

Ferns

Flowering plants

Other (please specify):

If you would like to add any information to explain your answer please do so here:

**Q196 8/19 In which of the following areas do you make use of services that are of value to you in some way?**

Tick all that apply:

FACILITATION: supporting partners to play their part, defining standards and providing common systems

INTRODUCTION: introducing people to biological recording and enjoyment of the natural world

COLLECTION: encouraging, training and supporting people to collect, digitise or mobilise biological records

VERIFICATION: checking the accuracy of biological records or developing capacity to do so on a wider scale

CURATION: managing and showcasing biological records on your own behalf or on behalf of others

PROVISION: publishing, aggregating and sharing biological records as easily available resources for all

DISCOVERY: enabling people to identify, locate and extract the biological records that they need

ENHANCEMENT: configuring, analysing or enhancing records to increase their value or aid their interpretation

USE: using biological records to obtain value or benefit yourself, for colleagues or customers, or for public good

If you would like to add any information to explain your answer please do so here:

**Q197 9/19 How often do you make use of the services that you use?**

Continuously

Very frequently

Frequently

Sporadically

Infrequently

Very infrequently

**Q198 10/19 Do you primarily make use of services at a local, national or central level?**

Tick all that apply:

Locally - the services I use are for a local or regional area and are delivered from within that local or regional area

Nationally - the services I use are for a nation (e.g. Scotland or the UK) and are delivered from within that nation

Centrally - the services I use are not place-based, they can be delivered from anywhere or to anyone

If you would like to add any information to explain your answer please do so here:

**Q199 11/19 In the last year, how much have you spent in total on paying for the services that you have used (regardless of who supplied them)?**

£0 (for free-to-use services)

£1 to £1,000

£1,001 to £10,000

£10,001 to £100,000

Over £100,000



Don't know

If you would like to add any information to explain your answer please do so here:

**Q200 12/19 Who provides these services to you?**

Tick all that apply:

Individual Recorders

Recording Groups

Verifiers or County Recorders

National Recording Schemes

Local Environmental Records Centres

Museums, zoos or botanic gardens

Environmental/conservation Non-Governmental Organisations

Commercial companies/environmental consultancies

Staff or students in education or academia

Local authorities or national park authorities

National or central government departments, agencies or public bodies

Cross-sectoral partnership or secretariat organisations

Other (please specify):

**Q201 13/19 How satisfied are you with the services that are available for your use through our biological recording communities and infrastructure?**

Highly satisfied    Satisfied    Neither satisfied nor unsatisfied    Unsatisfied    Very unsatisfied

Range of services

Customer care

Service availability

Service quality

Value for money

If you would like to add any information to explain your answer please do so here:

**Q202 14/19 Are you happy for all of the biological records, datasets and data products that arise from the services that you use to be openly available (with appropriate caveats for sensitive records) for use by anyone?**

"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]

Yes

No

Not sure/don't know

If you would like to add any information to explain your answer please do so here:

**Q203 15/19 In the last year, how many hours a month on average have you acted as a Service User in an employed, i.e. paid, capacity?**

Note: anyone working full time for 7.5-8 hours per day is working 37.5-40 hours per week and so about 150-160 hours per month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q204 16/19 In the last year, how many hours per month on average have you acted as a Service User in a voluntary, i.e. unpaid, capacity?**

Note: anyone volunteering full time for 7.5-8 hours per day is volunteering for 37.5-40 hours per week and so about 150-160 hours a month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q205 17/19 In the last year, what level of expenses have you yourself incurred while acting as a Service User in some way?**

INCLUDE COSTS SUCH AS: fuel, accommodation when away from home; hire, licensing or purchase of specialist kit, clothing or software; relevant subscriptions and training course costs.

EXCLUDE COSTS SUCH AS: general costs of running a home, car or office (unless you run that car, home or office solely for the purpose of acting as a Service User); any costs that are externally funded or reimbursed.

£0

£1 to £500

£501 to £1,000

£1,001 to £5,000

Over £5,000

If you received any funding or expenses that in some way covered your costs, please tell us here:

**Q206 18/19 What motivates you to be a Service User?**

**Q207 19/19 Regarding the part that you play as a Service User in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?**

Strongly agree    Agree    Neither agree nor disagree    Disagree    Strongly disagree

I know what to do to play my part well

I've got what I need to be able to play my part

I've received recognition and appreciation for the part that I play

People listen to, and value, my ideas and suggestions

Within the last year I have had the chance to learn and grow

People I liaise with are committed to doing a good job

If you would like to add any information to explain your answers please do so here:

**SECTION L: For Funders** [<back to list of sections>](#)

**FUNDER: YOU PROVIDE FUNDING TO SUPPORT OR COMMISSION KEY ACTIVITIES IN OUR NETWORK**

Please complete all questions in this section:

**Q208 1/18 Which of the following activities do you do as a Funder?**

Tick all that apply:

Stakeholder engagement to understand needs and opportunities

Strategic planning to determine your funding programmes' aims and objectives

Financial planning and budget management to set and track grant expenditure

Assessment of the status and suitability of funding applicants and their applications

Liaison with funding applicants to fulfil funding application processes and oversee grant reporting

Monitoring of funding impact and compliance with funding terms and conditions

Reporting to others what funding you have provided and what outcomes it has achieved

Participation on relevant steering groups and committees as a key stakeholder

Training or self-study to increase your skills as a Funder

Training or mentoring others to share your skills as a Funder

This role is not relevant to me after all (if so, ignore the remaining questions in this section)

Other (please specify):

**Q209 2/18 For the activities that you ticked above, what is already working well and what makes it so effective?**

We are asking this to find out what we should celebrate and encourage more of to help Funders in particular.

**Q210 3/18 For the activities that you ticked above, what is working less well and how is it problematic for you?**

We are asking this to find out what we can address to improve things for Funders in particular.

**Q211 4/18 What ideas do you have for specific changes or general improvements that could help resolve any of these issues for you as a Funder?**

We are asking this to find ideas that we can take forward to help Funders in particular.

**Q212 5/18 In which of the following places do you primarily provide funding?**

Tick all that apply:

Scotland

Northern Ireland

England

Wales

Isle of Man

The Channel Islands

Republic of Ireland

UK Overseas Territories

British Territorial Waters

Elsewhere on land

Elsewhere at sea

**Q213 6/18 Which of the following environments are primarily of interest for you given the drivers and objectives of your funding?**

Tick all that apply:

Terrestrial

Freshwater

Marine

**Q214 7/18 Which of the following taxonomic groups are primarily of interest for you given the drivers and objectives of your funding?**

If the groups you are interested in are not listed, or if the groups below are not sufficiently specific, please use the 'Other' option to name the specific groups of interest to you.

Tick all that apply:

>>> All or any species or species groups

>>> All or any species or species groups of conservation concern

Amphibians (e.g. frogs, newts and toads)

Reptiles (e.g. snakes and lizards)

Birds

Mammals - marine

Mammals - terrestrial or freshwater

Fishes

Insects - dragonflies and damselflies

Insects - bugs

Insects - butterflies and moths

Insects - beetles

Insects - true flies

Insects - sawflies, bees, wasps and ants

Arachnids (e.g. spiders, ticks and mites)

Myriapods (e.g. millipedes and centipedes)

Crustaceans (e.g. crabs, barnacles and woodlice)

Molluscs (e.g. snails, slugs, squids and octopuses)

Annelid worms (e.g. earthworms and leeches)

Other worms (e.g. flatworms and nematodes)

Cnidarians (e.g. jellyfish, corals and sea anemones)

Echinoderms (e.g. starfish, sea urchins and sea cucumbers)

Seaweeds

Fungi

Lichens

Mosses and liverworts

Ferns

Flowering plants

Other (please specify):

If you would like to add any information to explain your answer please do so here:

**Q215 8/18 In the last year, what level of funding have you provided to support or commission key activities in our network in some way?**

None

Minor

Medium

Major

If you would like to add any information to explain your answer please do so here:

**Q216 9/18 Which of the following sectors do you fund to support or commission key activities in our network in some way?**

Tick all that apply:

Individual Recorders

Recording Groups

Recording Schemes

Environmental/conservation Non-Governmental Organisations

Local Environmental Records Centres

Museums, zoos or botanic gardens

Commercial companies/environmental consultancies

Academic or educational institutions

Local authorities or national park authorities

National or central government departments, agencies or public bodies

Cross-sectoral partnership or secretariat organisations

Members of the general public

Other (please specify):

If you would like to add any information to explain your answer please do so here:

**Q217 10/18 Which of the following roles do you fund to support or commission key activities in our network in some way?**

Tick all that apply:

RECORDER OR DATA COLLECTOR: you collect biological records for your own or others' use

VERIFIER OR COUNTY RECORDER: you verify the accuracy of biological records collected and identified by others

COLLECTION CURATOR: you curate biological samples or specimens for analysis, exhibition or reference

RECORDING GROUP OPERATOR: you manage the activities and administration of a recording group

RECORDING SCHEME OPERATOR: you manage the activities and administration of a recording scheme

DATA PROVIDER: you publish datasets or derived data products and manage their metadata and licensing

DATA DEVELOPER: you create new value-added datasets or derived data products such as enriched data or trends

DATA USER: you use biological records, added-value datasets or data products for your own purposes

SERVICE PROVIDER: you supply services or systems such as those provided by LERCs or the NBN Trust

SERVICE USER: you use services or systems such as those provided by LERCs or the NBN Trust

FACILITATOR: you act as a secretariat to coordinate, and communicate across, our whole network

If you would like to add any information to explain your answer please do so here:

**Q218 11/18 Which of the following areas do you support or commission through the funding that you provide?**

Tick all that apply:

FACILITATION: supporting partners to play their part, defining standards and providing common systems

INTRODUCTION: introducing people to biological recording and enjoyment of the natural world

COLLECTION: encouraging, training and supporting people to collect, digitise or mobilise biological records

VERIFICATION: checking the accuracy of biological records or developing capacity to do so on a wider scale

CURATION: managing and showcasing biological records on your own behalf or on behalf of others

PROVISION: publishing, aggregating and sharing biological records as easily available resources for all

DISCOVERY: enabling people to identify, locate and extract the biological records that they need

ENHANCEMENT: configuring, analysing or enhancing records to increase their value or aid their interpretation

USE: using biological records to obtain value or benefit yourself, for colleagues or customers, or for public good

If you would like to add any information to explain your answer please do so here:

**Q219 12/18 Do you primarily provide funding at a local, national or central level?**

Tick all that apply:

Locally - to fund activities for a local or regional area that are undertaken from within that local or regional area

Nationally - to fund activities for a nation (e.g. Scotland or the UK) that are undertaken from within that nation

Centrally - to fund activities that are not place-based and that can be delivered from anywhere or to anyone

If you would like to add any information to explain your answer please do so here:

**Q220 13/18 Are you happy for the biological records collected, made available or used with support from your funding to be openly available (with appropriate caveats for sensitive records) for use by anyone?**

"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]

Yes

No

Not sure/don't know

If you would like to add any information to explain your answer please do so here:

**Q221 14/18 In the last year, how many hours a month on average have you acted as a Funder in an employed, i.e. paid, capacity?**

Note: anyone working full time for 7.5-8 hours per day is working 37.5-40 hours per week and so about 150-160 hours per month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q222 15/18 In the last year, how many hours per month on average have you acted as a Funder in a voluntary, i.e. unpaid, capacity?**

Note: anyone volunteering full time for 7.5-8 hours per day is volunteering for 37.5-40 hours per week and so about 150-160 hours a month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q223 16/18 In the last year, what level of expenses have you yourself incurred while acting as a Funder in some way?**

INCLUDE COSTS SUCH AS: fuel, accommodation when away from home; hire, licensing or purchase of specialist kit, clothing or software; relevant subscriptions and training course costs.

EXCLUDE COSTS SUCH AS: general costs of running a home, car or office (unless you run that car, home or office solely for the purpose of acting as a Funder); any costs that are externally funded or reimbursed.

£0

£1 to £500

£501 to £1,000

£1,001 to £5,000

Over £5,000

If you received any funding or expenses that in some way covered your costs, please tell us here:

**Q224 17/18 What motivates you to be a Funder?**

**Q225 18/18 Regarding the part that you play as a Funder in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?**

Strongly agree   Agree   Neither agree nor disagree   Disagree   Strongly disagree

I know what to do to play my part well

I've got what I need to be able to play my part

I've received recognition and appreciation for the part that I play

People listen to, and value, my ideas and suggestions

Within the last year I have had the chance to learn and grow

People I liaise with are committed to doing a good job  
If you would like to add any information to explain your answers please do so here:

## **SECTION M: For Facilitators** [<back to list of sections>](#)

FACILITATOR: YOU ACT AS A SECRETARIAT TO COORDINATE, AND COMMUNICATE ACROSS, OUR WHOLE NETWORK

Please complete all questions in this section:

### **Q226 1/18 Which of the following activities do you do as a Facilitator?**

Tick all that apply:

Collective development of strategy, standards and good practice with all stakeholders in our network  
Use of all forms of media to communicate key messages to our stakeholders and audiences  
Liaison with stakeholders and audiences to facilitate and support the roles that they play  
Technical development and support of centrally-provided systems for use by the whole network  
Participation on relevant steering groups and committees as a key stakeholder  
Formal governance of the secretariat with accountability for its finances, systems and decision-making  
Management of your staff or volunteers, budgets, risks, data, IT systems, equipment and offices  
Tendering, invoicing, fundraising, project or contract management and grant reporting  
Training or self-study to increase your skills as a Facilitator  
Training or mentoring others to share your skills as a Facilitator  
This role is not relevant to me after all (if so, ignore the remaining questions in this section)  
Other (please specify):

### **Q227 2/18 For the activities that you ticked above, what is already working well and what makes it so effective?**

We are asking this to find out what we should celebrate and encourage more of to help Facilitators in particular.

### **Q228 3/18 For the activities that you ticked above, what is working less well and how is it problematic for you?**

We are asking this to find out what we can address to improve things for Facilitators in particular.

### **Q229 4/18 What ideas do you have for specific changes or general improvements that could help resolve any of these issues for you as a Facilitator?**

We are asking this to find ideas that we can take forward to help Facilitators in particular.

### **Q230 5/18 In which of the following places do you primarily act as a Facilitator to provide secretariat support?**

Tick all that apply:

Scotland  
Northern Ireland  
England  
Wales  
Isle of Man  
The Channel Islands  
Republic of Ireland  
UK Overseas Territories  
British Territorial Waters  
Elsewhere on land  
Elsewhere at sea

### **Q231 6/18 Which of the following environments are primarily of interest for you given the scope of our biological recording network?**

Tick all that apply:

Terrestrial  
Freshwater  
Marine

### **Q232 7/18 Which of the following taxonomic groups are primarily of interest for you given the scope of our biological recording network?**

If the groups you are interested in are not listed, or if the groups below are not sufficiently specific, please use the 'Other' option to name the specific groups of interest to you.

Tick all that apply:

>>> All or any species or species groups  
>>> All or any species or species groups of conservation concern  
Amphibians (e.g. frogs, newts and toads)  
Reptiles (e.g. snakes and lizards)  
Birds  
Mammals - marine  
Mammals - terrestrial or freshwater  
Fishes  
Insects - dragonflies and damselflies  
Insects - bugs

Insects - butterflies and moths  
 Insects - beetles  
 Insects - true flies  
 Insects - sawflies, bees, wasps and ants  
 Arachnids (e.g. spiders, ticks and mites)  
 Myriapods (e.g. millipedes and centipedes)  
 Crustaceans (e.g. crabs, barnacles and woodlice)  
 Molluscs (e.g. snails, slugs, squids and octopuses)  
 Annelid worms (e.g. earthworms and leeches)  
 Other worms (e.g. flatworms and nematodes)  
 Cnidarians (e.g. jellyfish, corals and sea anemones)  
 Echinoderms (e.g. starfish, sea urchins and sea cucumbers)  
 Seaweeds  
 Fungi  
 Lichens  
 Mosses and liverworts  
 Ferns  
 Flowering plants  
 Other (please specify):  
 If you would like to add any information to explain your answer please do so here:

**Q233 8/18 Do you act as a Facilitator to provide secretariat support at a local, national or central level?**

Tick all that apply:

Locally - to support activities for a local or regional area that are undertaken from within that local or regional area  
 Nationally - to support activities for a nation (e.g. Scotland or the UK) that are undertaken from within that nation  
 Centrally - to support activities that are not place-based and that can be delivered from anywhere or to anyone  
 If you would like to add any information to explain your answer please do so here:

**Q234 9/18 Which of the following sectors do you support, or facilitate the involvement of, within our biological recording network in some way?**

Tick all that apply:

Individual Recorders  
 Recording Groups  
 National Recording Schemes  
 Environmental/conservation Non-Governmental Organisations  
 Local Environmental Records Centres  
 Commercial companies and environmental consultancies  
 Museums, zoos and botanic gardens  
 Academia and education  
 Local authorities and national park authorities  
 National or central government departments, agencies or public bodies  
 Cross-sectoral partnership or secretariat organisations  
 Members of the general public  
 If you would like to add any information to explain your answer please do so here:

**Q235 10/18 Which of the following roles do you support, or facilitate the involvement of, within our biological recording network in some way?**

Tick all that apply:

RECORDER OR DATA COLLECTOR: you collect biological records for your own or others' use  
 VERIFIER OR COUNTY RECORDER: you verify the accuracy of biological records collected and identified by others  
 COLLECTION CURATOR: you curate biological samples or specimens for analysis, exhibition or reference  
 RECORDING GROUP OPERATOR: you manage the activities and administration of a recording group  
 RECORDING SCHEME OPERATOR: you manage the activities and administration of a recording scheme  
 DATA PROVIDER: you publish datasets or derived data products and manage their metadata and licensing  
 DATA DEVELOPER: you create new value-added datasets or derived data products such as enriched data or trends  
 DATA USER: you use biological records, added-value datasets or data products for your own purposes  
 SERVICE PROVIDER: you supply services or systems such as those provided by LERCs or the NBN Trust  
 SERVICE USER: you use services or systems such as those provided by LERCs or the NBN Trust  
 FUNDER: you provide funding to support or commission key activities in our network  
 If you would like to add any information to explain your answer please do so here:

**Q236 11/18 Which of the following areas do you support, or communicate about, within our biological recording network?**

Tick all that apply:

FACILITATION: supporting partners to play their part, defining standards and providing common systems  
 INTRODUCTION: introducing people to biological recording and enjoyment of the natural world  
 COLLECTION: encouraging, training and supporting people to collect, digitise or mobilise biological records  
 VERIFICATION: checking the accuracy of biological records or developing capacity to do so on a wider scale  
 CURATION: managing and showcasing biological records on your own behalf or on behalf of others  
 PROVISION: publishing, aggregating and sharing biological records as easily available resources for all

DISCOVERY: enabling people to identify, locate and extract the biological records that they need

ENHANCEMENT: configuring, analysing or enhancing records to increase their value or aid their interpretation

USE: using biological records to obtain value or benefit yourself, for colleagues or customers, or for public good

If you would like to add any information to explain your answer please do so here:

**Q237 12/18 What types of activities or resources do you offer to coordinate and communicate with your network partners and other stakeholders?**

Tick all that apply:

Newsletters or magazines

Online forums

Working groups

User groups

Conferences

Training courses

Meeting rooms

Conference venues

Events management

Other (please specify):

**Q238 13/18 Are you happy for the biological records made available through our biological recording network to be openly available (with appropriate caveats for sensitive records) for use by anyone?**

"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]

Yes

No

Not sure/don't know

If you would like to add any information to explain your answer please do so here:

**Q239 14/18 In the last year, how many hours a month on average have you acted as a Facilitator in an employed, i.e. paid, capacity?**

Note: anyone working full time for 7.5-8 hours per day is working 37.5-40 hours per week and so about 150-160 hours per month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q240 15/18 In the last year, how many hours per month on average have you acted as a Facilitator in a voluntary, i.e. unpaid, capacity?**

Note: anyone volunteering full time for 7.5-8 hours per day is volunteering for 37.5-40 hours per week and so about 150-160 hours a month.

None

0.1 to 20 hours

20.1 to 40 hours

40.1 to 80 hours

80.1 to 160 hours

Over 160 hours

**Q241 16/18 In the last year, what level of expenses have you yourself incurred while acting as a Facilitator in some way?**

INCLUDE COSTS SUCH AS: fuel, accommodation when away from home; hire, licensing or purchase of specialist kit, clothing or software; relevant subscriptions and training course costs.

EXCLUDE COSTS SUCH AS: general costs of running a home, car or office (unless you run that car, home or office solely for the purpose of acting as a Facilitator); any costs that are externally funded or reimbursed.

£0

£1 to £500

£501 to £1,000

£1,001 to £5,000

Over £5,000

If you received any funding or expenses that in some way covered your costs, please tell us here:

**Q242 17/18 What motivates you to be a Facilitator?**

**Q243 18/18 Regarding the part that you play as a Facilitator in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?**

Strongly agree    Agree    Neither agree nor disagree    Disagree    Strongly disagree

I know what to do to play my part well

I've got what I need to be able to play my part

I've received recognition and appreciation for the part that I play

People listen to, and value, my ideas and suggestions

Within the last year I have had the chance to learn and grow

People I liaise with are committed to doing a good job

If you would like to add any information to explain your answer please do so here:

## **SECTION N: For Everyone** [\*<back to list of sections>\*](#)

Please complete all questions in this section:

**Q244 1/3** Given that the SBIF Review could potentially identify and facilitate many key improvements across our biological recording network, what would be your top three priorities for earliest or greatest attention?

1: Priorities for SBIF attention:

2: Priorities for SBIF attention:

3: Priorities for SBIF attention:

**Q245 2/3** How would you like us to share the progress, findings and recommendations of the Review with you?

Note: our highlight reports and key papers are currently published on the SBIF pages of the NBN website and we post regular news articles in Network News from the NBN. To sign up to receive Network News from the NBN, click [here](#).

via the SBIF pages on the NBN website

via the monthly Network News bulletins from the NBN Trust

via email using the SBIF supporters or NBN supporters mailing lists

via the Biodiversity Scotland pages on the Scottish Government web site

via BRISC or NFBR newsletters

Other (please specify):

**Q246 3/3** If you would like your name or the name of your organisation to be listed in the List of Contributors to the SBIF Review, please enter your name and/or your organisation's name in the boxes below:

Note: answers to this question will be separated from the rest of your questionnaire responses prior to analysis so that responses are not tagged with the names of individuals or organisations.

Names as you would wish them to be in the List of Contributors:

Your name:

Your organisation:

**Q247** And finally, if you have any other thoughts or comments to share with the SBIF Review Working Group, please tell us here:

END OF APPENDIX 1 [\*<back to contents>\*](#)



## APPENDIX 2: List of open data comments <back to contents>

Within each section of questions, respondents were able to provide a comment in response to the following question to explain their answers if they wished to do so:

Are you happy for the biological records that you <collect/curate/use/provide> to be openly available (with appropriate caveats for sensitive records) for use by anyone?

*"Open means anyone can freely access, use, modify, and share for any purpose (subject, at most, to requirements that preserve provenance and openness)." [source: [www.opendefinition.org](http://www.opendefinition.org)]*

- Yes
- Not sure
- No

The following comments, classified by broad theme, response and role below, were received:

- COSTS NEED COVERING/VALUING
- FOR DATA PROVIDER / OWNER TO DECIDE
- NOT FOR COMMERCIAL USE
- NOT FOR SENSITIVE DATA
- REQUIRES CREDIT OF RECORDER / SUPPLIER
- SUBJECT TO DPA CONSIDERATIONS
- SUBJECT TO LICENCE /COPYRIGHT CONSIDERATIONS
- SUBJECT TO SUITABLE TIMING
- VALUE OF OPEN DATA APPROACH
- OPEN POLICY FOR PUBLICLY FUNDED DATA
- OTHER

THEME: COSTS NEED COVERING/VALUING		
No	Curator	I do not believe that making data freely available for any use is financially sustainable. As a voluntary recorder I feel that just giving data away for anyone to use as they see fit undervalues the time and effort put into the recording effort that I, and my colleagues have put into creating the records.
No	Data Developer	The income we derive from supplying derived data products is essential to cover the operating costs of the LERC I run, and to some extent to cover the cost of my employment to our host organisation. as other funding sources are decreasing income from supplying derived data is becoming more important to ensure LERC survival.
No	Data Provider	Commercial users of our data should have to pay for its use, especially developers and their consultants. If all data is "open data" who will fund the cost of data management, support to recorders and biodiversity conservation? Part of our commercial search fees are given back to the bird and bat groups that supply the information. They use this money to fund species conservation and support their work. If the data was "open" there would be no funding for these groups. Open data would only work if there is sufficient funding available to support the data collectors, managers and LERCs
No	Data Provider	It is not sustainable to make all biological data available freely to everyone, everywhere. People dedicate hours of volunteer time to the process, but it is necessary to have some paid for roles in the process to allow data to be properly processed and disseminated. It is one of the few ways in which money spent on commercial activities such as development and building can be pulled back into the ecology community, and be used to support the volunteer work of recorders.
No	Data Provider	No - My job and the LERC i run depend on my being able to bring in funding to cover the LERC's costs, we can only do this by charging for the data we publish and supply for commercial use at present. We are losing other sources of funding so this is making it less likely that we can make data openly available for the foreseeable future.
No	Data Provider	Not for anyone under current business models. Not for commercial use (or any use that will in some way generate the user a profit) - as income that creates contributes to ongoing running of LERC and mobilisation of data. Income also comes from, for example, national government (or organisations such as SNH) or local authorities, again contributing to ongoing work of LERC. If all information was made freely available to such organisations, likely that they would just use the free information and not make funding contributions (particularly local authorities who are under increasing financial pressure to make savings). Unlikely that they would see the bigger picture and invest in LERC services that perhaps they themselves don't use but that the income enables LERCs to offer for free to recorders.
No	Data Provider	The Centre relies on bringing in some funds from commercial users to supplement that provided through grants. If we made all our data freely available then we would not be able to balance the books and run the centre - we could cease to have a service level agreement with our local authority and would lose income from commercial enquirers that supports the costs of running our organisation.
No	Data User	All datasets I use are LERC data supplied by my organisation - my job and the viability of the LERC are dependent on my organisation receiving funding for provision of this data for commercial use. This is becoming more important as a funding source due to reduced funding from other sources.

No	Data User	It is not sustainable to make all biological data available freely to everyone, everywhere. People dedicate hours of volunteer time to the process, but it is necessary to have some paid for roles in the process to allow data to be properly processed and disseminated. It is one of the few ways in which money spent on commercial activities such as development and building can be pulled back into the ecology community, and be used to support the volunteer work of recorders.
No	Group Operator	I do not believe that making data freely available for any use is financially sustainable. As a voluntary recorder I feel that just giving data away for anyone to use as they see fit undervalues the time and effort put into the recording effort that I, and my colleagues have put into creating the records.
No	Recorder	Commercial users of my data should have to pay for its use, especially developers and their consultants If all data is "open data" who will fund the cost of data management, support to recorders and biodiversity conservation?
No	Recorder	I believe that the work done by LERCs is invaluable and has an undeniable economic value, so expect all commercial users to pay for data. Inappropriately open data undermines the business models of all LERCs. I am happy to share almost all my data at 10km resolution, which I believe is appropriate to establish a UK level distribution understanding.
No	Recorder	I do not believe that making data freely available for any use is financially sustainable. As a voluntary recorder I feel that just giving data away for anyone to use as they see fit undervalues the time and effort put into the recording effort that I, and my colleagues have put into creating the records.
No	Recorder	I don't think it is acceptable to share data openly to Commercial companies that may financially benefit from open data with no support for volunteer recorders to continue collecting data
No	Recorder	I feel that commercial users of the data should contribute to the costs of the organisations/recording schemes/societies working to support wildlife recording. In principal I have no objection in principal to the data being open, so long as there is a mechanism for recovering some costs from commercial data users. I don't feel it should all be down to the taxpayer.
No	Recorder	If a Company is using records for commercial gain (even if required by legislation that surveys are needed) then a suitable cost should be imposed. I feel strongly that these records that have an intrinsic cost to the recorder for obtaining and submitting them MUST be paid for. It is also a way for Record Centres to obtain funds.
No	Recorder	Yes but not for commercial purposes since that would wipe out nearly 50% of the LERC income to cover core operating costs
No	Scheme Operator	yes but not for commercial purpose as that would wipe out nearly 50% of LERC income for core costs
No	Service Provider	Data should not be freely available to commercial operations - costs of record centres etc need be covered in some way
No	Service Provider	In principal there is no objection to making all data open, but current funding mechanisms prohibit the adoption of such a model as we rely on income from service level agreements and commercial data enquiries to continue the running of the Centre.
No	Service Provider	It is fundamental that the proper and effective collation, management and dissemination of biological records be funded. I cannot emphasise enough this is apart from the development of enhanced products and services often touted as the alternative route to funding in an open data model. LERCs maintain their data holdings such that they are of the highest possible quality part of which relies on agreement and cooperation with individual recorders who support our work. A fully open data sharing model does not fit with the current model which is long established and, in Wales, working.
No	Service Provider	No. We require public and commercial users to pay for our data services in order to sustain our business model. It is not sustainable to make all biological data available freely to everyone, everywhere. People dedicate hours of volunteer time to recording, but it is necessary to have some paid for roles in the process to allow data to be properly processed and disseminated. It is one of the few ways in which money spent on commercial activities such as development and building can be pulled back into the ecology community, and be used to support the volunteer work of recorders.
No	Service Provider	Not all can be open due to licensing issues such as OS mapping. Some services are commercially oriented e.g. data searches for consultants. Overall I support open data but some LERC charged services fund the support of the local recording network and the systems need to maintain the services and as a result access to high quality, full resolution data is not at present likely to become fully OD.
No	Service Provider	Not currently. Current business models mean if all data was open for any purpose, income from service provision would be impacted. This could be commercial or could be services to government agencies, local authorities. Money is increasingly tight in local authorities for example; if they can simply search for records for free, they may do this rather than enter into an SLA that would also mean support for the recording community, new recording and data management. Same for SEPA, SNH, etc. There needs to be funding at some level to enable service provision, currently income from data services, SLAs, etc. is what we have.
No	Service Provider	We would not be able to cover our costs as an LERC if our data was openly available, and therefore would cease to exist. If people want data provision services at a local level there needs to be a way of sustaining this service provision.
No	Service User	If the data services we use were available openly we would have to fully fund the LERC we host to ensure its survival, as the LERC would lose all its income. This cost of this would probably be prohibitive, and we would therefore lose our only current source of data.
No	Service User	It is not sustainable to make all biological data available freely to everyone, everywhere. People dedicate hours of volunteer time to the process, but it is necessary to have some paid for roles in the process to allow data to be properly processed and disseminated. It is one of the few ways in which money spent on commercial activities such as development and building can be pulled back into the ecology community, and be used to support the volunteer work of recorders.
No	Verifier	I do not believe that making data freely available for any use is financially sustainable. I feel that just giving data away for anyone to use as they see fit undervalues the time and effort put into collecting, compiling and verifying the records.

Not sure/don't know	Data Provider	Yes for non-commercial purposes under creative commons licence. Not commercially hence on the nbn atlas at 10km resolution. If we were properly funded annually and centrally by government then we would within reason be happy to provide all data completely open for everyone at full resolution.
Not sure/don't know	Data User	In theory, happy for the data to be openly available, but there is a cost for collecting/collating/making available the data which needs to be covered somehow.
Not sure/don't know	Group Operator	We are happy for people to use the data - no problems there. However this represents an income stream for the group - so we like to take control of issuing these records rather than give them to the record centre.
Not sure/don't know	Group Operator	Yes in theory, but my recording group coordinator role is part of my continued employment for an NGO. My role is partially funded on the basis that i cover some of the cost of my role by bringing in funding for data provision services so in practice we have to charge for commercial data requests.
Not sure/don't know	Recorder	Biological records I collect are usually the property of my employer, and my continued employment partially depends on my employer's ability to cover the costs of my role by charging for commercial data provision. In theory open access to data is great, but in practice this needs to be funded somehow - if data is to be "free at the point of access" maybe we need a centrally funded "national records service" to allow this to happen?! In practice, as with the NHS this may often involve people paying at some point though.
Not sure/don't know	Recorder	It depends on the records. The problem is here what start off as "records" seem to metamorphose somewhere along the line into "data" or even "open data", which governments and bodies such as the NBN seem to think are "free" and can be used for any purpose or released onto the internet without any controls over it. A large number of recording groups and even Local Record Centres do not like this approach, which is why you will see much less detailed, or even no data, being provided by some sectors for the forthcoming "Atlas of Living Britain". A lot of data, particularly historical data, was collected with a range of permissions and conditions associated with it and the current top-end push for "open data" seems to want to ignore all of this.
Not sure/don't know	Recorder	Only if that is compatible with the organisation or recording group (etc) with whom I choose to share my records or participate in a survey for. If making the data freely available would impact on their work (for example if it meant that a scheme would lose income that would make it harder or unsustainable to operate), I would want the decision to lie with them.
Not sure/don't know	Recorder	We have made material freely available to honours students to complete projects. We have received no funding for work we do and very expensive to collect data. The statutory and regulatory authorities should be contributing to the collection of this data.
Yes	Curator	As before for this question - yes but LERCs need income to survive.
Yes	Data Provider	Yes where possible. However in some cases the data production or "added value" needs to be funded so there needs to be recognition of this somewhere in the process either in the initial funding or at point of use. Ideally I would like a free at point of use model with adequately funded data collection, interpretation, management and provision. In the absence of that people should be prepared to pay for access to high quality data. I do see that low resolution data could be made OD but high quality, accurate high resolution data should be recognised as having value and a system behind it that needs maintaining.
Yes	Data User	As previously I am happy with the idea of OD but expect it to be well funded to ensure quality and sustainability
Yes	Facilitator	Yes but with the caveat that the cost of developing and providing them needs to be met somewhere.
Yes	Group Operator	Yes however we appreciate that LERCs need to charge to survive.
Yes	Recorder	Commercial operators need to pay for all data unless more money is given to recording schemes to help them survive without fees from commercial interests
Yes	Recorder	I think most recorders will answer this question as simply yes. However, I appreciate where others may not, that LERCs need to charge for handling data in order to survive and many local authority planners and local ecologists, conservationists source their data from LERCs as they get it quickly and it has been locally verified. Consequently I suggest this question should be more probing or should have subsidiary questions regarding LERCs.
Yes	Recorder	I think the data should be open wherever possible, but this requires centres to be adequately funded. As it stands, providing access to datasets is a way of generating funding and if all data is open, this funding stream is switched-off. A compromise is to make it open at one scale - but to charge for it at a finer scale.
Yes	Recorder	Yes as an aspiration. I do however believe that the systems needed to support my recording and data submission and it's management should be adequately funded. My data should be freely available at point of use. OD is one way that this could happen but more appropriate might be freely available for non-commercial use.
Yes	Scheme Operator	Absolutely, 100%, yes. It's a key function of a recording scheme and any that don't aspire to this are failing their group. Funding concerns are a genuine issue for some schemes with employed staff, but they need to be making efforts to move to a model that supports open data.
Yes	Verifier	But as for my previous answer to this question, I understand the need for LERCs to charge for handling data.
Yes	Verifier	Except commercial companies- Recording schemes need the money
<b>THEME: FOR DATA PROVIDER/OWNER TO DECIDE</b>		
No	Data User	The same ownership issue as before. Data are intellectual property. The only data which I have the authority to make available is that which I collect myself.
No	Service Provider	<b>LERC</b> acts on behalf of a range of data providers. It is up to the data providers whether their records should be made openly available.
No	Verifier	It's not my position to say - this decision is for the recorder of the record.
No	Verifier	Personally I would be more than happy, and all of my own records are freely available; handing over other people's data gather in many hundreds or thousands of hours of fieldwork requires much more serious thought, and others I have liaised with my organisation with have cautioned against doing that.
No	Verifier	The data which I verify is on behalf of someone else, i.e. it does not belong to me. I do not have the authority to say whether or not it should be publicly available- that is a matter for the owner.
Not sure/don't know	Data Provider	This entirely depends on the wishes of the original data provider, upon whose behalf we are acting.
Not sure/don't know	Data User	I think this is really a decision for the data provider.

Not sure/don't know	Data User	Not up to me - if I am seeing them, that is because the data providers have agreed to make them available.
Not sure/don't know	Data User	Specifically responding as a data user rather than any of the other roles selected and categories of questions answered, it is not a data user's role to decide this - it is down to whoever the data being used was obtained from.
Not sure/don't know	Verifier	I verify for a national scheme and how the data is made available is not for me to decide
Yes	Verifier	It is not for me to restrict other people gaining access to records I have not collected. You should ask the recorder of the specimen under verification.
<b>THEME: NOT FOR COMMERCIAL USE</b>		
No	Data Developer	Yes but not for commercial purpose (as LERC response and personal)
No	Data Provider	as LERC response - yes but not for commercial use as that would wipe out nearly 50% of core income
No	Data Provider	We use CC-BY-NC licences for our data.
No	Data User	Data should not be freely available but not to commercial operators
No	Data User	Use non-commercial licence.
No	Data User	yes but not for commercial purpose
No	Facilitator	yes but not for commercial use
No	Group Operator	as LERC response - Yes but not for commercial purpose as that would wipe out nearly 50% of our funding
No	Recorder	Commercial organisations should not be able to freely (as in not pay for) data that I have freely (as in not been paid for) provided
No	Recorder	Data should not be freely available to commercial operations so ideally all access should be through well-funded recording schemes or local records centres.
No	Recorder	They should not be available freely for commercial purposes
No	Recorder	Use the Non-commercial licence.
No	Service Provider	Non-commercial use
No	Service Provider	Non-commercial use
No	Service Provider	Not for commercial use
No	Service Provider	Yes but not for commercial purpose (both as LERC and as personal)
No	Service User	yes but not for commercial purpose
No	Verifier	Commercial use should not be free and must be regulated
No	Verifier	I have a big concern about access by commercial organisations. In addition there should be some degree of control over the geographical scale at which material can be accessed
No	Verifier	Not freely to commercial operations
Not sure/don't know	Recorder	I feel uncomfortable if any records I submit are sold on to third parties who may make a financial gain from them.
Not sure/don't know	Recorder	Would like commercial companies to pay for the data, rather than receive for free. Any monies raised to go for conservation efforts.
Not sure/don't know	Verifier	yes but not for commercial purpose if that is the recorders wish or if the records are those managed by the LERC
Yes	Recorder	Yes, except to anyone who would use them for a commercial purpose perhaps.
Yes	Scheme Operator	As before - definitely non-commercial, some commercial, prefer to know when they're being used and if properly credited.
Yes	Verifier	As before - definitely non-commercial, as long as we are aware, with appropriate credits.
Yes	Verifier	Subject to recorder being so too, and subject to non-commercial use only
Yes	Verifier	Yes perhaps with the exception of commercial use.
<b>THEME: NOT FOR SENSITIVE DATA</b>		
No	Data User	Some information is sensitive or has been provided with specific conditions.
No	Recorder	Sensitive species like badgers and brown hares have to be only held locally. Some people do not trust NBN to prevent government access to data and will not be part of our recording system, so with holding records of these species is the best way to keep them submitting records, that are at least held locally.
No	Recorder	Some data may be commercially sensitive
No	Scheme Operator	I do not have permission from recorders to make the records openly available. I think people may be discouraged from reporting rare / locally uncommon <b>taxa</b> if they thought the records would be made openly available, for use by anyone. Trespassing and collecting are an issue for my recording scheme.
Not sure/don't know	Recorder	I would not disclose the location of orchids or similar plants that would die if stolen. I keep such photos off social media. The same withholding of location/possibility for badger setts as baiters do stalk wildlife sites.
Not sure/don't know	Recorder	Mostly my answer is yes but there are occasional constraints with especially sensitive taxa.
Not sure/don't know	Recorder	This will depend on / require consent from landowner/client so may be felt as sensitive.
Not sure/don't know	Verifier	Depends on the record - some are sensitive - most are not.
Not sure/don't know	Verifier	It's not up to me - the <b>national scheme</b> and <b>local group</b> both have a policy of open data, so the default position is that verified records WILL be made available at capture resolution, except where the species would be endangered by doing so (e.g. badger setts).
Yes	Data Provider	For all SNH-owned data and projects where SNH funds data collection or mobilization, it is generally a requirement to publish all data at capture resolution (subject to precautions to protect sensitive species). However, we may occasionally wish to restrict access or viewing resolution in the case of data sourced from third parties who are concerned about being identified or where there is a risk of control programmes (e.g. traps) being interfered with (e.g. Orkney stoat datasets), or for unverified data which may contain errors (e.g. the Invertebrate Site Register).
Yes	Facilitator	Where possible i.e. non sensitive etc
Yes	Recorder	Certain breeding species would need to be protected
Yes	Recorder	Except when 'sensitive' in either species or location I believe this to be an essential ingredient for records submission and collation

Yes	Recorder	I would suggest that records that are made generally available should be at no less than 1km. square reference because I suspect that many are very many come from private gardens or other sensitive areas and a 6 fig. ref. could lead problems.
Yes	Recorder	provided protected species data are appropriately safeguarded
Yes	Recorder	Yes, as long as it's not protected species which might be vulnerable in the public domain e.g. freshwater pearl mussel. I feel quite strongly that sharing data is hugely important and don't see the point in accumulating data and not making it publicly available (if species appropriate)
Yes	Verifier	Except for those for sensitive species which are not open access
<b>THEME: OPEN POLICY FOR PUBLICLY FUNDED DATA</b>		
Not sure/don't know	Service User	For all SNH-owned data and projects where SNH funds data collection or mobilization, it is generally a requirement to publish all data at capture resolution (subject to precautions to protect sensitive species).
Yes	Data Provider	These data were collected using public money - they will be freely available.
Yes	Funder	For all SNH-owned data and projects where SNH funds data collection or mobilization, it is generally a requirement to publish all data at capture resolution (subject to precautions to protect sensitive species).
<b>THEME: REQUIRES CREDIT OF RECORDER / SUPPLIER</b>		
Yes	Recorder	Definitely for non-commercial purposes and, in most cases, for commercial purposes as well. We do, however, like to be informed when our data is being used and to be credited properly.
Yes	Recorder	I would be happy to share my data after I have asked for doing that and also under an agreement where my contribution will be acknowledged.
<b>THEME: SUBJECT TO DPA CONSIDERATIONS</b>		
Not sure/don't know	Curator	Potential problem concerning people's names being given as recorders, but other than that probably Yes.
Not sure/don't know	Data Developer	People's names may be an issue - otherwise yes
Not sure/don't know	Data Provider	People's name may be an issue, but otherwise Yes
Yes	Recorder	There is a lot of nervousness amongst data providers over the DPA implications of publishing records containing recorder name (an essential component of most records). In almost all cases this is due to poorly-designed surveys failing to make clear the implied consent. Any schemes struggling to keep up with current legislation will find GDPR hard to cope with. In practice, I think observers who contribute records are much more likely to be offended by their records not being used, or by not being given public acknowledgement, than by their name being published!
<b>THEME: SUBJECT TO LICENCE /COPYRIGHT CONSIDERATIONS</b>		
Not sure/don't know	Data User	Depends on source.
Not sure/don't know	Service Provider	Most of the data that we manage and provide in our services are not owned by us and so our ability to make these data fully open is questionable.
Yes	Data Developer	For published papers, this is usually constrained by copyright of the journal.
Yes	Data Developer	In some cases data providers may restrict the resolution at which we can publish outputs using their data.
Yes	Data Developer	Some are based on OS data which means that they can't be fully open however we do make them as widely available as we can within the licensing parameters
Yes	Data Developer	Unless specified in the project by the funder etc
Yes	Data User	Though of course if I am using others' data then I have to abide by any conditions they may place on use of those data
<b>THEME: SUBJECT TO SUITABLE TIMING</b>		
No	Data User	As mentioned above, data gathered for a personal study and intended publication should not be readily available to others to interpret, unless in a general or summarised format only.
No	Data User	I may be given access to data that are being compiled for a purpose that would be derailed by open access, such as a study that is to be published at a later date, or to build a case for a prosecution. So I can't say I would be happy for all data to be openly available.
No	Recorder	Records that are being produced for a publication like an atlas I prefer to keep private until the relevant publication is published, otherwise all my hard work could be used by someone else to produce an atlas, scientific paper, etc.
No	Scheme Operator	Records are collected for specific projects and sensitive information is sometimes collected, therefore cannot be openly available
Not sure/don't know	Recorder	If you have collected data for your own specific study for eventual publication there is an issue over submitting data for others to see and/or interpret.
Not sure/don't know	Verifier	Raw data should perhaps not be available for anyone to download at least until after publication of national macromoth atlas.
Yes	Recorder	This depends on the records, generally we like to publish results before making the data openly accessible.
<b>THEME: VALUE OF OPEN DATA APPROACH</b>		
Yes	Recorder	As a recorder I want my data available to whoever needs them, without the restrictions, duplication, drain on resources and prevention of innovation that licensed data approaches result in.
Yes	Recorder	I have always wanted my records to be as widely available as possible, for anyone to use for any purpose.
Yes	Recorder	I see little point in collecting records if they are not available to everyone who can usefully use them. They aren't really "my" records - they are Scotland's records, I just happen to see them.
Yes	Recorder	My prime reason for recording is to ensure the conservation of species. If others do not know what is where then that makes ensuring that species are not harmed impossible to achieve.
Yes	Recorder	Open data is important to help both professionals and volunteers, schools and community groups, do projects.
Yes	Recorder	So other interested people can make use of the data and to inform others of what is present in my area.
Yes	Recorder	There is no point recording if others cannot benefit from my records.
Yes	Recorder	This is paramount. Records which are open access are completely useless and may as well not be inputted into a database as they cannot be used for any kind of research or conservation, unless you are an NGO. This data needs to be widely and freely available for all so scientists, researchers, and conservation organisations can analyse the information in a non-biased manner.

Yes	Recorder	we are on this planet for a twinkle of time and what's the point of being overly precious with data that might help future generations see things that could disappear
Yes	Recorder	Whilst there are always risks associated with sharing site details, on balance there is greater risk in keeping them hidden as this could result in inappropriate management or the destruction of a site.
Yes	Recorder	Yes I think it is very important that biological records are freely accessible. This helps target recording efforts, aids identification and makes biological recording more inclusive.
<b>THEME: OTHER</b>		
No	Data Provider	See previous response - these records are curated by an organisation, held on behalf of individuals who have submitted, so care is needed in sharing them.
No	Data User	Access to some datasets may have only been given on request, e.g. I've made requests as VC[taxon] recorder for enhanced access (e.g. raw data at full resolution) to some datasets on NBN Gateway. Some also contain erroneous records.
No	Group Operator	Records collected as part of specific project and therefore cannot be made openly available.
No	Recorder	I wish to have the final say on who sees and uses my records and at what resolution (and on a case-by-case situation). I would not want third-party organisations making this decision for me. Whilst I am generally happy for my data to be available at full resolution for conservation organisations (NGO and Governmental), I would be less keen to supply such datasets to private individuals, land owners, commercial organisations etc.
No	Recorder	Records are collected for specific projects and cannot be openly available
Not sure/don't know	Data User	We wish to work with these strategically so individual records are less of an issue and we would take advice on that.
Not sure/don't know	Recorder	Generally yes but this is too complex a question to give a short answer to.
Not sure/don't know	Recorder	mostly yes but I would have concerns about ecological consultants using the data for EIA evidence etc. if it could be presented out of context.
Not sure/don't know	Recorder	surely not modify although accuracy can be queried
Yes	Curator	I am a [redacted] employee at a national museum which means the collections are publically available.
Yes	Data Provider	For this recording scheme only - yes.
Yes	Data Provider	I'm happy to do so, not always easy to know whether all contributing recorders are also happy.
Yes	Data User	In some cases data providers may restrict the resolution at which we can publish outputs using their data.
Yes	Data User	Only applicable to datasets which are owned by [redacted] Council
Yes	Group Operator	As only linked to one heavily designated site
Yes	Group Operator	We submit our records to NBN under a CC-BY licence.
Yes	Recorder	"Freely", I think should mean both without hindrance, and without charge. Your usage here is ambivalent.
Yes	Recorder	Although I am concerned that the records could be used inappropriately and there should be monitoring of who accesses the information, and caveats for sensitive records, it is important that researchers and students can access information which can be hugely useful
Yes	Recorder	Don't agree about modify, but would accept augment. Share for the benefit of conservation and knowledge
Yes	Recorder	help/training might be needed in order to provide the records in a format that can be submitted for others to use
Yes	Recorder	I don't understand why you are asking this question. Surely everyone who collects data realises that they are simply recording facts and that if the observation was free to be made, then the record itself is also free to all?
Yes	Recorder	I'm more happy with my records being shared freely than I am with organisations making money from my records, e.g. BTO charging other NGOs for access to certain datasets!
Yes	Recorder	It may not be possible to know in advance which records are 'sensitive'.
Yes	Recorder	My method of communicating records depends on the order.
Yes	Recorder	Not happy with word 'modify' in above statement. Data should only be modified by the collector.
Yes	Recorder	OK apart from the use of the word "modify" nothing should be modified.
Yes	Recorder	Subject to rigorous verification before acceptance / publication.
Yes	Recorder	That should be the default position of anyone making data available (unless confidential) or an appropriate justification should be provided (e.g. landowner does not permit sharing of data or only sharing for specific purposes).
Yes	Recorder	The "appropriate" caveats need to be robust. People should have a reason for needing, say, badger records, in details rather than broad brush.
Yes	Scheme Operator	In this instance, yes. The scheme collates and manages records for a group of invertebrates of no commercial interest.
Yes	Service Provider	At reduced resolution with enhanced access directly available from the LERC.
Yes	Service User	Applicable only to [redacted] Council owned data
Yes	Verifier	except for the word "modify"
Yes	Verifier	Generally yes but complex.
Yes	Verifier	In principle I would want all data to be shared as widely as possible. This is sometimes hard to achieve when the views of contributing recorders can vary widely on this matter.
Yes	Verifier	Not modified.

END OF APPENDIX 2 <[back to contents](#)>

### APPENDIX 3: List of motivation comments <back to contents>

Within each section of questions for each type of role, the respondent was asked what motivated them to play that role as follows:

- Section B – Q23 What motivates you to be a Recorder or Data Collector?
- Section C – Q42 What motivates you to be a Verifier or County Recorder?
- Section D – Q61 What motivates you to be a Collection Curator?
- Section E – Q83 What motivates you to be a Recording Group Operator?
- Section F – Q107 What motivates you to be a Recording Scheme Operator?
- Section G – Q127 What motivates you to be a Data Provider?
- Section H – Q148 What motivates you to be a Data Developer?
- Section I – Q166 What motivates you to be a Data User?
- Section J – Q187 What motivates you to be a Service Provider?
- Section K – Q206 What motivates you to be a Service User?
- Section L – Q224 What motivates you to be a Funder?
- Section M – Q242 What motivates you to be a Facilitator?

Where respondents occasionally replied ‘see answer for previous role’ or similar, we have only included their original answer in the table below; however, when analysing the results we did refer to their original answer.

Q23 What motivates you to be a Recorder or Data Collector? <back to list of roles>
I know the data I collect will go forward to help us understand how to reverse the declines in bumblebees
Exploration of Nature. I also want to be creative.
Interest in the marine environment
Useful to know what is where. It may help prevent development in sensitive areas.
I want pure science to happen. I volunteer because most funded science is tainted by being funded only to prove what funders want it to.
I have expertise to collect data that others can make good use of.
I want to contribute to data knowledge to help the protection of species, particularly ancient trees.
Importance of conservation
I want to know where things are and help show others the beauty of mammals
I am interested in the ecology and wildlife around about me
Interest, learning, training, improving knowledge and skills, being outside, meeting others with similar interest, trying to close gaps in data
using records as part of a scientific study or for conservation management - contributing to the bigger picture
Own interests, getting out and about, challenge of finding something new either to me or the area.
Utilise my expertise
The dire and deteriorating situation facing biodiversity in Scotland
Firstly it extends my own knowledge of species and habitats, and secondly it helps to support the scientific community
I am chairman of a Bat group and hold their records.
Personal interest, contribution to sciences and the conservation agenda.
Learning more about identification, working with other volunteers...
To add to the knowledge we have as a community of the wildlife around us. To inform monitoring of the environment. To enhance the LERC.
Without knowing the distribution of species we cannot assess their conservation status or target limited funds towards their conservation.
I understand the importance of having the data available for use in scientific studies and for conservation purposes. - I enjoy spending time outside and recording gives me added motivation to do so. - I improve my knowledge of and ability to identify species the more time I spend recording them which I find satisfying.
Interest in & a desire to learn more about ecology.
Enjoyment - understanding the natural world. Contributing local information which contributes to national and international data sets which informs conservation trends.
want to collect good data that can help inform management decisions and help us understand more about particular species
Desire to share information to conserve the environment.
I enjoy the challenge and adding information that can inform conservation decisions/management.
A passion for recording a taxon. Highly motivated to record a taxon from every/almost every 10K & 5 K square in Scotland (1100 10K squares)
No data on marine mammals on area and believe should have position within marine spatial planning framework. The planning partnership identified mobile species as policy area but never initiated any work on marine mammals in area. I live in coastal community and have first-hand experience of environmental degradation. Data empowers local communities to take action.

An emerging awareness of the importance of our environment and natural heritage after our village become involved in the Beautiful Scotland campaign.
Personal interest. National Recording Scheme organiser
Interest in the species and finding new localities for under-recorded taxa. - - Seeing my records in the context of those recorded by others across UK, thereby helping to define national distributions. - - Discovering a species' preferred micro-habitat and being able to advise conservation managers to help ensure its survival on a site.
very interested in the species and the habitats in which they are found and keen to help build up the data upon which their conservation can be planned
Working on BioImages as an educational resource. I like to find species that are new to me, even common species.
I enjoy it! It's a good mix of physical activity and being outdoors when collecting, social interaction with other "recorders", manual dexterity when curating and mental activity when using keys. - As an ex-scientist I appreciate the value of data, particularly in getting our fairly useless politicians to do anything socially useful as opposed to something that makes money, which they are always happy to do.
1. The lure of seeing something new - whether a new species or new behaviour. - 2. The knowledge of adding to my local datasets. - 3, The building of pictures of distribution and population change.
Personal interest and desire to increase our collective understanding
Interested in natural history since I could crawl. (An anagram of my full name is [REDACTED] so I was destined to do this. - I am passionate about all biodiversity. - I worked as a teacher of Environmental Studies for [REDACTED] years, then as a [REDACTED] ecologist.
aware of the vulnerability of our ecosystem and the need for base-line records for future reference. General lifelong interest in the natural world, PhD in botany, [REDACTED] years assistant warden on [REDACTED], personal interest in phenology and population changes (birds, butterflies, mainly, but no actual personal scientific study at present)
Protecting biodiversity
The fascination of knowing there are over 300 (so far) species of moths in my garden. Coming and going throughout the seasons confirming the circle of life is still carrying on.
Contributing valuable data to further knowledge and/or conservation.
A love of wildlife and the motivation to conserve it.
Scientific curiosity
My interest in the species and my local area
Interest in the groups I record and enjoyment from learning about new species, also work requirements and a desire to increase knowledge of species distribution to aid conservation efforts.
It is part of my paid job as an ecologist working for a developer.
Own interest, enjoyment of outdoors/natural history
I like spotting wildlife and also using free available data for work and leisure.
Enjoyment and the hope it will be of benefit to others
Joy !
Fascination.
Interest and keenness to improve our understanding of local wildlife
Interest in natural history and my species group in particular. Desire to be involved and support the local society. Recording for posterity and monitoring of the changes in the environment.
need to keep records, but we cannot find anyone else to do the job.
I just enjoy wildlife and recording helps give some value to my sightings
I enjoy looking at the diversity of wildlife in my local area. I want my local biodiversity to be maintained or enhanced. I want to contribute to the protection and understanding of my local biodiversity. I like to look back at the records I have collected in the past.
fascination with the natural world! wanting to learn more
Contributing to the scientific evidence-base for conservation. - A deep curiosity about the intricacies of the natural world.
It's fun. Moths are fascinating. It's interesting. I like photobooks. Moths are beautiful. Turning over those egg boxes in the hope of finding something wondrous, like a Merveille du Jour, makes me smile, like digging up potatoes.
Just love it
For my personal interest and contributing to National Conservation Programmes
To protect our wildlife and increase scientific knowledge
Fascination with what lives where and why. Making a contribution to a bigger picture. The chance of making an important discovery. Primarily, improving land management for wildlife conservation.
Life-long general interest in natural history. - Now in particular the decline in many common species.
Supporting conservation



Love of wildlife
The poor state of the environment
Passion
I like the process of reviewing and analysing the data, I like doing the collecting, I like observing and learning about the species involved, I like contributing to a greater pool of knowledge.
Enjoyment and contributing to a wider knowledge base
As a retired University biologist this is a great way to continue being a biologist and continue learning as well as doing something useful.
Knowledge and the chance to see wildlife.
Discovery and research - Contribute to Scottish (& UK) biodiversity particularly in those groups in my main areas of research
Hunter gatherer instinct perhaps?
Helping improve the wider picture
Although retired from my previous occupation I still wish to be active and also wish to provide something useful and something that I believe in.
learning about species and exploring places trying to find them
Science
Enjoyment of seeing wildlife and find new things.
It's very important to keep record of species and to share it with others.
We need this information in order to conserve and improve our environment.
Improving my own skills, for personal interest. Contributing to data that can be used in research.
Finding new things, filling in dots on maps, and seeing new and exciting things.
Being part of a team with similar aims and objectives.
Once I have made a significant observation I consider that that knowledge should not be lost. I like observing wildlife and like to know its distribution or changes in distribution say linked to climate change. I cannot know that unless I and others send records in to build the picture. I hope that the data will help conserve at least some of the species.
Species survival
Personal interest and a passion for wildlife.
Getting to spend time in lovely places. Finding new species for me or for an area. The other people I meet/work alongside. Contributing to bigger picture.
Conservation
Dots on maps, new records for NI and all-Ireland
1. Interest - 2. conservation
Providing data for future generations. - Putting dots on maps.
Physical, mental and social activity. Helping map species, learning new species. Using a computer, microscope, keys and maps. - It gives me a reason to get up in the morning.
General interest. Like to do something useful. Conservation concerns
If you don't know what you have and what the trends are you can't protect and manage the environment appropriately.
Keeps me physically and mentally active in retirement. Enjoy field work. Keeps me in touch with fellow naturalists and friends. Sense of contributing to monitoring environmental change and hope that biodiversity loss can eventually be reversed. Maintenance of professional skills.
Joy of finding something new or exciting
To contribute to the conservation of our natural world.
Personal interest and general commitment to supporting wildlife conservation.
A passionate love and concern for the Natural Environment that has so far lasted over 50 years!
Data to go with seed collections we make.
Pure curiosity and a weird desire to collect information.
For the sake of conservation
Furthering knowledge of species. Accessing species distribution is a resource I want to contribute to.
Knowing that you cannot conserve wildlife without knowing where it is and what problems it faces. I can only do a very little about the problems but I can help with the knowing where it is.
Personal interest in nature, and improving knowledge of species distribution.
being able to contribute to local knowledge of wildlife and increase my own knowledge to share with friends and family
A desire to benefit wildlife conservation; pleasure in doing it and seeing the results.

I like to know what lives around me. - I like to contribute to a bigger project. - I like the rewards of seeing distribution maps. - I enjoy looking for wildlife and finding out what it is.
I enjoy it - It's is often useful - I have the skills to do it - keeps me fit - always learning new things
██████ for SCM work. Ad hoc records for █████ LERC █████ personal interest in species and knowing the value of good data freely available for use by everyone & the benefits to making informed decisions on developments etc..
Personal interest
obsession ...
I enjoy being in the fresh air and discovering the biological diversity of my environment.
Environmental/wildlife conservation
I enjoy doing it. I also like to pass on the information I gather so it can be seen as widely as possible.
It my hobby
An interest in the countryside and what species live there. I completed a BSc degree in Countryside Management at █████ in 20██ and that increased my interest.
Personal interest, and wishing to contribute to conservation.
A better understanding of the distribution of █████ taxon in the UK
I enjoy the opportunity to learn more about wildlife and the chance to make new friends.
Keen to record what's in my area. Species protection. Prevention of Wildlife Crime. Personal satisfaction. Healthy lifestyle.
I have always been interested in wildlife and ecology, hence made it my profession and now do it as a job. Sharing the data is a simple way to contribute to species conservation etc.
Enjoy the outdoors and keen to celebrate the area that I live and work in.
The overall importance of knowing what species we "have", how it changes and what we may have lost. Plus pleasure.
I enjoy seeing moths, butterflies and birds and believe that the results of this enjoyable activity should be effectively recorded, collected, analysed for the ultimate benefit of conservation. Filling in forms, spreadsheets , managing a VC database and interacting with other recorders and give them feedback on their records is part of this.
I have always been passionate about natural history and recording gives a focus to my interests. I believe that "Citizen Science" can provide data which can inform environmental practice.
I'm a hoarder.
Personal satisfaction and the thought of long term good.
I believe it makes a difference: data I collect is used to further conservation.
I realise that distribution data is important for all species of all life, is of high importance to effectively devise conservation schemes,
Personal interest in certain species groups. Desire to remedy under-recording in the region where I live.
I feel it is important to know what the wildlife situation is and while there are plenty of "professionals" keeping records, having individuals helping in their own area must give a much fuller picture. I also enjoy watching and keeping records. I learn the habits and signs of wildlife which makes me more observant and therefore I see far more than I would normally have done so.
Interest. Aim to record as many species as possible in the two sites in which I am active.
To increase our knowledge of the natural world in order that it can be conserved for future generations.
Interest to extend knowledge of existence of species in my area; building up a year-on-year database of certain species.
Interest.
Interest in subject under review whatever that may be
I find it enjoyable and interesting.
Love of learning about our natural history, and desire to share records and hopefully contribute to our understanding and conservation of habitats and species.
Love of wildlife, find it fascinating and relaxing to be outside looking for and at wildlife. Knowing that records can help increase knowledge and conservation is why I submit records.
part of my job and general interest
Conservation/species monitoring
Simply to find out what is out there. Insect recording is patchy and there is a need to fill in a lot of gaps
Provision of records to aid conservation and to allow analysis of biogeographical distribution.
I enjoy it and I know the importance of having relevant, up-to-date data for conservation.
Personal interest and enjoyment.
I enjoy filling in the blanks on the maps of this area.

Enjoy wildlife watching and sharing this information.
primarily interest. - also manage own small holding primarily for biodiversity. Recording helps to monitor what is happening. The group's training helps me to do that.
Love of the outdoors and of Scotland's flora and fauna. The wish to contribute to the sum of human knowledge. The desire for this knowledge to be used to inform the conservation of our wildlife and environment. Curiosity.
I understand the importance of knowing what species are present in order to be able to manage land appropriately. Data collection is very intensive and expensive, so volunteer recorders are essential
curiosity
There is a lack of baseline data. We need to highlight what we have before we lose it
Contributing to data sets for distribution of plants and birds, which will in turn play a part in their conservation.
Interest in the environment and in animals and plant species. - - More fulfilling to work outside and with nature than in other forms of employment
My Job
I've always enjoyed birdwatching so it's natural to want the records to be of some value for preservation of spp. or habitat management.
An interest in this particular species.
Its usefulness and I enjoy it; it makes me more aware of my surroundings.
interest in biodiversity and conservation, enjoy making the observations, good to make observations for a purpose
Furthering of knowledge
Professional occupation
Lifelong enthusiasm for Botany. - Now serving as BSBI county recorder for vo ( ).
I hope to contribute to the picture of the wildlife in the country, so that it can be appreciated and protected. It adds interest and a sense of purpose to a walk. I enjoy meeting like-minded people on training days and field trips, and improving my identification skills.
A general interest in wildlife, especially distributions and trends, combined with a belief that data not properly recorded and stored represent a wasted opportunity.
Interest in flora and fauna, their presence and absence and variety.
Gathering data vital to a National record
Interest in wildlife generally and particularly because I am very concerned at the alarming decline in almost all species and am trying to do what I can to help reverse this trend.
Curiosity about the natural world, sharing knowledge, inspiring others
Personal interest, need for Conservation action and public involvement
A life-long interest in the outdoors especially in actively monitoring and preserving fauna, flora and habitats.
Personal enjoyment
Part of job. Also interested in submitted records of interesting species I have found.
Personal interest in birds and wildlife - The desire to use my records/observations for conservation
It's a very important tool of conservation work and species conservation would be impossible without the information gathered.
Concern for the conservation of our natural environment and biodiversity. - Intellectual motivation - challenges of recording - Working with people with similar interests and being able to share my knowledge and enthusiasm
I am interested in the subject
Interest in recording specie distributions in general, particularly if it benefits the long term health of a species
A love of nature and a desire to understand and protect it.
I find it hugely enjoyable to learn about the natural world. I am also keen that records are then used further along for a practical purpose such as conservation.
I want to know what is around on my reserve, there is a competitive element to it! I also want to monitor how the habitat work that we carry out is directly affecting the wildlife on site.
Making use of my data/observations. Contributing to local/national schemes - as a keen birder, I feel there's an obligation to 'do my bit' for scheme such as BBS, WEBS, Atlases, etc. Data collection is also part of my job.
Belief in the importance of recording to aid conservation effort. - To help prevent inappropriate development, and encourage mitigation when species are lost. - Satisfaction of increasing my own knowledge. - Feeling like a valuable asset to scientific knowledge in ecology. - Competitive achievement in recording more (local recorders leader board on LERC )
We need evidence for conservation, and evidence requires data.

I believe that biological recording should underpin decision making and provide the evidence base for the state and health of our natural environment. And I enjoy it too. Finding a species that is new to an area, or new to me, being able to tell someone else that what they have found is new or significant all add to the enjoyment. Running a moth trap is like having Christmas every day as you never know what you might catch. -
Interest in the natural world and in conservation. The excitement of finding new and interesting species and the challenge of identifying these.
Interest in increasing number of records - Interest in improving own ID and knowledge - Keen to see trends/interpretation of data - Keen to support citizen science in practice
I enjoy recording myself, and I enjoy encouraging and mentoring others to do so. The data I collect is shared so that it can be used for research and conservation, which I find very worthwhile. It provides me with a way of experiencing the natural world and feeling part of the bigger picture. - - On their own my records won't change the world, but if combined with others' they add up to something much more significant.
The challenge of identifying species and a huge concern for the loss of biodiversity in this country.
curiosity
I have a particular interest in one or two groups of invertebrates and it seems churlish to ignore the other groups I encounter. I just like insects and their life histories and adaptations.
Enjoyment, knowledge to assist job, networking/ social element and knowledge data will assist species conservation in the UK.
love of all wildlife
An enjoyment of nature and the outdoors, an enjoyment of learning and developing new skills (particularly species ID), a sense of contributing to wider knowledge of species distributions and subsequently to protection of biodiversity.
Desire to contribute to the better understanding of species abundance and distribution and any changes.
Wildlife Conservation and Scientific research
Interest in protecting nature/the environment, on a local level and globally.
understanding how species are using the local environment, distribution etc and using the data for their protection and habitat enhancement
I enjoy the administration and being able to see the bigger picture, especially when relating to my main interests.
Mainly because it is enjoyable to see new species in new locations. I find the world of moths and butterflies so fascinating. To a lesser extent I feel that I am making some sort of contribution.
To contribute to our existing knowledge on insect biodiversity & distribution in the UK.
I enjoy it. I can also see how valuable every record can be, as species decline/expand, and without this data, you can't do any informed conservation of species.
Personal interest and providing a record for future use and analysis.
Improving our knowledge of distribution and ecology
Gathering data to fill gaps; Use of information to ensure
Interest in natural history. Contributing to human knowledge.
Enjoy finding/observing interesting species & to aid their conservation & pass on knowledge to others.
Conservation issues; Love of the natural world; Scientific interest; Learning
Conservation
Love of being out in the countryside and an inquisitive nature.
My job and a gradual increase in understanding and also the training I have received.
Contributing to existing knowledge, furthering my own knowledge and my own enjoyment of wildlife. - - Use of information for conservation purposes.
It's important for Scotland, it's important for our wildlife and it's sustainable use, it's important for everyone else, it's important for future generations. It's fun, I get to mix with some great people and I just love doing it.
Nature conservation
Seeing my records used for conservation.
<b>Q42 What motivates you to be a Verifier or County Recorder? &lt;back to list of roles&gt;</b>
Wanting to find out where species are and the change in populations
Unless there is confidence in the integrity of a recording scheme it is worthless. I am better placed than anyone to verify records collected locally.
good to be able to use and improve my experience and knowledge
To get a better overview of the <b>taxon</b> of the county.
As long as I can use the records I am verifying in my database of Scottish <b>taxon</b> then I am happy to verify them.

Ensure good data is available to use for distribution mapping, modelling, conservation assessment
No other local recorders working intensively on the group, so it falls to me to check ad hoc records.
A chance to encourage and support recorders as well as develop a better understanding of the fauna of the local area
see answers i earlier section. In addition I am keen to pass on my experience and hopefully expertise as well as encouraging others
Ensuring that the data going into recording schemes is accurate.
The drive to improve my own identification skills and the love of enthusing others about insects and wildlife generally.
Desire to be involved with and help the county Nat Hist Society. To give a break to the previous recorder, who asked me to do it. Interest in the species group I cover.
Interest in wildlife and I enjoy it.
Necessary part of the scheme.
As a retired University biologist I can keep on being one and also learn and still do a bit of teaching.
Being a collector of records myself and having an interest in the groups I am a county recorder for.
A worthwhile task for something that I believe in, plus one that is enjoyable (most of the time).
Science
Benefit of recording scheme and moths. - Being appreciated for doing a good job.
Wanting to know more about species I like.
Personal interest
Nobody else would do it!
Getting things correctly identified and recorded!
helps others to become more confident in species id
Pease note that (at least in the situation) one cannot readily distinguish between time spent on recording per se and time spent on being a County Recorder/verifier
the opportunity to learn from working on material (specimens) from a wider range of species and retaining specimens for my reference collection
I am only part of the verification process and not the final verifier of records. I do this as accurate data is essential for conservation research to be taken seriously.
Duty- not many people have the experience to do it and I was asked to do it.
just to help out the County Recorder and local record Scheme (as well as to maintain the high standard of local recording)
To help out my local recording group, to share my knowledge.
To help gather records which improves our knowledge of fungal distribution
It does give one the complete picture for you VC and it is a job that needs doing. It also puts you in touch with folk even if it's only by email.
People helped me in the past, I'd like to pay back. - It's good to encourage others and help them get the most out of recording. - Their records are valuable for conservation.
Desire to build good information base on species for geographic areas.
Data standards. NB - Answers on this questionnaire are on behalf of a team I manage who carry out verification.
To help collate and verify records
I think it's important to get data verified, mobilised and used for conservation.
The wish to ensure that records from my area are accurate. The wish to assist less experienced recorders with improving their capabilities.
A passion for accuracy in recording, the desire to prevent important records being lost.
I was asked & I enjoy organising.
Quality control of records
to help other people improve their skill and to benefit the species that i verify
Knowing that the data collated at the local level is as accurate as possible is very satisfying.
I enjoy bringing data together and seeing how it can become more powerful and tell more stories once aggregated. I enjoy encouraging and mentoring others to enjoy seeing wildlife and become better recorders. The data I verify is shared so that it can be used for research and conservation, which I find very worthwhile. It provides me with a way of experiencing the natural world and feeling part of the bigger picture.
A desire to see accurate data being used as the basis for conservation strategy and policy and to promote to the general public the changes that are taking place in their environment locally.
I enjoy helping people learn
love of wildlife and desire for accuracy of records to inform decision making and analysis
To support wildlife conservation

A desire to learn where new species are being found in my local area. - A feeling that records should be properly verified and mobilised and that I can help in doing that. - A sense of belonging to a community of people with similar views.
A particular interest in the group that I verify and to help and encourage other to record them.
I like to know what species are being recorded where. Having been monitoring butterflies in ■ Scotland for about ■ years, I have seen many species distributions change dramatically
Passing on experience
Supporting & encouraging other recorders to grow in their knowledge & know that their records are valued & ensuring records are as accurate as possible for conservation purposes.
Conservation; the formal record of our avifauna.
Increasing knowledge, kudos, making a difference for conservation
<b>Q61 What motivates you to be a Collection Curator? &lt;back to list of roles&gt;</b>
A biological collection is a vital tool to leave for future generations.
It's my job and I love it
Having a reference collection is a way of building up expertise, improving your skills, which is one of the reasons I keep one.
Interest in Entomology and ant taxonomy
To contribute to improving the knowledge on Scottish (& UK) biodiversity and to provide voucher specimens for the local area
I enjoy looking at marine invertebrates alive and preserved. There is so much to know and discover.
building and using a reference collection to support specimen identification
Desire to benefit wildlife conservation; improve my knowledge and experience; and pleasure in owning the collection.
Interest in the subject - professional interest
It helps to verify records and to produce for posterity a reference collection.
It is my job. Curiosity about the natural world, love of the natural world, interest in species.
To ensure that collected data can be used for science and conservation
To preserve my voucher specimens for any potential future use.
The desire for my recording to be accurate and evidence-based.
Preserving our environmental heritage. Unfortunately the examples of extinct species we hold are likely to grow in coming years.
I am motivated simply by the need to back up my statements about species records. There is a certain force of habit which has come after nearly fifty years of practice but this discriminates against excessive collecting or species 'twitching' for the purposes of obtaining a 'full set'. I try to make everything I acquire a voucher with a function.
Preserving our natural heritage. It's a dynamic and very varied job that I find challenging and enjoyable. Natural history collections provide us with a wealth of knowledge and the potential to collaborate with a range of organisations and institutions.
I really like working with the collections. I love discovering new objects in the collection (even after ■ years!) It's a very varied job - you never know what will turn up next. I also feel a commitment to the collections - if I don't use my knowledge to enhance the records that relate to them, it probably won't happen. It's also nice to see visitors' reactions to the objects.
<b>Q83 What motivates you to be a Recording Group Operator? &lt;back to list of roles&gt;</b>
part of my paid role, rewarding to train others to record wildlife
Making sure that data is used.
Just love it
It is very rewarding to expand existing knowledge and share it. Many of the ■'s projects or initiatives introduce the concept of recording to audiences who have never considered it or thought it too technical to be involved in. Equally it is rewarding to work with very committed naturalists who are focussed on specific species.
I'm a ranger, comes with the job
Leaving a legacy of native seed collections for future generations.
I have enjoyed the benefits of membership of my local Recording Group for more than ■ years - so once I retired from full-time work I thought it was about time I contributed towards running it!
Someone had too...
Part of the 'job'.
it's part of my job.
A desire to contribute to preserving the biodiversity of the islands and to ensure the records we collect are made available for this purpose. The work is interesting, challenging and enjoyable.
Providing good quality data to the local environmental record centre and to ■ national scheme
Nothing to add to my reply for the verifier role.
Desire to see local atlases published and to communicate to the public our local knowledge of wildlife distribution and abundance.

As [REDACTED] member of the group over [REDACTED] years ago I can only say that I enjoy seeing its successes and that makes me rise to the challenge of its failures. I wouldn't describe myself as an operator but as a member of an informal team/committee within a 'community of interests'.
love of wildlife and keen to assist others to engage
<b>Q107 What motivates you to be a Recording Scheme Operator? &lt;back to list of roles&gt;</b>
Wanting to get the information and know more about population status and distribution -
Enjoy recording; Conservation of the taxa I'm interested; data to analyse for conservation assessment
I like working with volunteers, maintaining and analysing the data, ensuring that data is being used once it has been collected.
Wanting to know more about species I like.
To champion our group, inspire people to appreciate them, to further our knowledge of them and to help ensure their conservation.
Part of my job
love of wildlife
Desire to contribute to better understanding of species abundance and distribution.
Desire to effectively conserve our species of interest, and provide evidence of the conservation status.
A particular interest in the group that I verify and to help and encourage other to record them.
When I took it on it was for professional development; the desire to increase our knowledge of the county's biodiversity; the desire to contribute to a well-respected national recording scheme; wanting to get more people involved in recording (and conservation); and because I liked organising things. Now I've been doing it for [REDACTED] or [REDACTED] years I don't feel massively motivated any more, to be honest! It's a lot of tedious work. Now I'm mainly motivated by the knowledge there doesn't seem to be anyone else who's prepared to take it on. But I do like working with the group of volunteers involved in running the recording scheme locally.
<b>Q127 What motivates you to be a Data Provider? &lt;back to list of roles&gt;</b>
Interest
I have studied Ornithology and am deeply interested in the bird population of the island [REDACTED], but also deeply concerned by the observed decrease.
wish to be able to share data for use in conservation and enable evidence based decisions to be made.
The need to ensure that high quality data is available for those who want or need it. To ensure that decision makers have the information they should use to inform their actions.
To ensure end-users have the best available biological data at their disposal
Needing data myself, biodiversity conservation, because it is important.
Data should be shared so that it is making a difference.
We believe in sharing data as much as possible (with caveats for sensitive records and contractual obligations)
Provide information useful and interesting for recorders. - Positive recognition.
A passion for wildlife conservation and sharing data.
Recording species info as a resource for all.
After all the work I have put in, I like to think that my efforts may be useful to others in the future
part of my job - general interest
Job
It is a part of the species data flow and a key responsibility of a recording scheme.
It's my job!
Job requirement
Willingness to share information
Want to be involved in Conservation.
The same reasons as motivate me to run a recording group.
Helping conserve the natural world.
No point in collecting data if it is not shared and used.
Job satisfaction.
love of wildlife
The need for good quality biological data to be available to all decision making bodies. - The ability to inspire and educate the public on the value of recording by using existing records.
To ensure the maximum benefit can be gained from the data we collect
If the data is there, it should be available - otherwise what's the point?
I want decisions affecting our natural environment to be made based on the best information available so as to minimise the damage that we do to

<b>LERC</b> is a local environmental record centre hosted by the <b>county</b> Wildlife Trust. We exist to make biodiversity information available, so that it can be used to inform decision-making, target conservation and add to collective knowledge of biodiversity.
Conservation
Ensure existing data is taken in account in the decision making process and available for other conservation purposes or for the benefit of conservation - - To assist recorders (recording groups, schemes, etc.) - - To engage the public in recording and/or conservation and/or wildlife in general
<b>Q148 What motivates you to be a Data Developer? &lt;back to list of roles&gt;</b>
adding value to data and encouraging its wider use, solving problems and creating useful outputs.
Innovating with data is interesting. Decision-makers need interpreted data e.g. network maps. To them raw data is useless. LAs now don't have ecological staff so the data products we need to provide have to be much more tailored to specific question such as targeting GI to mitigate impacts on Natura 2000 sites. They also need to incorporate more than just traditional biological records. For instance data on visitors accessing sites and condition monitoring data.
It is part of my job as an ecologist.
Provide useful information to recorders. - Positive recognition.
The need for Habitat Data on which to make planning and land management decisions
The need to keep the data structured, analyse it and publish it
I'm paid by my employer to do it!
love of wildlife and satisfaction of using skills
It's interesting!
<b>Q166 What motivates you to be a Data User? &lt;back to list of roles&gt;</b>
Interest
To add value to the recording of Ancient / Veteran trees
It is an important part of my job
benefit to conservation
My profession
Helps with understanding and own recording
To maximise fieldwork effort
Necessary for some aspects of my job. In order to do that I need to ensure appropriate data is properly used and interpreted.
Increased knowledge before site visits, improved surveys
It is my employment. To ensure that I can provide interpreted data to decision makers.
I can only provide robust advice within consultancy reports if I am drawing upon all available relevant data.
It is a requirement of my job to ensure that information presented is correct and reliable. Being able to cross reference information presented with other record sources is invaluable.
Interest in biodiversity and a desire to see that decisions are made after full consideration of the best available data.
need to use data as part of job
Professional requirements and desire to do a good job. - Conservation of the environment.
To ensure development takes biodiversity into account.
To expand my knowledge of local <b>taxon</b>
A basic part of doing any wildlife study or conservation work
Need for my job
My main duties are to respond to planning applications with a view to advising the developer on the possible presence of protected species and the measures they should take in terms of mitigation / enhancement. I also advise developers on how they can enhance their developments to benefit wildlife, and hopefully create an environment that is an improvement on what existed before. I would therefore benefit greatly from access to as much recording data as possible to provide as complete a picture as possible to the developer.
To ensure my outputs are based on proper data
Biological records hold a lot of interesting information about species trends and distribution, which interests me greatly.
Conserving wildlife particularly in the planning processes
Interest in the taxonomic groups I record - helps with identification and to target surveys - Conservation - to help protect species and habitats of conservation concern (as a <b>taxon</b> with an NGO I use biological records to give advice to developers). - Work requirements - helps to aid survey design and identification
It is part of my job as an ecologist
My research
Minimises environmental impact
Researching an area before visiting. - Comparison with my own records. - Increasing my ecological knowledge.



Personal interest. Wildlife conservation, particularly deciding on appropriate habitat management.
Interest in recording and taxonomy.
I like finding things out and seeing data in different ways; I like manipulating data to make it accessible to others.
Academic interest
It is an important part of my job
To contribute to improving the knowledge on Scottish (& UK) biodiversity and to provide voucher specimens for the local area
helping in the wider picture
Professionalism and aiming to deliver projects that take full cognisance of the natural environment.
I need information, I need data for work, I research land use, habitat quality, and species presence
Finding out more about species I like.
Personal interest
If I require information for a project
Correct, informative data relevant to the specific project
Personal interest, voluntary work with young people.
Interested in the distribution of species. Also interested in species records for certain sites managed by my organisation.
To find our collections.
I need to wrangle data to produce reports as part of my job.
My background is in nature conservation and working on reserves
Personal interest in nature.
My job. Also maintaining & researching my collection.
Interest in finding out more about wildlife and its distribution
job plus personal interest
Partly - writing a book at the moment
To find out more about the species group I am interested in. It is a requirement of some of the contracts and ID training that I undertake.
Statutory requirements
It informs the work I do
Informing my data recording e.g. checking if a species has been recorded at a location, a time of year etc.
Personal interest
Curiosity
As a sometimes self-employed Ecologist the data can be useful for preliminary ecological appraisals.
general interest
Learning about distribution motivates me to go and look for the species and helps when trying to identify some species. Data can also assist in understand local population trends.
To find out more about species and their distribution and recording activities already taking place.
Work as Local Authority Ecologist
It's my job, but I also enjoy using data for my own interest.
Curiosity and a wish to know more about the distribution of various species of interest to me. Also a very small amount for my work as a part-time ecological consultant.
Requirement of my job.
personal interest, professional need
Building up integrated knowledge of individual species, production of identification guides, discovery of new knowledge
Part of the 'job description'
It is my research background and part of my job.
this is necessary to do my job.
Intellectual satisfaction and the desire to learn. To be able to interpret and understand the data I manage for the group and to make it easily accessible for others.
Understanding effectiveness of management interventions
To put my own recording into context
I want to put local data into a national even international context and so add value to local recording
It is part of my job. I also use data to make my voluntary recording work more effective / targeted.
love of wildlife

Interest in the distribution of species and habitats. My current and recent roles have often required a localise knowledge of this for conservation purposes.
Gathering all data to create the most accurate data outputs as a LERC
Protecting and enhancing nature/the environment.
Any information to ensure that my own studies are complete as possible. Experience has shown that it is not possible to rely entirely on others when taking forward a personal study but any data which can assist is very welcome.
No inform decision making and research
A particular interest in the group that I am seeking data on, to learn as much as possible about their distribution.
I'm interested
My job and personal interest.
Interest in what has been recorded previously. - - As a local environmental record centre manager, we make much use of datasets provided by other data providers.
To enable verification of records as vice-county moth recorder & to look up species data to inform local survey priorities for conservation & see distribution changes.
Conservation
More comprehensive dataset available to and taken into account by users of LERC services - better informed; better outcome for conservation -- Own interest in wildlife, recording, conservation
My professional role as a conservation scientist
<b>Q187 What motivates you to be a Service Provider? &lt;back to list of roles&gt;</b>
providing evidence for informed decisions to be made based on evidence, using our services to improve appreciation of the natural world and the benefits it brings
Employed as such. - The need to ensure biodiversity data is better used in decision-making - Supporting the local recording network - Conservation
To contribute to and facilitate conservation action
Part of making our data accessible to everyone, raising awareness of biological recording, biodiversity, priority species, INNS etc.
I enjoy the work and see the benefits of protecting and sharing data.
Job satisfaction
Part of my job. Assist wildlife conservation in Scotland and protection of special places and species.
love of wildlife
Ensuring that the data that volunteers collect is made available to those that require it in a sustainable manner, i.e. one which supports the recorders and maintains LERCs as viable businesses employing 100s of people across the UK in the environmental information sector.
I feel that my job makes good use of my varied background and skills set and I feel that I am doing something useful and worthwhile.
It is important to make biological information available and to encourage the recording of data by as many people as possible to develop a greater understanding and appreciation of our native biodiversity.
I love the thought that the data we collect makes a difference. Seeing how widely the data is used also gives me tremendous pride in what I do. - I love working with environmental data and am constantly surprised by challenges posed and relish taking on these challenges and applying new and novel techniques to address a problem.
It is the main purpose of <b>LERC</b> . We exist to make local biodiversity information available so it can be used to inform decision-making, target conservation and add to knowledge of biodiversity.
Conservation of species, sites and habitats - use of data in the decision making process. - - Inspiring others to start recording and see them develop
<b>Q206 What motivates you to be a Service User? &lt;back to list of roles&gt;</b>
benefit to conservation and to public
Access to authoritative distribution data
Business interests which in turn are driven by general interests/chosen path. Where unpaid driven by own interest in natural history/outdoor observations.
Incorporating biological data into decision making
It's an important part of my job
Data necessary for the job of informing development or INNS.
Partly work and partly interest
Personal interest and educating young people.
Being able to learn new things and share info

Professional requirements for service planning.
Curiosity, involvement, increase in knowledge.
Usually a requirement as part of a consultation.
job requirement
Local Authority Ecologist
The desire to use the most up-to-date and comprehensive information available on the distribution of organisms that I'm interested in and/or working on.
interest in the environment
I use the information and services provided by other organisation to support and enhance my role as a data manager, analyst and recording group organiser
Desire to deliver what I do to the best of my ability
To answer a question.
love of wildlife
Interest in the distribution of species and habitats. My current and recent roles have often required a localise knowledge of this for conservation purposes.
Checking the viability of my own records by viewing national distributions etc.
<b>Q224 What motivates you to be a Funder? &lt;<a href="#">back to list of roles</a>&gt;</b>
Improve the quality, extent, range and time-series of data to aid better decision making
part of job
Supporting species conservation
It is a positive job where I can make a difference.
To help deliver the goals of SBIF and also those of BRISC.
Interest in gathering of local data and using that to enhance knowledge and for promotion of the area.
LRCs provide a necessary service for the Local Authority to carry out statutory duties.
Requirement for biological data to enable planning process to function correctly to protect biodiversity wherever possible, and to prioritise biodiversity enhancement/conservation work.
<b>Q242 What motivates you to be a Facilitator? &lt;<a href="#">back to list of roles</a>&gt;</b>
Need to ensure biodiversity data is available and used
To help to achieve SBIF and BRISC's aims for the good of biological recording in Scotland.
Love for wildlife, nature and the environment made this job very appealing when I was searching for employment - it makes doing this role (which could be done in any organisation i.e. finance and business management) much more rewarding and exciting to be a part of.
A wish to improve the understanding of how data flows work, to help people use the systems and tools that are available, and to influence change that will make things better.
Enjoy the job.
I believe NFBR is a useful and valuable institution.
love of wildlife

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## APPENDIX 4: List of morale comments <back to contents>

In each section, respondents were able to provide a comment in response to the following question about their morale to explain their answers if they wished to do so:

Regarding the part that you play as a <ROLE> in our biological recording communities and infrastructure, to what extent do you agree with each of the following statements?

- I know what to do to play my part well
- I've got what I need to be able to play my part
- I've received recognition and appreciation for the part that I play
- People listen to, and value, my ideas and suggestions
- Within the last year I have had the chance to learn and grow
- People I liaise with are committed to doing a good job

The following comments were received:

ROLE	COMMENT
Recorder	I am currently a volunteer. I find persons being employed spend a lot of time & effort looking for their next job, because their job only got funded for a short time.
Recorder	more support and a more connected recording community in <b>county</b> would help me become a better recorder and get more out of recording, some local groups are great, but some individuals with specialist expertise do not share records.
Recorder	A lot of this goes unnoticed by general public/powers that be. The folk that I work with/gather data for/with are very supportive and appreciative as they know how much effort it requires
Recorder	Our project feels disconnected from general biological recording community.
Recorder	We have had a lot of support from the <b>██████████</b> and local recorders.
Recorder	My main limitations are health issues and age! Not a lot can be done about either of these!
Recorder	LRCs are not being listened to in relation to Open Data (particularly by Natural England) and the changes from the NBN Gateway to the Atlas, - We have good relationships with other organisations such as the Environment Agencies
Recorder	'I've got what I need to be able to play my part': More equipment and consumables are always useful for entomology as well as access to keys and biological record data. Availability of free contemporary keys varies depending on taxa.
Recorder	One of the most valuable resources is the experienced members of the societies I am a member of.
Recorder	In some of the above cases, there are instances where I could agree and instances where I could disagree. I am not appreciated by everyone I work with but neither am I dismissed by everyone I work with. Some people value my ideas, some don't. Some professional conservationists try their best to do a good job, some are rogues in it for an easy ride and a civil service pension.
Recorder	More funding would make things much easier.
Recorder	It depends on who you are referring to regarding the above answers! Butterfly Conservation listen and understand the issues - <b>LERC</b> don't!
Recorder	I help others but I am also helped by others.
Recorder	There is a severe lack of employment in environmental recording and coordination. There are so many voluntary groups, schools, passionate individuals all doing their own thing, it does not seem to be well coordinated or reported on.
Recorder	Difficult to distinguish here between my roles in data collection/recording and in managing a society!
Recorder	I would say I am quite 'passive' in my data sharing - I collect through my work and privately, and share simply by sending in my records, I don't really interact that much with how it's done, hence some of the question above don't really apply.
Recorder	If the answer to the first one is 'neither - nor', it undermines subsequent answers that are to right or left of that.
Recorder	I enjoy attending training courses to improve my identification skills.
Recorder	any contributions by me are pro bono. Not interested in 'recognition' etc
Recorder	<b>LERC</b> do a great job of sharing their data with recorders, providing training and the annual seminar day is a great get together to acknowledge the efforts of all involved.
Recorder	all informal recorders receive thanks but not individual recognition.
Recorder	I do my best as far as I can, and try to encourage others, including children, to discover, care about, and love wildlife and get involved in joining in with recording and/or joining local conservation groups and activities (not as successfully as I should like!)
Recorder	Notable exception (failure by some local council to engage and share records) to the last question but didn't want to unfairly tar others with same brush!
Recorder	Tricky to complete this section as I record multiple taxon groups and the organisation of each is not the same. Suggest that this most applies to botanical recording work as my principle recording interest.
Recorder	A local records centre in <b>██████████</b> would make my job easier - there would be more potential to develop projects etc..
Recorder	1) Could still learn more in specific areas - 2&3) I feel the local authorities we help - LNCS designations is most of what I'm currently involved with - with our work on a volunteer basis give hardly any support or recognition. Very disappointing. Support among local recorders is good.
Recorder	The only thing i feel is "missing" is a stronger commitment from Government and national agencies to continue to provide the funding local record centers need to continue doing what they are doing so very well. My experience is largely of <b>LERC</b> , but I have a few dealings with others. The work they do is far too important to have it depend on coffee mornings and the goodwill of volunteers to keep it going. Without the formalised and consistent structure and support of a record centre like <b>LERC</b> , I would fear for the future of biological recording in Scotland. A single national centre wouldn't quite do it - volunteers do have a regional empathy and it's too valuable to loose.
Verifiers	iRecord needs more resources to develop the system in a way that the users need it to.
Verifiers	I do not have sufficient "lab space" at home to store specimens/equipment/microscopes etc. - Space is really at a premium as I run a <b>business</b> <b>██████████</b> in my home. My computer is old and out of date. My computer programs like EXCEL are ancient, inadequate or out of date.
Verifiers	Again depends which group this applies to!

Verifiers	I would like more contact with and support in this area from the verifier community.
Verifiers	It is more satisfying to verify for a local group, where you get more immediate feedback. Online verification is a soulless and lonely activity!
Verifiers	Not doing as much as I used to do when I was butterfly recorder for [REDACTED] Scotland.
Curators	There aren't enough resources to do anything well. Constant fire fighting.
Curators	I am a taxonomist and rely on well documented specimens. These are usually obtained from museums. Collections from the commercial or government agencies require a lot of processing to match the data the specimen. Most records without a specimen are of no value in taxonomy as they cannot be verified. I have not been involved in biological recording as the skills for identification are almost non-existent in my group of [REDACTED] taxon [REDACTED]. I would not use a record without a specimen in my publications. Most databases are of little value as they are only records which cannot be tracked for the groups I am interested in [REDACTED] taxon [REDACTED]. I think this is very different for vertebrates, insects and other terrestrial groups. The marine fauna is poorly known and consequently the records are scarce.
Curators	Our museum is in terminal decline. We had [REDACTED] staff in Natural Sciences [REDACTED] years ago, today we have [REDACTED]. I am the [REDACTED] as I am retired and work [REDACTED] days a week. Our total budget has been cut gradually over the last [REDACTED] years and we are promised cuts of [REDACTED]% each year for the next [REDACTED] years.
Curators	Although I enjoy my job very much, I am part of a team that has been severely understaffed for over a year (in fact, I am soon to be the only staff member in the team). - - We do not always have the resources to accept offers of collaboration or hosting of workshops etc.
Curators	Not enough resources to be able to play my part to the full
Groups	It is getting difficult to understand just what you are wanting in each section and the distinctions between them!
Groups	I feel that with a bit more in the way of resources, we could be so much more effective. I'm not talking mega-bucks, just a few thousand quid a year. We have singularly failed to get buy-in from all but a few other partners in our Local Biodiversity Action Plan Group (the noble exceptions being, [REDACTED] and [REDACTED], who have contributed partial match-funding for previous SNH grants). This is disappointing, but they all plead lack of money (justifiably in the case of many Public bodies).
Groups	It's a very minor voluntary role!
Schemes	If we were given records without restrictions we would be able to make more use of them. We need local records centres in particular to help with this.
Schemes	Don't get much chance to grow and learn as there's always a massive pile of data entry / data processing I should be doing.
Data Providers	There are insufficient resources to do my job properly - There is a lack of recognition in certain bodies (eg NBN, Natural England) as to the importance role that LRCs play, particularly in regard to data management and supporting recorders
Data Providers	The answers to question 20 will vary massively depending on the organisations and people involved.
Data Providers	Lack of resources
Data Users	I have brought up the issue of SNH data availability with local officers but nothing has changed. - I have also spoken at length with local authorities to try to get them to publish all ecological reports submitted in support of planning applications, but again all to no avail.
Data Users	Greater access to datasets is always desirable and could be improved.
Data Users	Again depends on who you are referring to!
Data Users	Data usage has mainly been through online maps, so little interaction with those providing the data, hence the average score.
Data Users	I feel that the needs of data users are neglected by some recording groups.
Service Providers	I passionately believe in LERCs as a crucial part of the biodiversity conservation jigsaw. We have a proven track record of doing our jobs well and being valued by those that we come into contact with, whether data providers or users.
Service Providers	Although I am confident that I do a good job, I am constantly looking for ways to improve and develop and to streamline procedures. I rely on self-study to improve my skills, mainly because there don't seem to be appropriate or tailored training courses on offer. - - There is no defined structure for career progression in my role.
Service Users	I do not expect recognition or support for the kind of use that I make of these services

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## APPENDIX 5: List of what is working well and less well <back to contents>

Within each section, the respondent was asked the following two questions:

- For the activities that you <do>, what is already working well and what makes it so effective?
- For the activities that you <do>, what is working less well and how is it problematic for you?

The following responses, classified by role, were received:

ROLE	WORKING WELL
COLLECTION CURATOR	My own skills, knowledge allowing me to self-teach
COLLECTION CURATOR	The preservation of biological specimens is well known but whether it is practiced is another matter as it takes time and skill. It is effective as we have specimens stored in good condition for over a hundred years. - - The biological world is organised in taxonomic groups eg Chordates, Insects plants etc so it is easy to find where identified specimens are to be catalogued. The understanding of this basic fact takes many years as you need to know where to find the correct hierarchy for particular groups. The system works well all over the world.
COLLECTION CURATOR	I am principally curating material for my own private reference collection - - The more identified material I add to it, the better I get at identification. This helps me with referee specimens for the local recording scheme and also helps with my job in conservation science.
COLLECTION CURATOR	acquisitions and loans, submission of records to other schemes
COLLECTION CURATOR	Online data capture, standard methods, training/accreditation schemes
COLLECTION CURATOR	Continue to explain why the acquisition of actual specimens is often necessary for the correct identification of specimens.
COLLECTION CURATOR	I use my custom-made databases and keep them simple and efficient
COLLECTION CURATOR	I curate specimens for my own recording, and occasionally receive specimens from others for identification. For the most part this works well, although it has taken me a long time to acquire the knowledge and skills needed to curate a collection well.
COLLECTION CURATOR	Developing liaison with, and training for, universities to instil in students (under and post grad) that if undertaking studies which involve collecting specimens that this should be done to museum standards so that the material can be deposited in a museum and not discarded afterwards.
COLLECTION CURATOR	This is difficult. The collection I curate is essentially a private one of around [REDACTED] or more specimens amassed by myself and one other person, [REDACTED]. The thing that works about having the collections is simply having good reference material to hand for comparative purposes and having voucher specimens when queries arise or, perhaps, a species split occurs.
COLLECTION CURATOR	Part of a large museum service, and so there are many colleagues to assist with many aspects of the work. Having been in the same museum for over [REDACTED] years, I know the system!
DATA DEVELOPER	Own portal has raised our profile as a data developer
DATA DEVELOPER	I have been able to successfully bid for funding to develop projects around data products and their use. - Innovative nature of the LERC community has helped to develop new products and to share skills.
DATA DEVELOPER	Having the time to develop my own understanding of data collection and analysis methods.
DATA DEVELOPER	Access to all Scottish data from the national moth recording scheme. - Feedback from recorders on what is valuable information and my ability to manipulate and present the data in use ful ways
DATA DEVELOPER	NBN Gateway makes it fairly easy to submit requests for data.
DATA DEVELOPER	Those schemes which share original records at data capture level with metadata are most useful
DATA DEVELOPER	As a Local Authority we commission Habitat Survey work and on occasion protected species survey work. All data collected is processed, stored and managed by [REDACTED] LERC [REDACTED] LERC Centre) who are our main data custodian. [REDACTED] LERC in turn share data with NBN.
DATA DEVELOPER	Some datasets are freely available and easy to access - eg. JNCC Seabird Monitoring Programme datasets
DATA DEVELOPER	All other than training.
DATA DEVELOPER	local support
DATA DEVELOPER	Good library in the museum
DATA PROVIDER	digitising records through ArcGIS
DATA PROVIDER	mixed results
DATA PROVIDER	our own portal has raised our profile as a data provider.
DATA PROVIDER	The BSBI Distribution Database is working extremely well and enables data to be handled and searched. Also MapMate.
DATA PROVIDER	Local recording expertise - volunteers and county recorders who work hard to collect data and then are willing to make it available. - East of England Standard Service (LERC designed and operating in East of England region and beyond - <a href="http://www.nbis.org.uk/sites/default/files/documents/TheStandardDataEnquiryServiceSummaryforwebsite_V3.pdf">http://www.nbis.org.uk/sites/default/files/documents/TheStandardDataEnquiryServiceSummaryforwebsite_V3.pdf</a> ) - ALERC accreditation system - addresses the issues of metadata, enquiries etc
DATA PROVIDER	We have run/are running a number of projects to train/support recorders in both species id and submitting records. These have been very successful. Funding to support our recorders form HLF and Life (amongst others) has been key in this.
DATA PROVIDER	.Availability of my organisations web site to host the data
DATA PROVIDER	The NBN provides a fantastic system in enabling up to share biological records.

DATA PROVIDER	Identification training days are an invaluable resource.
DATA PROVIDER	NBN Gateway makes it fairly easy to publish data and manage requests for higher-level access.
DATA PROVIDER	data management, via digitisation of collections
DATA PROVIDER	see previous answers: Online data capture, standard methods, training/accreditation schemes; Online verification/checking of data entered; Standard methods of data capture and training to ensure high-quality data and confidence in monitoring seabird populations
DATA PROVIDER	This is quite a self-contained role. I work as part of a project which collects it's own data. We aren't reliant on obtaining data from anyone else. Once the project is complete, the data will be made publicly available, most likely through Obis SEAMAP. This is where previous data sets have gone. Submitting the data here was very straightforward last time.
DATA PROVIDER	Give access to data to as many people as possible so that the data is widely available and used.
DATA PROVIDER	Most of the data management activities are straightforward and present no major problems.
DATA PROVIDER	Our internal mapping system [REDACTED] is a fantastic library of our internal data and has helped identify where gaps in our data are and where paper data has still not been digitized or where particular reserves or offices are not on top of their data management. It's enabled our staff to access data and do simple analysis and mapping without contacting us and it's enabled us to query NBN data through web services on to our system making it easily accessible. It hasn't however given us the resources to catch up with outstanding data management of paper records!
DATA PROVIDER	It has been pleasing to see data from 'my' recording scheme appear on the NBN Gateway - looking forward to seeing how the new atlas platform operates.
DATA PROVIDER	Pretty much all are working well.
DATA PROVIDER	LERC expertise, skills, staff and volunteers, Host and Partners' support.
DATA PROVIDER	ALERC is an excellent organisation to help tackle dataflow between national schemes and LERCs
DATA PROVIDER	Discovering, digitising and mobilising the biological records that you hold on your own or others' behalf - Data management of your data holdings and preparation of your datasets and metadata for publication
DATA PROVIDER	We do the minimum...
DATA PROVIDER	Sharing data via national portals (until recently)
DATA PROVIDER	Our species data management system (using Recorder6) is very robust. iRecord also works well as a system for capturing records, although the process of getting iRecord records into our system so we can use them in our reporting could be improved. - - Through sharing expertise regionally with other environmental record centres, we have been able to develop our own bespoke reporting systems which mean we're able to produce very high quality biodiversity information products, which are relevant to our customer's requirements. - - We also have excellent relationships with the local recording groups, built up over many years, who share their data with us so that we can offer a comprehensive biodiversity information service to users of <b>LERC</b> .
DATA PROVIDER	Some good contacts with experts via LERC who can give feedback on data quality, undertake verification
DATA USER	Not much. It is impossible to use downloaded data from the likes of NBN because of copyright issues!
DATA USER	Running training days
DATA USER	Well produced method statements, well written data collection guidance
DATA USER	none of the above - the system is not working well for data users.
DATA USER	Availability of data from specific NGOs / specialist conservation groups (often with some interpretation or advice included). - -
DATA USER	Easy to search for other people's data using systems such as NBN.
DATA USER	Having all locally relevant and locally specific data held and managed in one place (locally).
DATA USER	Useful to be able to see records from in and around particular sites, I don't always need to download or use the data, it's primarily for pre-site visit info checks. Understanding collection methods helps with designing my own surveys, and if there are any potential bias in the records supplied.
DATA USER	The BSBI Distribution Database - allows me to search quickly, easily and with sophisticated tools for records.
DATA USER	access to data via LERCs and NBN Gateway is good
DATA USER	Online datasets such as the BSBI DDb are fantastic and should be viewed as Best Practice for all other recording schemes. The fact that you can go online, find up to date, current data on any species and print out distribution maps as well as drilling down to actual records is tremendous.
DATA USER	Access and a good working relationship with a local records centre, enabled me to know where to go when I need data and to trust the quality of the data that I receive.
DATA USER	access to data held by my organization - we are all working towards similar goals so we know how to access datasets easily
DATA USER	Data searches prior to field visits allow an understanding of the site and the surrounding area so I know what to expect and what to look for in particular.
DATA USER	The NBN map works well to give a rough indication of species presence
DATA USER	Other recorders are generally happy to share information.
DATA USER	The key to almost any survey or study of a species is to gather the available and relevant existing data. Generally this is hugely helped by the web and the existence of LRCs.
DATA USER	Availability of data from LRCs to support ecological advice on planning applications
DATA USER	I use the NBN Gateway to access records when consulted on planning applications. Of particular interest are European Protected Species, such as otter and water vole. The NBN Gateway (soon to be succeeded by the NBN Atlas on 31st March) is a decent public resource, though will hopefully (and I understand it will) be greatly improved in terms of user-friendliness when it becomes the Atlas.
DATA USER	Records can be fairly easily downloaded from the NBN and obtained from national recording schemes.
DATA USER	Very good access to data.

DATA USER	accessing and downloading records has worked quite well for me because I have learned how to do that in the past few years and I know how to manage the data that I download
DATA USER	A good network of recorders with expert local knowledge.
DATA USER	We can work well with the LRC
DATA USER	The NBN has made it much easier to obtain data.
DATA USER	The NBN Gateway has been a tremendous resource.
DATA USER	Deep understanding of our data
DATA USER	I receive support from a number of individuals and organisations. - Few, if any, have shortcomings and I am very grateful. -
DATA USER	ease of use, trusted recordings
DATA USER	The Butterfly Conservation & MothsIreland systems work well - great communication
DATA USER	The idea behind NBN gateway for accessing records for use is good.
DATA USER	Ability to utilise data from external sources to inform land management.
DATA USER	Getting records for my own interest, although usually get directly in touch with my Local Record Centre rather than search online databases.
DATA USER	Previous work by county recorders helps us find populations.
DATA USER	training is pretty good.
DATA USER	<b>LERC</b> provide good data sets and have up to date records
DATA USER	Accessing data on websites e.g. <b>LERC</b>
DATA USER	Getting hold of data from the LRC
DATA USER	The data I use is easily accessible and free to use at a good resolution. Odonata.
DATA USER	NBN Gateway makes it fairly easy to submit and respond to requests for higher-level access.
DATA USER	NBN online map search works well in principle, as long as my broadband allows it and the web site is running smoothly. I think a single centre online as a go-to for records makes most sense.
DATA USER	The red orange green base map overlays (traffic light analogy) correlations for the habitat:species planning GIS visualisation function of the new NBN Living Atlas.
DATA USER	all working well
DATA USER	Data provided quickly and in a suitable format.
DATA USER	irecord is useful to look at species distribution as are the different recording schemes eg BWARS in particular.
DATA USER	Access to national recording schemes is usually OK
DATA USER	We access all our data from <b>LERC</b> - they provide reports on planning applications when required and also provide us with data sets to integrate directly to Council GIS.
DATA USER	see responses under data collector
DATA USER	I have found the NBN Gateway to be a tremendous resource in terms of being able to find out the distributions of organisms and the contribution which my/our data makes to this. We also use the NBN's EasyMaps service to put maps on our (Local Recording Group's) website. - I personally use the NBN Gateway to check on the latest taxonomy of organisms and ensure I am using the correct scientific name.
DATA USER	Have extensive records and data management support from own eNGO organization. Management of data is improving.
DATA USER	GIS based systems
DATA USER	Species distribution mapping
DATA USER	The availability of records is good
DATA USER	Our organisation holds good quality datasets which are easy to access and work with.
DATA USER	Most activities work well due to the availability of good on-line resources and helpful colleagues.
DATA USER	Where a record centre exist then it is good to be able to get good verified records
DATA USER	NBN is a great boon but constant issue with all data provided is ensuring its quality.
DATA USER	All
DATA USER	Record collators such as LERC and NBN Gateway make accessing all available information more easy although there are obviously gaps in these data.
DATA USER	local support
DATA USER	Availability of data sets for use with GIS software.
DATA USER	Data acquired used for making land management decisions
DATA USER	The local records centre is valuable in providing local data for local decision making. This supplements the data available from NBN and national schemes.
DATA USER	Other than my own data collection I undertake research to look for earlier data and any examples of similar studies and their findings elsewhere. finding the appropriate sources is the most difficult aspect of this.
DATA USER	My local environmental record centre offers a data request service at no charge to users who are enquiring for personal interest, academic use or research. This is really helpful from a data user's perspective, as it gives me access to comprehensive local datasets, not all of which are available on the NBN. - -
DATA USER	Growing network of local regular moth recorders who are happy to share their records. Support from local BRC <b>LERC</b> who have regional interactive species maps on their website for at a glance local distribution checks & can supply extracts from their database. Free online access to other online datasets.
DATA USER	Shared websites like trektellen.org have been a massive boost to recording, valuable submitted records are available live.



DATA USER	Whilst information available to LERCs from iRecord could be improved (e.g. associating outcome of passing record against NBN Record Cleaner rules in the data download), it is efficient in that access to data for LERCs and use for LERC business was arranged once rather than by each LERC individually. Accessed via online download so updates can be obtained as regularly as the LERC would like. - - NBN Gateway, though it had its issues, was a useful way to discover datasets and, arrange better access where necessary. Once permissions (to use for LERC purposes) and full access in place, datasets could be downloaded as needed
DATA USER	The diversity and quantity of biological records data available for scientific use to inform nature conservation is increasing all the time. This is to be celebrated and encouraged
FACILITATOR	I am part of national organisations and international projects which aim to increase the skill base, quality and reputation of biodiversity data providers.
FACILITATOR	We have committed volunteers to help with communication. Our role as a key stakeholder is helped by our knowledge of the Scottish scene and out network of contacts.
FACILITATOR	Large network with a wide variety of skills and interests.
FACILITATOR	As we have such a large network of organisations we can often call on these to help and provide support to us in relation to matters where we may not have the knowledge and expertise such as internal auditing, collecting donated services, offering meeting room provision etc. - -
FACILITATOR	The BRISC/GNHS small bursary scheme to support taxonomic study - small bursary (max £200) can really make a difference to an individual's ability to access professional (eg Field Studies Council) courses. - Some LERCs, local recording groups and local branches of national schemes (where they exist) provide excellent local support, training and excursions for recorders. - iRecord as a concept is excellent and works for many taxon groups and individuals - easy access to online recording is essential. - Specialised systems & apps such as BirdTrack, Dragon Finder and iSpot - they are engaging and responsive to users
FACILITATOR	We are well known and seen as reliable body.
FACILITATOR	local support
FUNDER	Contractual arrangement to gather new species/ habitats data and monitor existing species/ habitats
FUNDER	working with local groups
FUNDER	Current system works well but does take time to maintain appropriate audit. Good local contact with Record Centre (and others on management group) is very helpful.
FUNDER	A small sum of money from BRISC can be key match funding for a much bigger project. Or it can be a small sum, as in the bursaries for biological recording training, that can make a big difference to an individual.
FUNDER	Strong individuals - positive, knowledgeable
FUNDER	Thanks to all those funders of [REDACTED] LERC who continue to help secure funding in difficult times.
FUNDER	HLF funding currently means that a simple, affordable payment of £[REDACTED] is paid by my Local Authority employer to an LERC.
GROUP OPERATOR	BRC
GROUP OPERATOR	Volunteer recruitment is good, lots of keen self motivated volunteers to train.
GROUP OPERATOR	Most working pretty well I think (and hope!)
GROUP OPERATOR	By working within separate groups we are able to focus on specific species, i.e. amphibians, swifts, barn owls, Small Blue butterfly etc. - - Running a Recorders' Day every year highlights what other NGOs are surveying in the area and we can help publicise these or run joint events to highlight them
GROUP OPERATOR	ongoing support from data collection projects is always good and ensures the recording is carried on to a good standard
GROUP OPERATOR	I run a charity to make seed collections throughout [REDACTED] and accession them into our seed bank. We share our collections with Kew's Millennium Seed Bank Partnership.
GROUP OPERATOR	The group largely keeps going because of the enthusiasm of the Committee members who organise it, and the members who participate in activities. People like a sense of belonging to something with a local focus, where they will meet like-minded people with different expertises, and learn from them.
GROUP OPERATOR	I am the data recorder for a local bat group. This really just involved collating the data collected by the bat group into an archive for our own use. These records are also made available to others upon request. Some of the data are submitted to Bat Conservation Trust (depending on the scheme they were recorded under). I believe they are sent from BCT to NBN. They are not currently submitted to local record centre as this represents an income stream for the group. - As it is fairly self contained - there are no particular issues - either good or bad - that I would identify at this time.
GROUP OPERATOR	Use of website and social media
GROUP OPERATOR	Continual move from paper based to computer based recording & analysis.
GROUP OPERATOR	Data sharing gives access to a much more comprehensive picture than we would otherwise have.
GROUP OPERATOR	We are a small group so we can manage our activities effectively, but this largely depends on working as a team.
GROUP OPERATOR	The group is fairly self sufficient.
GROUP OPERATOR	In house recording system works well for curating data.
GROUP OPERATOR	Nothing to add to my reply for the verifier role: It is fantastic to see so much interest in natural history at the moment. Digital photography and social media plus other online resources have had a very positive impact on getting more people interested in wildlife and recording, while 'traditional' societies and book publishing are going strong in many cases as well.
GROUP OPERATOR	A free group in exchange for people's records at the end of the year.
GROUP OPERATOR	Dedication of recorders. General uptake and enthusiasm from the public for new local initiatives
GROUP OPERATOR	We are still a very young group, only started in 20[REDACTED]. But the volunteer base is good and highly motivated, Training course went very well, and more actions already planned for this year. Successful grant bid has just now further enabled us, as we now can buy some equipment.
RECORDER	Specialist f2f Bumblebee ID training days and a route to become more experienced through training at different levels ultimately becoming a trainer themselves.
RECORDER	The facilities that I have been provided seem OK.

RECORDER	Standardized methods
RECORDER	Checking species distributions on NBN can be helpful. - Submitting spreadsheet to local recorder is straightforward, but infrequent.
RECORDER	Big 'weekend' or 'week' where people have a national thing to look for & count eg Big Garden Birdwatch or Worm Week. - This is great because it is set up & publicised & people are doing a group task. - I think Springwatch on tv is also good.
RECORDER	Using a standard methodology for recording under the Ancient Tree Inventory works well
RECORDER	As it is ad hoc there is no pressure - Easy contact with local ERC
RECORDER	- Self motivated but working with other organisations like the BRC for data management and being involved with the NBN
RECORDER	I do Garden Birdwatch weekly - it is simple and has very good feedback which is encouraging - I do not mind paying the annual fee of £17 - I do a Wider Countryside Butterfly survey square - this is also pretty straightforward but a bit more complicated than garden birdwatch and requires a little bit of special effort - Last year I did two bat count squares and would say they required even more effort (e.g collecting equipment) and were more specific in their requirements. One square once a year would be enough for me, but the results were amazing. Very good feedback - I send casual records to LERC - I go out with the county Recording group to improve my botanical skills (I was originally a botanist)
RECORDER	I volunteer with the BSBI - very experienced and knowledgeable botanists who are willing to teach others is why I find this recording group so great to work with. They are a very dedicated team, and are well organized with recording dates in the diary right from the beginning of the season.
RECORDER	Butterfly monitoring scheme works well, records verified quickly for county, online system works well, data is made available promptly. online recording via LERC recording website - Indica websites generally are easy to use
RECORDER	Being part of an online community to share records and assist with ID enquiries: - The online community (particularly for moths) is so inclusive and open and includes all levels of experience from beginners to experts.
RECORDER	Greatly increased opportunities for participation - more projects and schemes than ever before and better promoted.
RECORDER	Submission of records to recording scheme. - Training and self-study - major incentive to collect data
RECORDER	Participation of existing national schemes works well, usually because they've been going for some time and have a dedicated officer to manage the system. This also applies to the use of standard survey methods for my work - having them to follow gives me greater confidence that I am following best practice and my data is relevant.
RECORDER	FSC AIDGAP - Support and training offered by LERCs and WTs - Online recording systems
RECORDER	Co-ordinators of national recording schemes are essential to maintain momentum in recording. - Publication of distribution maps encourages recording of lesser known species and gaps in distribution.
RECORDER	I recently helped out in the bat survey. For this specialist recording equipment was needed and made available to volunteers at a variety of locations including libraries, partner organization offices etc. The booking system worked well and the locations for collecting the equipment were well spaced across the survey area. Without this the survey would not have been possible for me. - I regularly attend free/low price training on plant and animal ID to help with recording. This has been invaluable to me and increased my awareness of species groups I wouldn't have been able to record otherwise. The low price of the training is important as I don't have the funds to pay for it myself.
RECORDER	The destination for data across a range of taxa is very good and having a LRC in county is a great asset
RECORDER	Close network locally. Collection for local records centre is fine - we understand each others experience and use it
RECORDER	Online recording is becoming much easier, and websites such as iRecord do a good job, but the general public may be put off because sometimes they aren't so straightforward. - NBN online and Atlas of Living Scotland are also both very useful for looking at distributions and patterns.
RECORDER	LERC has a very well organised system for submitting and using records.
RECORDER	I have built up a substantial database of taxon records for VC including records from individuals and organisations in the local area as well as my own records. I have also initiated a recorders forum online to enable the exchange of information and records. I assist various organisations with regard to biological recording (especially taxon) and have provided some basic training to other volunteers. I submit records to a number of recording schemes and to the LERC records centre.
RECORDER	Member of taxon Survey - I carry out squares in each year for past years. - Main activity is recording taxon throughout Scotland as I am in Scotland. - I carry out casual collections and also use formal collecting techniques e.g. set water traps for specific surveys.
RECORDER	Collecting scientifically credible data has improved data quality. Forming a area wide citizen science community sightings project has increased overall awareness in the project.
RECORDER	We have been taught how to submit photographs and records to iRecord.
RECORDER	Training and mentoring - developing recorders abilities to ID, retain vouchers (where necessary), data verification
RECORDER	The national recording scheme (taxon) I feed my records into works well and has an excellent UK-wide website presenting distribution/diversity maps at both national and local levels. This allows for recording gaps to be identified, and field work planned to address these under-worked areas. It also help identify which species to look out for (e.g. taxa spreading into your area). It also lists species and their last record date in your VC, so you can focus your fieldwork on these poorly recorded species too. - Museums (like Liverpool) provide excellent resources for holding identification courses (these are often free of charge). Being able to use their expensive microscopes and specimens is very important for teaching. - LERCs promote, fund and deal with organising ID courses locally (helping to stimulate recording in their areas). They also yield useful ad hoc records from the general public, which might otherwise not be registered.
RECORDER	The use of digital photos on the web for both ID and for rapidly passing to others for ID. The organisation of some bodies to collect data via the web and to provide analysis back to the recorders (e.g. BTO and BC)
RECORDER	The internet works well both for tracking down papers and finding photographs (tho obviously care is needed here!)
RECORDER	I record insects and started from scratch in 20. Initially I attended organised basic training, but as time passes I am more able to self-train through private study. I found basic training and keys at the family-level to be relatively accessible and available at no or little cost. I live in the, so training events were within an acceptable distance.
RECORDER	I think in the main most is working well. However, there are a couple of aspects which concern me: - 1. Not all organisations which collect and/or collate data seem to share that data with the relevant Local Record Centres or the NBN and I feel strongly that this is something we must pursue and encourage to be able to move forwards in the knowledge that

	we are all working towards the same aims. - - 2. The proliferation of recording areas concerns me greatly. We now have data being sent to many individual recording schemes (local, regional and national) as well as to the NBN directly and to Local Record Centres (plus others I am sure). This makes things very difficult for recorders who have to keep track of where they have sent records and where they have not and it certainly does not help data duplication and I assume changes as it goes along different lines. I strongly feel that Local Record Centres should be the main local collection/collation points for ALL records, that LRCs should go to lengths to ensure that all data (following validation/verification) is uploaded to the NBN, and that those wishing to access this data should obtain it from either the relevant LRC or LRCs or from the NBN. Fragmentation of the recording effort and complication of data paths is hampering the development of the recording base and hindering further positive evolution of the recording community and how it uses accumulated data.
RECORDER	Lots of very good training courses and materials now available. Has definitely increased over last 10 years making many more taxonomic groups accessible. Use of mobile technology also making recording much quicker and easier. Access to reference materials good in some locations but not all. Some taxonomic groups also very active on social media meaning you can have quick answers to taxonomic queries
RECORDER	█████ Natural History Society is very active and encompasses affiliated groups such as █████ Invertebrate Group (which █████), █████ Fungi Group (which █████ █████ █████ forays). █████ NHS and █████ Invertebrate Group (IG) and Fungi Group all run excursions and training exercises as well as █████ NHS holding indoor meetings and a biennial conference focused on invertebrates. █████ NHS also appoints Recorders for all major groups and █████ coordinate recording of 'neglected groups of invertebrates'.
RECORDER	ease of entering records online eg BTO-Birdtrack is excellent
RECORDER	Difficult to say, but it usually comes down to one or two active people and those that lurk
RECORDER	Running a Robinson moth trap , using reference books to confirm identification
RECORDER	There is a good range of recording schemes for various groups which enables wide involvement in recording. This makes recording worthwhile as you feel able to contribute to the bigger picture.
RECORDER	There is a good range of citizen science projects and recording schemes around. The recording schemes are generally very well organised and have clear data flows. - - There are plenty of courses available (some free) to improve identification skills of various taxonomic groups. The █████ NHS does a good job of running courses for invertebrates.
RECORDER	The █████ area █████ Group of the SWT is particularly effective at using records to protect wildlife during the local authority and forestry planning processes. At the present time we screen all planning proposals in the two counties and look for wildlife impacts. This is nearly all done by personally consulting local naturalists and wildlife groups. Distribution maps are no substitute.
RECORDER	- There are good effective groups operating for key species with data being used to produce National trends
RECORDER	Training schemes - I was a █████, which helped me learn to identify specialist groups. - Networks of recorders and online contact details. - Access to records via NBN Gateway.
RECORDER	Making the time to undertake my own personal research into the best ways to collect and analyse data. This enhances my own personal understanding of the collection and use of data.
RECORDER	Interactive tool NBN very useful for reference.
RECORDER	casual collection of ad hoc records works well because I can manage my own time and access to sites that are easy to do so. Also I can bring another purpose to my outdoor activities.
RECORDER	Improved IT such as smartphone apps. - Local groups running training days and field trips. - Strong leadership in local groups providing support and organisation.
RECORDER	Our local centre is seen as a centre of expertise and skill. It is the place to go to to find out about local species and to get involved in recording. It is also the hub around which a network of specialists can work and share data.
RECORDER	Support and help of other recorders and specialists in local area/Natural History Society - County NHS website for recording my species group
RECORDER	- Use █████ county DRN system █████. Any person can access the recording system, fill in a sighting and the record is sent to me for verification and storage.
RECORDER	Learn together as part of a local recording group. Send data in to my local records centre. Opportunities to learn from local experts.
RECORDER	I do a lot of recording with the █████ county Mammal Group - and this works well. We try to enthuse others and are planning an atlas. We have had some notable successes including finding Pine Marten in █████ county. Fortunate to live near █████ which is the hub for the █████ and the █████ - which I hope to do. means there is a great network of helpful local naturalists nearby. - I work in █████ and actively record wildlife at my work (although not part of my role) -and enjoy enthusing others. We are trying to develop the site to improve biodiversity - and lots of help for us to do that. - I have always recorded birds, butterflies, dragonflies, mammals, and herptiles at my home in █████ but some of the garden is in █████ !. Just branching out into █████ taxon - and great local network, and courses -including free courses at █████ Museum which is fantastic - █████ county have a great network and have a recorders event every year - Also do the █████ taxon monitoring -again great free courses available
RECORDER	It enhances my day to day work to be able to identify species and pass that knowledge on.
RECORDER	It's working. Mostly because I get lots of support and more importantly, assistance with identification from those who know more than I do
RECORDER	Collating various flora & fauna species data carried out mainly by volunteers while working for █████ and carrying out our own ( a friend & I) surveys, mainly species.
RECORDER	Participate in organised BTO surveys. Submit records to Bird Track. Other records which may be of interest I send to the Local REcords Centre.
RECORDER	BTO recording on their website
RECORDER	Data management of my own records is working fine so long as I can continue to run my old copy of Recorder 3. - - Data submission using spreadsheets is an improvement on the old card system.
RECORDER	Being able to have contact with high quality identification advice when needed.
RECORDER	Good survey packs with easy to follow instructions e.g. Opal
RECORDER	I find it easy to enter records on web sites in the knowledge that they go to national centres where they are available to a

	range of organisations.
RECORDER	The websites on which I can record data are well set up and user-friendly. The people that I come into contact with (working for these organisations) are intelligent, passionate and inspirational.
RECORDER	We offer a significant level of personal support and ongoing training to our volunteers who take it beyond the initial training - this encourages a deeper level of engagement as a citizen science and a commitment to the programme.
RECORDER	Excellent contact with LRC and local Recorders
RECORDER	■■■ BSBI ■■■ the Distribution Database is a brilliant resource. - Meeting with other recorders is of great benefit. - e need more trained recorders, so we need a way to encourage people to apply.
RECORDER	National recording schemes are working well, particularly BSBI and Butterfly Conservation ones. The BSBI database is excellent and a similar resource would be useful in other recording schemes. - Volunteer contribution in this sector is massive and very effective.
RECORDER	All the following are working well for me - I submit records to two Biological 'Centres'. - I place my records and queries on iSpot for others' interest and verification. - I subscribe, submit records and share data with three specialised Facebook groups - I follow others' records of specific Organisms - I follow others biological records in my home County - I exchange information and records privately with interested persons - some International - I have stopped placing records on iRecord because the common response is Outside Know Range and therefore implied as invalid -
RECORDER	As a long time recorder and county recorder I am aware of what schemes there are and the easiest current method to submit records, albeit that there is far too much choice. Amongst the vast majority those that submit records through me there is an understanding that the records will be scrutinised and as long as encouragement, some positive feedback and a degree of understanding is given the process runs well.
RECORDER	I like that some surveys have standard recording sheets and are easy to submit records on line. This gets the information shared quickly, for example squirrel sightings with the SWT or the butterfly transects with UKBMS. The NBN species search maps are very useful for desk research and planning.
RECORDER	I have been recording for very many years
RECORDER	Identification forums with experts to help identify specimens. - The ability to submit records electronically using smartphone apps and web forms and standard spreadsheets.
RECORDER	data management of my own records (notebook) - using iRecord and BirdTrack to record various species (on my phone) - using MapMate system to record various species (PC)
RECORDER	Participation - I find iRecord a very useful way of recording my wildlife records and ensuring that they get to the right person for verification. BTO Birdtrack remains the best way for recording complete bird species lists. - - Casual collection of ad hoc records - The iRecord mobile phone application for Android works very well. - - Formal collection - BMS Online works very well - - Data management - iRecord, BTO Birdtrack and BMS Online allow me to create my own extracts, QGIS provides a great mapping tool. - - Reference materials - NBN Gateway, UK moths, Butterfly Conservation web sites (national and ■■■ of Scotland) and iRecord all provide very useful information on species distribution and identification. - - Submission - iRecord and BTO Birdtrack do this automatically. - - Training - As a Volunteer Ranger with ■■■ organisation ■■■ I find that there are plenty of training opportunities, I also know that LERC run excellent training sessions.
RECORDER	iRecord as a single point of entry for my records.
RECORDER	A standardised recording system for all species.
RECORDER	Co-ordination and linkages to established recording of groups, butterflies, moths dragonflies in particular. - - Encouraging recording activities of volunteers. - - Making recorders feel valued and that their records are worthwhile. - - Confidence that records submitted will be appropriately managed.
RECORDER	National Recording
RECORDER	Knowledge base of largely volunteer experts.
RECORDER	Citizen science - people who wouldn't normally record wildlife getting involved
RECORDER	Recording is done locally, within 3 miles from home, on an attractive pathway that I frequently use for cycling. - Recording techniques are relatively simple.
RECORDER	I study Lepidoptera (■ taxa ■ & ■ taxa ■) - what works well in ■■■ is communication with other experts and being able to communicate directly with UK experts - by email, Facebook, etc. this increases learning and ability to critically identify some of the more difficult species. I currently sit on validation committees for both ■ and ■ which work very well - small groups like these are more efficient.
RECORDER	There is lots of information available online
RECORDER	iRecord makes data submission and verification easy. The broad range of verifiers helps.
RECORDER	We have a reliable mechanism for recording records to a high standard, validated and checked before going to the NBN Gateway. We can then use the interactive map to check records, or areas without records from the interactive map. In addition the NBN Gateway gives an overall "picture" of British distribution to keep thing in perspective. We rely on others for record confirmation and make use of experts further afield as required.
RECORDER	Recording and submitting records for some species is well organised and easily carried out online. Feedback for some groups (eg hoverflies, bees, butterflies) is relatively quick, useful and educational especially via certain facebook sites. - - Online resources for some groups is well organised and useful. - - Online resources such as ispot and irecord make submission of records straight forward
RECORDER	Participating as an active member of a citizen science project, Recording Group or National Recording Scheme
RECORDER	Most activities do work very well and I admire the skills and dedication of those involved.
RECORDER	Recording data and sending direct to local records centre and this system works well. - - Training others internally works well. Some training for externally groups outside of work which has worked well as organised by ARC as part of the Amphibian and Reptile group network. - -
RECORDER	■■■ county ■■■ Natural History Society's coordinated records submission portal - easy access to all the relevant recorders who deal with sharing data with records centres, etc. Finding out where to report records from other areas is difficult and time consuming - I have a lot of unreported data that I cannot find time to forward to an appropriate recording scheme - - Providers of essential specialist identification literature: this stuff costs an arm and a leg and is often nigh on impossible to find. I have made most rapid progress when working on groups supported by individuals who help circulate obscure literature electronically. A lot of the relevant literature is copyrighted material, despite being out of print and impossible to

	find second hand. - - Up to date checklists are essential for working on many groups. Particularly valuable examples are the annotated checklists (including links to references describing the most relevant revisions) for beetles (Andrew Duff) and Gavin Broad's parasitica checklists (without which it would be virtually impossible to study these orders).
RECORDER	Many online resources are now available to help with ID, recording and data management. e.g. iRecord, iSpot, FSC resources etc.
RECORDER	Professional coordination and management of data collection and dissemination .
RECORDER	Having close and personal contact with the Local Record Centre ( LERC ). - - Being kept informed and up-to-date with current issues regarding taxonomic changes, help with difficult identification from either the species recorders (eg local moth recorder) or again via the Record Centre who will forward my queries to the relevant authority or put me in touch with them (ie acts as a facilitator). - Training days when available (vital as both an aid to ID and to establish links, and maintain contact with fellow enthusiasts) - 'Bioblitz' activities (again to forge links) -
RECORDER	Use of reference materials from county recorders. Using the GPS. Training others as data collectors.
RECORDER	availability of info on citizen science projects, training courses
RECORDER	The ability to easily upload ad-hoc species information. The training given freely to encourage correct species information.
RECORDER	The BTO Garden Bird Watch works well because it is easy to do, easy to record and you get feedback from them on the results
RECORDER	Teaching volunteers species identification.
RECORDER	I am a Volunteer Wildlife Champion for organisation and attend wildlife identification training courses provided by them - I find them useful for learning and meeting others involved with wildlife recording
RECORDER	Submitting records to LERC - Working with volunteers and schools to help others record - I enjoy using reference books and the internet to work out what I've found.
RECORDER	National Moth Recording Scheme - LERC Environmental Record Centre
RECORDER	Communication between recorders and outreach to those with a more casual interest.
RECORDER	Effective network of bird recorders appointed and managed by the Scottish Ornithologists' Club
RECORDER	I keep an annual spread sheet of all my recorded species supported by flickr cross reference photos see <a href="https://www.flickr.com/photos/">https://www.flickr.com/photos/</a> - I use an annual notebook but since July 20 have started on site recording directly into I-record on my android phone. I find this works well for me and ensures my records wherever seen are collected outside my personal spreadsheet lists. I don't have to look for latin names etc or OS grid references as I did using notebook & spreadsheet. - Local recorders are starting to collect my info from my I-record account but they find it inconvenient I think as the data is not always in the format that suits them. - I also use several facebook groups to assist with IDs as my knowledge is limited but the spread of sightings quite wide.
RECORDER	LERC . They offer an easy to use means of recording and keeping important data on species and habitats. It is an invaluable source of such information that is made easily available to anyone carrying out environmental surveys for developers.
RECORDER	The local Recording Group is a great network where I can get support and also send my records to, in the knowledge that they will be validated, verified, sent to the NBN and backed up very professionally. Socially it is a great group too. - - The British Dragonfly Society is also a great place to send records to and the feedback from the Country Recorder is excellent if you have any questions. The volunteer events that it runs are also a great way of meeting like-minded people and the appointment of a Scotland Officer has helped increase its profile and reach to those interested in Dragonflies. Occasional ID training courses are run as well, which are very popular.
RECORDER	I collect ad hoc records for LERC . That organisation and its links to other local groups provides a network of more expert people to ensure records are as accurate as possible to species identification. This is very supportive of the individual recorder. I also use a website - i-spot which provides assistance in species identification from people more expert than I am. This is also very helpful.
RECORDER	Superb books & reference materials covering most UK species groups - some of the best in the world. - BTO database - probably also the best in the world, although interfaces could be better, and BTO data should go on NBN.
RECORDER	Celebrate the work of Plantlife and the BTC mentored programmes for you people to learn the skills of identification. More is required
RECORDER	I am supported by organisation who give me excellent training, provide all required resources and have helped me to link up with a supportive peer group.
RECORDER	Data collection and species recording in my local area which is shared with my local records centre. I work on my own during local walks and car travel. I also take part in specific recording projects set up nationally or through my local records centre. - It is effective because it suits my interests and lifestyle and is generally not too time consuming.
RECORDER	I participate in the BCT NBMP - easy to do and well facilitated through the BCT. I use my local record centre's excel spreadsheet for my own 'ad hoc' collection of records, which I then share with them once a year - again, easy and doesn't take much time.
RECORDER	Passionate individuals / staff - Strong local voice -
RECORDER	local recording group is very efficient and pro-active.
RECORDER	My primary interests are moth recording and bird recording and the collection and management of these records by the Butterfly Conservation National Moth Recording Scheme (BC NMRS) and the British Trust for Ornithology/Scottish Ornithologists Club respectively works well. I'm the taxon recorder for VC and the only difficulty I have is in identifying and obtaining moth records that have been submitted to other recording schemes and various on-line applications e.g. iRecord/iSpot and my own local Record Group. These records tend to be casual records often from non-specialists, however they can be very valuable as they may come from visitors to areas that moth recorders with traps might not visit. In county this is very much the case where there are very few resident recorders. Whilst BS NMRS do their best to repatriate records that they have identified from these various schemes it is often difficult to assess the records as the records contact details may not be readily accessible and the requirement for an acceptable record may have not been met. Most moth-ers who operate traps as residents or visitors to county, do submit their records to the CMR but I'm sure there are many good records don't get. There is a limit to the time most CMRs will devote to "mining" all these schemes, and dealing with the problems of assessing these records.
RECORDER	Moth recording through local recorder - Garden Butterfly Survey Butterfly Conservation - Bird recording using Birdtrack and Local recorder - Beewalk



RECORDER	Good easy-to-use recording web sites are a joy and have become better lately, especially in providing an easy way to find the grid ref for sightings. - Getting together with like-minded people is facilitated by an annual Recorders' Meeting; I don't think it can or should be more frequent, but it is a very useful, stimulating event. - The yearly 'Big Garden Birdwatch' by RSPB is stimulating too, and occasionally one hears of the Mammal Society asking for records of cats' victims or similar, which ought to be more widely publicised -- anything that engages the public has a great effect. - We are often invited to attend training days and although I haven't gone in years, I have done them (instructed and been instructed) and they work very well and are well attended. - We can borrow most specialist equipment, we have only to ask. - The SNH <b>taxon</b> man very kindly ID'd a <b>specimen</b> for me last year (sent by post).
RECORDER	<b>LERC</b> Training
RECORDER	Project such as NARRS and OPAL work well and provide high-quality data. <b>local group</b> provides useful mentoring and support.
RECORDER	One of the few other <b>taxon</b> recorders in the <b>area</b> has become the most serious source of records in this century. <b>taxon</b> have run joint workshops e.g on <b>taxon</b> to try to train locals to record. Our records are sent to the central U.K. database at Kew <b>taxon</b> . Since moving here in 19 <b>taxon</b> I have found one species not previously recorded in the U.K. and mapped its presence in the <b>area</b> . Several other species have been added through our joint activities including visiting specialists. We have also relocated rare ones.
RECORDER	NBN distribution maps are the thing I refer to most. - Also I use <b>local</b> Recording Group ( <b>taxon</b> ) records. - I also use Google to find local group data on species.
RECORDER	Availability of information / resources on the internet, eg iSpot, <a href="http://www.lichens.lastdragon.org/">http://www.lichens.lastdragon.org/</a>
RECORDER	records are easy to enter and access through the <b>LERC</b> website.
RECORDER	Using NBN Gateway maps to help me see what is recorded in my area. - - Consulting local experts/knowledgeable people to help me identify what I have seen.
RECORDER	On line information such as CANMORE / PASTMAP / NESBREC etc referred to frequently
RECORDER	What works is there being venues through which to submit records (e.g. <b>LERC</b> has their record form and their records centre are very open to receipt of records via email. I think that the variety of apps also helps get people doing ad hoc data collection.
RECORDER	The availability of online species distribution maps is invaluable for giving me an idea of what to look out for, possibly how interesting some of my own records are, and can help guide my identification. Seeing my records displayed on an online map is also satisfying!
RECORDER	Opal citizen science is very useful when working with groups of school children. - Personally I find iRecord very useful for recording ad hoc records. The <b>taxon</b> recording scheme has an excellent presence on facebook and makes learning identification and recording really friendly and straightforward. - There are some excellent ID books for hoverflies and bees now which have made these groups much more accessible to the beginner.
RECORDER	Submission of records, data management, use of reference material
RECORDER	Standard methods of data capture and training to ensure high-quality data and confidence in monitoring seabird populations
RECORDER	Operating as an individual I can give as much time as I want to my recording activities
RECORDER	Most standard recording schemes work well and the outputs (such as maps) are useful. - - Some recording packages, such as MapMate, work well and are easy to use. - - Some local records centres are working well, despite low funding.
RECORDER	There are some excellent training resources available to recorders (materials, courses, initiatives) and support from recording groups. - - The use of social media is bringing interested individuals together to for recording communities. - - The iRecord website/app makes recording in the field quick and easy. It also benefits the recorder through reports and tool and can simplify data supply to versifiers.
RECORDER	I collect on an ad hoc basis and as a personal interest so not sure I can answer this as I just enjoy what I see.
RECORDER	Am largely self-taught with considerable help in improving my skills from local Vice-county Recorders.
RECORDER	Having a recorders event is a great way to network and learn about what recording groups have been up to.
RECORDER	Some Local Biological Records Centres and recording schemes provide a very useful, professional and efficient service, e.g. <b>LERC</b> , the emergent Atlas of Scotland, Record Pool. - - Interactive querying of data, such as via the skeleton polygon tool or radii around a grid reference, as on the Atlas of Scotland, is a very useful tool. -
RECORDER	friendly and informative training and forums. - flexible data collection
RECORDER	Use of the NBN Gateway to check distributions and see whether I have recoded something in a new location. Not sure this is going to be so easy on NBN Atlas of Scotland... - Submission of records to my local Group and thence to the Gateway. They provide a formatted spreadsheet which makes this easy. - The local focus provided by a local recording Group is definitely worth celebrating! It is effective in maintaining people's interest and encouraging them to submit records. - The BSBI Recording system with recording cards tailored for each Vice-County, plus a local recorder to oversee, works well. Their online database is also exemplary - the NBN folks could learn from it!
RECORDER	Individual projects run by different groups are effective in focussing on particular types of wildlife or habitat. Development of apps has been useful. In particular, the coordinating activities and support of bodies such as <b>LERC</b> <b>LERC</b> ( <b>taxon</b> ) is very important, and serves to raise awareness of recording in general and particular recording schemes, as well as providing support and training to recorders.
RECORDER	Organised training - Online reporting
RECORDER	Training & mentoring
RECORDER	Personal contact with Vice County Recorder to verify ID of difficult species - Useful resources online in particular BSBI distribution maps
RECORDER	the methods we use are simple and easy to repeat
RECORDER	RSPB <b>taxon</b> and BTO Bird Track
RECORDER	Submission of own bird records using BTO Birdtrack
RECORDER	Annual email request to known surveyors and SOC recorder asking for records of particular rare species, followed up by email summarizing results, to engender collective ownership. This information is then sent to SOC, RBBP and RSPB merlin system.



RECORDER	The continuing development of new online resources and publication of natural history books has made it easier than ever to find information and get help with identifications etc. It's good to feel part of something that is increasingly seen as 'a good thing', with biological recording gaining in popularity and being less frequently seen as eccentric.
RECORDER	Training other recorders - much interest in learning new skills. - Data management of my own records - Recorder6 database very useful as are sites like iRecord
RECORDER	Participating as part of a recording group is effective. It gives me access to experts in taxon groups I am unfamiliar with and it gives me the opportunity to share my own specialist knowledge of particular taxa and areas.
RECORDER	BSBI (recorder based in [REDACTED] vs [REDACTED]): Good support from BSBI vice-county recorder network - e.g. can send specimens to vice-county recorder or particular taxonomic expert to identify and receive feedback. BSBI data is accessible via their Distribution database online. Vice-county recorder can provide map of recording coverage for 2020 atlas to help target survey effort for coming season. BSBI provide excellent publications to assist skill development e.g. books on tricky taxa. - - NBN Gateway was useful in checking known distributions to see if species ID was likely and giving information on existing records/ distributions to aid recording work. - - LERC can provide data to assist recording for particular species or sites. LERC is key in promoting information on local and national recording groups/ schemes and citizen projects. The LERC is also a source of information on local experts for different taxonomic groups - so acts as a conduit between recorder and expert. - - Active groups on Facebook etc. and online forums allow for fast transfer of information e.g. post a photograph with a tentative ID and get a reply from an expert quickly. The Butterfly Conservation forums are particularly effective. Have had some success with iSpot too. - - iRecord provides a useful place for records to be submitted when I am on holiday in England/ Wales etc. i.e. outwith my usual recording area as it accepts records for all taxa. - - BirdTrack has superior data management capabilities to most other systems I have used. -
RECORDER	Locally - liaison and working with most relevant organisations, recording groups, large and small recording, wildlife and geology projects, community groups, local authorities. Support from host body ([REDACTED] City Council). Our support and encouragement of all recorders in our area. - - Regionally - liaising with all [REDACTED] area Local Environmental Records Centres, sharing practices and ideas as well as advocacy - - Nationally - Membership of ALERC, close working with NBN, quick responses from both organisations
RECORDER	Working with national recording schemes and getting individual help with species identification is made easier through the internet. This is essential particularly for more difficult, less studied groups.
RECORDER	regular participators provide sightings - the project has strong ecotourism elements as well as citizen science
RECORDER	I have a long-term study of swans and geese which has enabled others to become involved and contribute records and monitoring of sites. - Ringing swans enables me to train others interested in ringing and allows the public to observe what we are doing, providing a leaflet for further background. - -
RECORDER	In my chosen taxa of Lepidoptera there is a very strong support group of experts within the recording community, encouraged by Butterfly Conservation who manage the national Recording Schemes for butterflies and moths. Without this overall organisation and willing assistance, identification of more difficult species would be nigh impossible.
RECORDER	Casual ad hoc record have become much more easy to submit via iRecord.
RECORDER	Doing casual wildlife recording, regular moth trapping; - Butterfly transect in [REDACTED] grounds; - Submitting records to local BRCs & VC recorders; - Making use of experienced recorders/taxonomists to learn more and in turn pass on this knowledge to others
RECORDER	Submission of records to others (LERCs). I don't have to manage or curate them.
RECORDER	LERC available locally to submit records to - iRecord/Birdtrack are easy to use
RECORDER	The internet and social media makes it much easier to find out about recording projects and recording groups. Local groups are an excellent way of accessing advice and support; as well as species identification experience with people who know what they're looking at. My local environmental record centre acts as a fantastic hub for biological recording locally, helping to create a vibrant network of local recording groups.
RECORDER	Growing network of local butterfly & moth recorders in [REDACTED] county who share knowledge, supported by local BRC [REDACTED] LERC who send records to national recording schemes for these species groups, make available local species maps & provide training opportunities re various species groups. Various national/regional survey opportunities provided by Butterfly Conservation for all levels of experience/knowledge. Local OPAL citizen science surveys staff have enabled free provision of packs to encourage participation of schools & other groups in recording.
RECORDER	There are a lot of groups offering good and free introductory courses in species and techniques, which is very welcome. It's easier here in the central belt to get to them, so I'm rather lucky, I feel.
RECORDER	Scientific and financial support from professional bodies.
RECORDER	As I work for a LERC I am now aware of the importance of record collection and therefore add my own casual records whenever possible. This is the occasional record of easily identified species and is done in an on-going manner but does not amount to a huge tally.
RECORDER	Lots of fantastic schemes available to participate in, from entry level right through to surveys requiring specialist knowledge. Many are well-publicised via LERCs, NBN Network News; lots listed in the 'Find a survey or scheme' section of NBN website. - - Some good local training opportunities available, via LERC and other local initiatives - - Lots of online resources to help with recording, to help find grid references for example, and get species information. LERC can put me in touch with relevant experts for identification help. - - Can borrow field equipment and ID resources from LERC that may otherwise be too expensive
RECORDER	I am fortunate to "work" in an area with an excellent Local Records Centre - [REDACTED] LERC. [REDACTED] LERC has a very engaging annual recorders forum, runs regular ID training sessions, runs local projects (e.g. their [REDACTED] Atlas). they make sure there is something within their range of offerings to appeal to all levels and degree of interest, knowledge and expertise. Also they do things in a way to engage people who would normally consider wildlife recording e.g. their "What the cat brought in" promotion as part of the [REDACTED]. They are also not too precious about their status and are great at working in collaboration with the [REDACTED], OPAL Citizen Science Projects etc., etc., They have a great website, data logging is easy and access to records online is also easy. - - It is just so much fun working with them and it's for a good cause. Long may they continue.
RECORDER	Bird recording is very professionally organized and administered by BTO and its partner organisations. - - Moth recording (the other main taxon where I routinely gather and submit records) is also well organized locally by [REDACTED] on behalf of the NMRS
RECORDER	For birds its easy! Lots of people watching birds, as well as recording groups around the country. BTO also offer a lot of support to those bird clubs and have a national recording system (BirdTrack) which generates a huge number of bird records



	every year and is easy to use. The availability of a mobile phone app for BirdTrack makes adding records in the field easy too. BirdTrack also offers a way of getting those records to county recorders
SCHEME OPERATOR	Very little!
SCHEME OPERATOR	as LERC response - other staff, volunteers and recorders dedication and enthusiasm
SCHEME OPERATOR	Small group training sessions on identification and use of the recording scheme website.
SCHEME OPERATOR	Running and attending field excursions and other activities with your Scheme's Recorders and Verifiers - Data management of your Scheme's records - Administration of your Scheme's activities and accounts - Preparing your datasets and metadata for publication by your Scheme or another Data Provider
SCHEME OPERATOR	Data management has got much easier since online recording has increased in popularity and usage. When I started (only 1 or 2 years ago), we were still entering all records from paper recording forms. Having a website for our local recording group, for sharing information and promoting surveys locally, also works really well.
SERVICE PROVIDER	own portal helps showcase and deliver data services
SERVICE PROVIDER	Support from my organisation to undertake this work as part of my role.
SERVICE PROVIDER	See previous sections
SERVICE PROVIDER	The NBN gateway provides a successful platform to enhance the accessibility of our data. This greatly motivates the collection and collation of records within the organisation and inspires volunteers. - Online access to records also decreases the staff time required to process data requests as often the client can be directed to the NBN Gateway.
SERVICE PROVIDER	The NBN Atlas works well as a single point of access to biological data. It is effective as it gives a national overview, and is not restrained by countries or counties.
SERVICE PROVIDER	NBN - For those users who already know about us we can engage with them and receive feedback. We are respected as a body and seen as a reliable place to store information. We have a unique role by being independent and complimentary to other services of local record centres. - - We are seen as a go to place for these resources. - - We are increasing our brand awareness and selling ourselves more as an organisation.
SERVICE PROVIDER	All except training.
SERVICE PROVIDER	NBN Gateway alerted us to new sources of biological records
SERVICE PROVIDER	local support
SERVICE PROVIDER	We provide a comprehensive range of data products and services to a range of users, as well as providing tangible and valued services to support our local recording community. We regularly receive praise for the quality of our services and I believe we are a valued part of the biodiversity conservation sector in [REDACTED].
SERVICE PROVIDER	Local knowledge and good relationships with the recording community encourage trust and data sharing. - - Experience in dealing with different types of data sets has given me a good understanding of what is important in the recording of different taxa and the types of errors likely to be present.
SERVICE PROVIDER	Having museum collections to back up training is very useful
SERVICE PROVIDER	Overall working well. We have good partnerships, we have the ability and flexibility to respond to customers needs and we share resources with our LERC partners across [REDACTED]. This is all possible because we have a funding model combining public and private sector income to support it.
SERVICE PROVIDER	For our organization there has been in the last couple of years a huge shift to relying on technology to provide these services allowing us more time to focus on improving the quality and quantity of the information that feeds the listed activities.
SERVICE PROVIDER	As a local environmental record centre [REDACTED], I think we are well-placed to pre-empt and respond to users' needs. - - Data management of the biological records we hold works well, using our Recorder6 database. Our own, linked, in-house reporting systems, using SQL server, allow us to produce tailored biodiversity reports as part of our data request service. - - Our in depth knowledge of our data structure, and the datasets that we hold, also allows us to respond effectively to bespoke requests. - - Good relationships with local recording groups and other local data providers means we have an excellent understanding of the strengths and limitations of the data that we hold. Relationships with local County Recorders and verifiers enable us to thoroughly quality assure our data holdings.
SERVICE PROVIDER	I have very knowledgeable colleagues who share and support me in doing my job. With this support we are looking at the quality of the records we have and how to maximise their use. As a minimum we would like all our records to have been through the NBN Record Cleaner.
SERVICE PROVIDER	Local Authority is extremely supportive (financially and values the LERC) and is a key service user of LERC (including data provision to inform planning decisions). Also enables access to aerial photography and high detail mapping (OS MasterMap) that may be too expensive otherwise - - LERC has great and long standing relationships in the area with a wide variety of recorders, data users, organisations, etc. Local contacts, connections and support. Connections via LERC can lead to collaborative and partnership working. Can put people in touch - including putting a recorder or member of the public in touch with an expert, scheme or society or other resource - - Data is available and can be taken into account - use of LERC data services by and repeat 'custom' from a wide variety of users - - LERC constantly seeking to improve data quality - active validation and verification of data including use of tools such as NBN Record Cleaner as well as 'human' verifiers. - - LERC constantly seeking to update data holdings and add to them - - LERC gives a face and coordination to local recording. Somewhere to go to with queries or for support - or resources (e.g. online or experts) - - LERC promoting, supporting and encouraging recording - e.g. training days and events. - - LERC organising identification training - can enable training to occur locally that may otherwise only be in a more central location (e.g. from NSS), and which may have barriers to being able to get involved - e.g. transport costs and time, cost of training itself may be prohibitive. Good feedback at events themselves. - - Digitisation of data sources into a database for inclusion in data searches - coordinated by LERC
SERVICE USER	Hosting an LERC to have access to their services and using LERC services to benefit as an NGO, associated benefits for public that this brings (e.g in response to planning applications).
SERVICE USER	Both the NBN and BSBi distribution maps are an essential tool in assessing habitats and in resolving some identification issues
SERVICE USER	I use [REDACTED] a lot to undertake data searches within a buffer zone of projects for which I am undertaking ecological assessments. They are quick, helpful and good value.
SERVICE USER	Not sure I can answer accurately as learning and use is ad hoc using largely NBN Gateway site as well as general searches (and Sitelink for designated site details).
SERVICE USER	Protected species records are useful

SERVICE USER	Our LERC is excellent. It provide a good service, managing and interpreting data and encouraging local people to take an interest in species and in recording what is found where. - The staff are fantastic.
SERVICE USER	Too early in our working relationship with our LRC to know.
SERVICE USER	Data is easy to get from NBN or from Centre direct. Turn around time is quick.
SERVICE USER	Same issues as previously outlined
SERVICE USER	Information available online about events & things to be involved with.
SERVICE USER	Training works well as organised in conjunction with LRC and to develop skills of recorders. Skills are applied to staff throughout the local authority who work outside and record wildlife- e.g. ecologists and countryside rangers
SERVICE USER	It is of interest to see how recording develops and evolves through a variety of service providers. - A continuous process of training sessions and self training avoids less careful recording and keeps recording practice up to date.
SERVICE USER	I use the local biological record centre for site specific data searches - they provide a good service.
SERVICE USER	People give freely of their time
SERVICE USER	I can usually find out about most national schemes
SERVICE USER	We access all our data from <b>LERC</b> - they provide reports on planning applications when required and also provide us with data sets to integrate directly to Council GIS.
SERVICE USER	Early training provided in the use of the NBN Gateway when it first came in was very useful. The same should be done for the new NBN Atlas.
SERVICE USER	More training opportunities and data management for all areas of Scotland
SERVICE USER	Data is provided from LERC in a timely manner.
SERVICE USER	local support
SERVICE USER	TomBio is a fantastic tool for use with biological records and QGIS
SERVICE USER	Availability of data sets for use with GIS software.
VERIFIER	Having people you can ask for second opinion on things - working with BRC to over see their <b>taxon</b> records
VERIFIER	Encouragement of recorders through giving them feedback on the value of their records.
VERIFIER	Being known in the field so that you tend to be approached early if a query in ID comes in. Knowing other experts elsewhere to get a 2nd opinion
VERIFIER	This is an unofficial role at present but is likely to be formalised as the new record centre gets up and running
VERIFIER	I liaise with my Local records centre. They send me photos usually for verifying. - I also identify specimens sent to me from Organisations/LRCs e.g. <b>local group</b> -
VERIFIER	The number of invaluable on-line resources such as: - Biodiversity Heritage Library for entomological journals - Historic maps e.g. <a href="http://maps.nls.uk/geo/explore/#zoom=13&amp;lat=51.4880&amp;lon=0.0536&amp;layers=1&amp;b=1">http://maps.nls.uk/geo/explore/#zoom=13&amp;lat=51.4880&amp;lon=0.0536&amp;layers=1&amp;b=1</a> - Geo-referencing e.g. <a href="http://www.bnhs.co.uk/focuson/grabagridref/html/index.htm">http://www.bnhs.co.uk/focuson/grabagridref/html/index.htm</a>
VERIFIER	All seems to be working well. - - However, running specialist ID courses means that you can be over-used (asked to run the same course/talk by several different organisations in a year). For an amateur recorder (with a full-time job), this can actually reduce your own field time, as weekends can be taken-up with course prep and running, rather than getting out and recording yourself.
VERIFIER	The system of verification is getting better within most national organisations I deal with. The system of using expert ID help via the web is an outstanding leap forward and allows even the novice access to the best expertise but also allows the experts to be put to the best use.
VERIFIER	<b>county</b> Natural History Society has a superb supportive framework
VERIFIER	iRecord is really helping the verification and collation side of things. As a county recorder, I actively encourage recorders to submit their records there so that it is a central place to extract records from at the end of the year and also so the records are verified. - - It is useful being a county recorder to find records from recorders that might otherwise be missed. It is also a useful way of enthusing non-specialists to learn more about your particular taxonomic group and to encourage recording. Being active at a local level is great for that.
VERIFIER	National and international societies and experts, field guides, atlases, reports. On-line recording systems, email and (to a lesser extent nowadays) phone and letter. Personal contact with experts in many fields, not just my own.
VERIFIER	Years of interest and experience in UK <b>taxon</b>
VERIFIER	Generally all are working well. Use of data management makes recording more effective.
VERIFIER	Our volunteers / recorders undergo a significant level of training so that we can 'pre-verify' a significant number of records. This means we don't experience an unmanageable backlog and that they can see their records through the database mapping function with a minimal time lag.
VERIFIER	Liaison with other recorders and botanists. - Involvement with other natural history organisations. - Opportunity to teach other people.
VERIFIER	Massive volunteer operation with high level of expertise.
VERIFIER	Being part of a well run and committed national recording scheme filled with enthusiasts aids motivation and enjoyment.
VERIFIER	All Working
VERIFIER	Availability of recording scheme specific spreadsheets for entering data (which I adapt for Scotland for <b>taxon</b> in collaboration with other <b>county</b> s). - iRecord verification. - My own MS Access application for importing, verifying and submitting data. - Support from colleagues on the identification of records.
VERIFIER	See previous answers - communication within <b>county</b> and links to UK experts; I study Lepidoptera <b>taxon</b> s & <b>taxon</b> <b>county</b> - what works well in <b>county</b> is communication with other experts and being able to communicate directly with UK experts - by email, Facebook, etc. this increases learning and ability to critically identify some of the more difficult species. I currently sit on validation committees for both <b>county</b> and <b>county</b> which work very well - small groups like these are more efficient.
VERIFIER	Very good relationships with other neighbouring recorders, relevant LRC and National Society.

VERIFIER	see my comments about access to specialist identification literature in the recording section - - I only do a small amount of verification for the local recording scheme who do the leg-work with managing the resulting records and passing on verifications. .
VERIFIER	NBN Record Cleaner is useful for initial screening of records. - Schemes and societies are very willing to help with verification queries.
VERIFIER	Dedicated County Moth Recorders and local Record Centre managers
VERIFIER	I get asked occasionally to identify difficult to ID photographs and specimens of <b>taxon</b> . I seldom get more than a few queries a year as the <b>local group</b> Manager is an expert naturalist and can verify most records himself.
VERIFIER	To have enthusiastic amateurs who wish to learn and spend time on workshops to improve their skills AND build their confidence
VERIFIER	These thing work OK - -
VERIFIER	Others are helpful and encouraging: not just in Britain but abroad.
VERIFIER	Online verification/checking of data entered
VERIFIER	Liaison with other local recorders works particularly well as we have a well-established system. Self verification works well for some difficult species as recorders become increasingly aware of what must be done to secure a record. This means a lot more records of aggregate taxa but that is preferable to questionable records to species level
VERIFIER	Scotland is a small place and I know most of the recording community for my groups. - I have a good local records centre ( <b>LERC</b> )
VERIFIER	iRecord is excellent for providing quick and easy access to data so they can be verified. The verification tools are also extremely helpful.
VERIFIER	The society for which I verify records has put a lot of effort into agreeing protocols to ensure that all verifiers are working to the same standard. (This was largely done by volunteers.)
VERIFIER	Building a team of 'hobby botanists' as well as more experienced people. - Training and mentorship, to encourage learning and the gaining of confidence through experience. - Working with schools to spark botanical interest in the young. - Building a wide-ranging and varied programme of botanical activities and encouraging participation. - Targeting data collection in areas hitherto under- or weakly-recorded.
VERIFIER	Availability of specialised knowledge and scientific papers on the internet.
VERIFIER	Well established recording and reporting systems run by the BTO & SOC. Prompt entry / return of survey results!
VERIFIER	Availability of distribution information available via NBN and other sources e.g. BSBI - Availability of on-line identification resources - Ability to consult other experts via on-line groups and social media - Willingness of some academic institutions to help with verification from specimens
VERIFIER	The NMRS has a good method of supporting and using county recorders, all records are sent to county recorders before being accepted into the national dataset. There are also safeguards to flag up potential misidentifications etc
VERIFIER	The support of the LERC is an essential part of the verification role that I perform on behalf of our group, and I would not be able to fulfil my requirements without it. More should be done to assist the verifiers.
VERIFIER	It is fantastic to see so much interest in natural history at the moment. Digital photography and social media plus other online resources have had a very positive impact on getting more people interested in wildlife and recording, while 'traditional' societies and book publishing are going strong in many cases as well.
VERIFIER	Websites and new references are continually improving our ability to identify and verify species. Social media is making communication easier but is not used comprehensively and there is a degree of an age gap.
VERIFIER	Most taxa groups use us on a regular basis and we co-ordinate many local initiatives. We state that all records entered into our main species database have been verified and validated either by us or by other experts we work closely with - as a LERC response
VERIFIER	Working closely with LERC's and local NGO's helps maintain accurate datasets, supports volunteer recorders identify difficult wildlife taxa.
VERIFIER	Community of experts ready and willing to help with difficult verifications. - Butterfly Conservation supports county recorders within a well organised structure.
VERIFIER	Being a verifier on iRecord is very straightforward. It is particularly useful that you are able to contact the recorder to query a record.
VERIFIER	Monthly list of all new records on Recorder circulated to verifiers to be checked
VERIFIER	Online (iRecord) verification. This works well. - Use of NBN record cleaner
VERIFIER	Growing network of local regular <b>taxon</b> recorders who are happy to share their records & have them checked - many take photos as a matter of course or if doubtful of ID & also share knowledge with one another so other more experienced recorders including neighbouring VC recorders also help novices, which makes it easier for me as verifier. Support from local BRC <b>LERC</b> who send on records to <b>national sch</b> on behalf of myself & some other VC <b>taxon</b> recorders in their area & have regional interactive species maps on their website for at a glance local distribution checks.
VERIFIER	BirdTrack saves me time and effort by accumulating in a single archive (still needs verified, and out-of-area records screened out) -
VERIFIER	BirdTrack is a usable system that enables verification of records. BirdTrack has also enabled the volume of records I collect and look after a much easier job as it has built-in tools that help verification and easy data entry for data recorders. iRecord is also a system that has made wildlife recording from your phone an easy task and means more records available to harvest.
ROLE	WORKING LESS WELL
COLLECTION CURATOR	I'm afraid nothing is working particularly well. The lack of resources (particularly people) means there is insufficient time to put into any of these activities so either very little is achieved or quality is compromised.
COLLECTION CURATOR	We don't have enough specimens databased or the resources to significantly address the backlog. - There are too many forms to fill in.
COLLECTION CURATOR	Some of the equipment required is not particularly cheap, which sometimes makes it difficult to persuade people to keep a collection.
COLLECTION CURATOR	Lack of financial support
COLLECTION CURATOR	Taxonomic groups require different preservation techniques, eg drying for insects, skinning for mammals, alcohol for marine invertebrates. Within each of these groups there are specialist techniques eg narcotisation for soft bodied animals. The skill

	and knowledge required takes time and resources. - - Training for curation is about acquiring knowledge over years. There is not enough time for looking at invertebrates as there are so many of them and so few curators who are interested in small animals.
COLLECTION CURATOR	See previous comments about obstacles to posting specimens to referees or donations to other reference collections: When refereeing, I get to keep the specimens so posting them back isn't a problem for me :-). If I were to do more of this for specialised groups, returning specimens would not be easy (costs and the difficulty in getting to post office in working hours) AND Managing my own records and extracting/reporting datasets from them. I do a lot of work on specimens that can take months if not years to conclusively identify. Increasing knowledge (mine) and taxonomic revisions result in many specimens being re-identified. Extracting and reporting retrospective records and re-identifications is not straightforward as recording packages don't support it well (I use Mapmate but cannot figure out how to synch records with other users or recorders using different recording packages). - - Incomplete or out-of-date species libraries in recording packages. Mapmate does not cover some groups that I work on and has limited capacity for updating taxonomic revisions. - - Getting difficult specimens identified by referees: the Post Office is not always willing to send specimens in the post and has a bad record for damaging them. Couriers or larger, safer packaging are expensive.
COLLECTION CURATOR	Lack of local expertise to help identify species. Large collections needing specialist preservation and curation. A backlog of specimens for digitisation
COLLECTION CURATOR	Lack of funding for any activity, lack of staff, lack of continuity of knowledge
COLLECTION CURATOR	I have limited software training, and many partners do not know how to work with Access. I don't know how to use other relational database software.
COLLECTION CURATOR	I lack the time to take proper care of my collection.
COLLECTION CURATOR	Quite considerable cost and time resource is needed for this aspect of recording, e.g. for specimen storage boxes, as well as smaller ongoing costs for pins and chemicals. - - I've had lots of support from various museums over the years, and it is worrying that support for museum natural history is in such decline. - - While it is quite easy to get people interested in watching and photographing wildlife, it is a bit less easy to get them interested in recording, and a lot less easy to get them interested in specimens and microscopes!
COLLECTION CURATOR	Specialist curators (especially in natural history) in local museums are now an endangered species in their own right. The value of expertise in this field of work needs greater support from the natural history community outside of museums.
COLLECTION CURATOR	For me as a private individual the problem is housing the material safely. I was a professional curator for over [REDACTED] years and know the standards. It is difficult for an individual to meet these. The collections I used to curate are now only accessible with much advance preparation and difficulties surround access to equipment on site. Having my own reference material and equipment means a quicker and more convenient resolution of queries but involves much expense and space. Its a bit of a balancing act. - - I have become aware of differing attitudes to voucher material, and records centres are not always the best locations for these as a result. I would say that the ideal would be for collections and record centres to be close by each other (as they once were in the natural sciences sections of local authority museums, even if not always well supported) and for curatorial standards to be part of the training of record centre staff. The collections themselves should be covered by firm collections care standards and appropriate disposal policies in the case of a centre folding.
COLLECTION CURATOR	"Submission of biological records to National Recording Schemes or other Data Providers" - this is a tricky one for us, due to the process of extracting records from our database to external data partners being very complicated. However, we are currently working with NBN to resolve. - - Only a tiny percentage of our collection is data-based at the specimen level and we have no internal funding to help us with the digitisation process. So the rate at which we can share data is very slow.
COLLECTION CURATOR	Due to cutbacks, there are now considerably fewer natural history curators than previously. This means there is less cataloguing and digitisation of the natural history collections than a few years ago
DATA DEVELOPER	I would like to do a number of the activities i have not ticked above, but lack of time and resources prevent this, due to the time i have to spend on data management.
DATA DEVELOPER	Future loss of EU funding for projects following Brexit. EU funding has been a large factor in our development of new technologies and products.
DATA DEVELOPER	BTO data mostly not on NBN, so most bird data must be sourced separately and requires a separate SNH/BTO licence agreement. - Large amounts of data held up in recording scheme databases (including Indicia), not yet (if ever?) available on NBN.
DATA DEVELOPER	Schemes which only supply presence/ absence data or data at a low resolution are not helpful. Sometimes an absence of background information makes the record effectively useless.
DATA DEVELOPER	Our close working relationship with [REDACTED] LERC ensure that data is processed and managed as required.
DATA DEVELOPER	Some datasets are not freely available, even to other NGOs where the data will be used for conservation purposes - eg. many of the BTOs datasets.
DATA DEVELOPER	Training and self-study, due to funding and time issues. e.g. Many of the GIS courses that would allow me to better provide enhancements to datasets are very expensive and not within the reach of a small company like ours.
DATA DEVELOPER	lack of sufficient funding
DATA PROVIDER	Invitation to community councils on [REDACTED] to co-operate with crofting community and express awareness and knowledge of what we already have and what could improve status quo (example: plantation project, small woods in sheltered spots)/ - - Problematic: - - old crofters (who in their youth experienced abundance of wildlife and were hunter, fisher etc) seem not to have great concerns for situation in nature. Difficult to interfere on land they own. - - Impact and disturbance through high touristic pressure in summer. Mobile homes driving freely through machair, dogs free etc. Reluctancy of community to put up signs giving advice on how to behave in breeding season. -
DATA PROVIDER	Most of the data provider process is very problematic - the amount of admin required to produce a dataset for a request - in the correct format is sometimes completely prohibitive and the process for collating and formatting data from our own systems and that of national schemes, iRecord, etc is so lengthy that we do not use a number fo datasets that we have access to in theory due to lack of time to reformat and access them. I would like to do less admin and train someone to support me but at present i do not have resources to do this. i also need more training and support to develop our own portal to provide data by this means to other staff within my NGO, but at present am unable to do this because i cannot find someone to help me.
DATA PROVIDER	MapMate is potentially a problem as it is growing older and less supported by Windows!
DATA PROVIDER	Lack of recognition of the value of these activities in making data available and opening it up to users. The use of OD as an excuse to ignore the need to fund data collection and support volunteer recorders. - Nationally designed online systems

	(recording and data provision) that seem to be there to service national bodies rather than recorders. Lack of recognition of the work that goes in to developing relationships with recorders and supporting their work at a local level. This cannot be replaced by national online systems. NSS and LERCs no this well but national decision-makers seem to ignore it. - The fact that the UK BMSS is still to be published.
DATA PROVIDER	While we have been successful in bids for a number of recording projects, long term sustainable funding (like in everything!) is needed. Having sufficient staff resources would overcome most issues.
DATA PROVIDER	The nbn gateway is often not accessible to those with limited IT skills or access. The importance of sharing data is therefore not always appreciated by those on the ground.
DATA PROVIDER	The lack of ability to upload images to local recording scheme.
DATA PROVIDER	Concerned that NBN Atlas won't make it so easy to manage requests for higher-level access. Atlas users may not be aware that additional data is available, and if they are, we may have to resort to sending out copies by email or on CD. This raises issues of FoI, data security and version control/updates, and could be a significant workload for many data providers if requests continue at their present rate. It's possible of course that requests will not continue at their present rate, but that would indicate that the wealth of data held by NBN is no longer being used to the extent that it is currently.
DATA PROVIDER	Backlog of material to be digitised. low numbers of staff
DATA PROVIDER	We don't want to have to directly service data requests - we want a culture and mechanism whereby all our data can be open and accessed by all on the NBN Atlas. We need to mobilise data and for it to be open. Currently this often isn't the case. Sometimes LERCs limit the period of time that we can hold their data, which
DATA PROVIDER	I've not encountered any problems in this role
DATA PROVIDER	Difficult to get data updated and verified.
DATA PROVIDER	Fund raising is a problem.
DATA PROVIDER	Data requests take a lot of time to process, in which we could be carrying out more useful data management activities. We mostly just respond to data requests received through our organization data unit email inbox. Requests received through the old NBN gateway are rarely responded too as there are too many to keep on top of. It would help if people couldn't request higher resolution data when there is no higher resolution data available to anyone. It would also help if there was a warning on particularly restricted species datasets that members of the general public would not be able to request greater access, greater access is only given on a case by case basis but for conservation purposes only.
DATA PROVIDER	Data flows - Verification - Workload - limited time to commit to data provision.
DATA PROVIDER	Responding to data requests is tedious and time consuming. Making our data available to all those we would like to is not possible without a massive amount of resource to churn out all the required data in a myriad of formats. Lack of metadata/access controls on NBN atlas limits the usefulness of data we can upload.
DATA PROVIDER	On the whole the sharing of data via NBN seems to be working smoothly, with support from BRC. Don't yet know how easy it will be to update for the atlas platform.
DATA PROVIDER	Training and self-study but this is part a funding issue and part a time issue.
DATA PROVIDER	reduced core income from some partners, withdrawal of sustainable LERC funding from Natural England. - - Pressure to make all our data freely available with no restrictions on commercial use but with no alternative income stream identified or proposed
DATA PROVIDER	NBN Atlas is preventing the previous dataflow models from working by the loss of access controls.
DATA PROVIDER	Fulfilment of data requests and responding to requests for higher levels of access - we do not receive funding to fulfill data request, however we recognise the huge importance and benefits to conservation of doing so, so we rely heavily on third party portals that can automate this process for us. The NBN Gateway fulfilled this purpose but was recognised as being no longer fit for purpose towards the end of its life. The NBN Atlas does not currently provide the same tools as the Gateway and so currently we are unable to share our data with key users. - - Fundraising and grant reporting - funding to support improvements in data sharing is difficult to come by.
DATA PROVIDER	Lack of time and other resources.
DATA PROVIDER	Sharing of records collected professionally by consultants. - Removal of direct access to full resolution data shared via NBN gateway by national schemes/societies. - Support for upkeep and development of software (Recorder 6) software is dwindling. - Insecurity of funding - Lack of capacity to achieve what could be achieved
DATA PROVIDER	Fulfilment of requests for data from national partners has been made significantly more difficult by the withdrawal of access controls from the NBN's data-sharing infrastructure. - - Similarly, data-sharing between national recording schemes and LERCs has been made significantly more difficult by the withdrawal of access controls from the NBN's data-sharing infrastructure. - - Administration of licences on any datasets we share through the NBN's data-sharing infrastructure is also complex, now that we have to apply one of the CC or OGL licences. Our recent experience with preparing a <b>taxon</b> dataset for sharing at original capture resolution on the NBN Atlas has shown that complying with the NBN's guidance on sharing historic data on the NBN Atlas is likely to be very time-consuming.
DATA PROVIDER	Time pressures mean I generally struggle to meet deadlines set for supply of data; some requests seem to assume I work on it full time, e.g. a deadline of 2 weeks for supplying all non-WeBS counts of SPA qualifying species from <b>area</b> for a <b>year</b> period, mining this out of 250k records.
DATA PROVIDER	Can be difficult and time-consuming to navigate legislation, etc. and ensure compliance - - Constant worry about funding and sustainability
DATA USER	It is impossible to use downloaded data from the likes of NBN because of copyright issues!
DATA USER	huge gaps in data, badly written methodologies
DATA USER	it is currently very difficult to access and use data in a consistent format.
DATA USER	Limited availability of comprehensive and up to date biological data for this area. -
DATA USER	Some organisations do not share their data to the same level as others. When searching for invertebrate data a 1km accuracy is not adequate enough as it maybe for birds or mammals.
DATA USER	Certain data simply isn't recorded much, if at all (tends to be less well studied and recorded anywhere though). Consistency of access across local records management and regional/ national management regimes.
DATA USER	There are so many data sets out there, managed by different suppliers, that it can be difficult to understand the difference between them, which I should be checking, or if I need to check them all etc.



DATA USER	The number of poor quality and inaccurate datasets on the NBN Gateway
DATA USER	It appears that many organisations, with SNH sadly being the prime example, do not make biological records available. Bat roost records are a case in point. So much of the work I do in consultancy relates to bat mitigation and it is infuriating to know that bat roosts have been recorded nearby by SNH (or their batworkers), but the records are not publicly available either on NBN or SNHi. I appreciate that there may be DPA concerns about the identification of specific houses with bat roosts, but surely this is not insurmountable. - Another issue is that a phenomenal amount of biological data is collected in support of planning applications, but virtually none of this becomes publicly available either due to spurious concerns of planning authorities about 'protected species locations' or commercial confidentiality. -
DATA USER	I know that there is other data not held by the records centre, and I know that some of the organisations that I work with, do not make full use of the centre.
DATA USER	accessing data from national datasets -particularly NGOs who tend to be very protective or the data even though you may have contributed to it (or even helped financially to them collecting it)
DATA USER	Presentation of the data collated during desk studies is problematic unless it is received in a good visual format from the LERC. Large Excel spreadsheets are time consuming to go through, so highlighting the species of interest or concern is important.
DATA USER	There are too many different ways to record biological data - i.e. bumblebee conservation may record it on their site but it might not be on the NBN gateway. - - People should also be aware that a lack of presence does not mean absence. There are too many ecological reports that don't use reliable data.
DATA USER	There are a lot of data sources that are not readily accessible. Two that spring to mind are the Invertebrate Site Register held by SNH and the SIRI at the national Museum of Scotland. Both are happy to share data but it is not in a form that can be extracted easily. There is also a lot of information in, for example, SNH local office files and where it is difficult to know if anything exists or not. Digitisation of such material would be a great help but is also likely to be difficult and expensive.
DATA USER	Data is still very fragmented and there is lots of possibilities for confusion over different accuracy of recording details (e.g. what species are actually found on a site and which have been recorded from the adjacent 'square')
DATA USER	We provide ecological advice to Local Authorities outside of our own LRC area. Some of these districts do not currently fund their LRCs which means their data is not available to us. This is partly due to a lack of recognition of the value of the service provided by the LRCs but also due to lack of funding within the districts after heavy cuts in funding from central government
DATA USER	The tool is not particularly user friendly. The map is too small, the area search tab is poor (it takes you preferentially to international locations over UK if they share the same name), and there is too much focus on the scientific name over the common name (species are listed alphabetically by their scientific name, for example). There is also not enough data on there.
DATA USER	Data supplied through the NBN is patchy because not all recording schemes etc. share their records with it. Also, it is difficult to have confidence in those data and their reliability.
DATA USER	At times slow processing/no service on NBN Gateway.
DATA USER	none is particularly working less well than the others, although accessing an downloading record could be customized to avoid self-curation of the record in case someone needs "easy to explore" records. often I need to select and filter the records that I need and dismiss most of what I have downloaded.
DATA USER	Lack of easily accessible, robust data with good coverage.
DATA USER	We need less focus on data and more focus on more strategic end products. Particularly looking at natural heritage as an asset for wider improvement for health, tourism etc.
DATA USER	NBN datasets are often far from complete and/or too restricted.
DATA USER	Some of the data on the NBN, particularly the invertebrate records supplied by Natural England, are so superficial as to be worthless - species name, a 10km grid ref and a year. - - I am finding iRecord unwilling to allow full access to records for a site I help to manage. Unless there is a suspicion that the landowner wishes to destroy their biodiversity, I think it is unethical to deny a landowner access to records for their own site.
DATA USER	Access to data is often too limited and data holders are unwilling/unable to provide better access.
DATA USER	There's never enough time and each are (data curation, data publishing, data user) requires different specific and detailed skills.
DATA USER	There is a lot of duplicated records in the public datasets. - For example, one original field record may have 10+ records of this (varying degrees of mapping resolution) arising from different organisations and literature sources
DATA USER	Nothing really that has not been written above.
DATA USER	lack of detail in some cases, lack of data and recording is the main problem. If none has recorded it or submitted it then you can't just look it up online, it will not exist online yet.
DATA USER	Not all recording schemes and Lercs contribute [to NBN] so several places have to be searched in order to locate records.
DATA USER	Same as before - flawed databases are the main problem
DATA USER	The actual workings of NBN Gateway is poor. It is not simple or easy to find and collate data sets for use.
DATA USER	Records are often historical and there is little information on the reliability of records.
DATA USER	Can be out of date.
DATA USER	finding what data is available
DATA USER	Huge variation in number of records, access to information depending which area you are in Scotland. Aberdeen/Aberdeenshire good records, Angus very poor, old records for some species/habitats.
DATA USER	Large databases take a while to load on old/slow computers. - Too many acronyms - can be confusing!
DATA USER	Quality of some of the data held by the LRC
DATA USER	It all works well, apart from some inaccurate data on the NBN that hasn't been verified. But this is minimal.
DATA USER	BTO data mostly not on NBN, so most bird data must be sourced separately and requires a separate SNH/BTO licence agreement. - Large amounts of data held up in recording scheme databases (including Indicia), not yet (if ever?) available on NBN. - Extreme clunkiness of Indicia - we can negotiate access on a species-by-species basis, but very time-consuming for all concerned. - Difficulty of setting up alerts for new records of concern, such as invasive species reported from new areas, for which a rapid response is required. - When downloading data from NBN, NBN Gateway lacks an a facility to select 'All

	Scotland' or multiple vice counties (e.g. Perthshire or Lothians, which are each 3 vice counties). This means we have to request a custom download from NBN. It's unclear whether NBN custom downloads will still be possible with NBN Atlas, or how we'll cope if not. - I have only very limited experience of trying NBN Atlas so far, and although it looks impressive I am concerned by the number of problems encountered.
DATA USER	I can't think of anything problematic, however I sometimes see consultants' reports citing absence of species when it is not necessarily an absence of species, but an absence of recorders. That's more to do with how records are used though, not their availability etc.
DATA USER	Discovery of safeguarded species records and the precise gps locations of protected species can be difficult to achieve.
DATA USER	Often the NBN website doesn't work when trying to access distribution records, may be the lack of internet speed.
DATA USER	Lack of local biological/geological record centre
DATA USER	The system we have established is effective.
DATA USER	1) Licensing of data is overly restrictive - 2) There's no single mechanism for requesting data (you have to go to multiple organisations, make multiple requests, play by multiple sets of rules) - 3) Data on the NBN are often not up to date or the definitive version (this is not a criticism of NBN) - 4) The quality of data is unclear or poor - 5) Many datasets are not publicly discoverable or usable
DATA USER	From what I've seen of the new 'NBN Atlas' so far, it is not as user-friendly as the NBN Gateway, and is missing a lot of the data. The EasyMaps service is also being discontinued, which will leave a lot of holes in our website!. - On a local level, we have used our own Group's data to publish several Atlases of different taxonomic groups, and these have been a great success.
DATA USER	Tend not to use NBN records as sometimes difficult to interpret and question reliability of records.
DATA USER	Accuracy of identifications, lack of verifiable records.
DATA USER	The lack of an up-to-date seabird census is a big problem, as it means we have no recent baseline to compare recent trends to, and no holistic picture of the national trends
DATA USER	Since not all data is collected in the same place (i.e. every organisation/ record centres etc. holding their own datasets), it can be time consuming to get the full pictures and collate all available data on a particular species etc. Data from consultancies or other private sector companies is unattainable even though it could sometimes be helpful.
DATA USER	Lack of open data or records published at low resolution. - Access to papers in academic journals - on-line costs are prohibitive and there is no major reference library within reasonable distance. - Costs of travel etc. limit the ability to attend conferences, training courses and workshops etc.
DATA USER	INCONSISTENT COVERAGE AND DIFFERENT APPROACHES ACROSS THE COUNTRY
DATA USER	Better user interfaces to interrogate and present data
DATA USER	as above - NBN is a great boon but constant issue with all data provided is ensuring its quality.
DATA USER	Training and self-study, due to funding and time issues. e.g. Many of the GIS courses that would allow me to better provide enhancements to datasets are very expensive and not within the reach of a small company like ours.
DATA USER	It is important to be able to have a search function that is not restricted in terms of search terms. The full range of data present in the original submission plus any additional information added subsequently should be available to use as search terms. It is currently not possible to do this using iRecord. If the search options available are restricted then the usefulness of the platform is dramatically reduced.
DATA USER	Sometimes datasets are not available - not digitised or not shared with LERC - which means you may put effort into arranging a new survey of a site that is not really necessary. - - There is large variation in the way datasets are structured, which can make life difficult. - - Sometimes information is withheld by the data provider or is missing e.g. no recorder names or poor spatial information, which may mean it is difficult to get a record verified by an expert.
DATA USER	lack of funds
DATA USER	A lack of data for certain local authority areas makes supplying biodiversity evidence to the planning process much less effective. This lack of data also make quantitative prioritisation of action on species and habitats less effective. These issues are being targeted by a temporary funded project across [redacted] area) to create a records centre as an extension of LERC.
DATA USER	Not enough time to analyse data and implement the results
DATA USER	Some national schemes/organisations do not submit their information to local records centres or NBN. This means there are gaps in our knowledge and decisions are made in the absence of complete, up to date information. To some extent this applies to individuals not submitting records to local or national centres/schemes as well. For commercial reasons many records are not submitted.
DATA USER	Data and reports are found in various sources but it can be time- consuming to find all of these and then extract the relevant information. There is also the issue that some data gathered for development proposals may be considered as confidential or commercially sensitive and thus is not readily available. In addition data presented for development proposals in EIAs may not be made available to Records Centres as a matter of course thus useful data is 'lost' or the impact of proposals cannot be put into a proper context.
DATA USER	Discovery of available biological records, datasets or data products - Understanding, negotiating and complying with licence conditions and access arrangements - Accessing, downloading, formatting and validating biological records, datasets or data products - - Currently the multitude of organisations and portals collecting biological data creates huge variation in routes for accessing data, data formats and license conditions. As a national organisation we find this presents a significant barrier to using the data as we work across a national extent, and therefore often have to seek data from many different sources. In some cases it becomes impossible to use data from certain sources due to the time required to seek access to it and format it to match the format of other datasets. -
DATA USER	As a [redacted] recorder, I am also a data user as I need to refer to national datasets to support my species identifications. There is currently no single point of reference I can use to find out if a [redacted] species has been recorded in my area, as records are spread across different national recording scheme databases. Due to data flow issues, my local environmental record centre doesn't hold a complete local [redacted] records dataset either. - - There is also no mechanism for providing feedback on record quality on the NBN; as a result there are lots of duff records on the NBN and it's difficult to know whether I can have confidence in the data.
DATA USER	Issues with some [redacted] species maps that link to NBN Gateway due to taxonomic name changes, so only most recent

	records since name change occurred are displayed - this seems to be beyond LERC 's control. LERC also do their best to update maps, but with small number of staff with large workload, it may be several months before these appear. However, these are usually more reliable than NBN maps that contain some erroneous datasets (& currently don't have most up-to-date LERC or Butterfly Conservation data). There are also issues with National Moth Recording Scheme maps: MothsCount website says 'We are currently unable to display the NMRS provisional macro-moth distribution maps using webservice due to technological incompatibility with our website and the new NBN Gateway. We are working on a solution to this and will let you know when this problem is resolved.' These are only provisional maps though, as updated maps will only be made publically available when national atlas is published in 2018. It was time-consuming to find useful records from NBN Gateway datasets among several erroneous ones & also to avoid duplication of records already in LERC database. It can also be difficult to track down records from other sources not submitted directly to me or LERC & make contact with original recorders, though Butterfly Conservation sorted & forwarded iRecord & outstanding RiS data to VCtaxon recorders this year to aid verification for inclusion in national taxon atlas.
DATA USER	Downloaded data needs processed/formatted for integration with other records, e.g. from e-bird.
DATA USER	Can be time-consuming to format records obtained into a format compatible with LERC database (thinking particularly about other databases as opposed to usual records from recorders). Means fewer updates are requested than would be if could be quickly added to the database. Knock on effect of less time to look for other data sources. - - Can be difficult and time consuming to discover available data. Once permissions are granted for use of data for LERC business, often time consuming to then format the data to be compatible with our own data holdings so may not be updated very regularly. - - Negotiating licence and access conditions can be tricky and often need to be negotiated separately (when process possibly already gone through by other LERC) - - Anticipated problems with NBN Atlas - if data shared at less than full resolution, only way to get full access is through individual negotiation. More time consuming and pressure for the data provider / group as well as for the LERC. Interpretation of CC-BY-NY licence that LERCs are also not able to use data under this licence without specific permission but this might not be the intention of the data provider
DATA USER	The open availability of biological records to support science to inform nature conservation remains patchy with multiple sources and large variations in the extent to which data are openly available for re-use. - - Many data sets lack data describing observation effort, thus making spatial presence and abundance data difficult to interpret.
FACILITATOR	Lack of support from central government organisations who often seem to be working to undermine work that is happening successfully at local and regional levels. - Lack of recognition for the value of this work
FACILITATOR	We only can operate at the capacity of our volunteers. This limits what we can deliver.
FACILITATOR	The NBN Board structure and governance as a whole needs some thought. This has not been reviewed in some time and along with the membership review which has just taken place, it would be timely to look at restructuring the Board to make this as effective and inclusive as possible. - -
FACILITATOR	Where to submit your record is not immediately clear to some - best route(s) vary with taxon group and location of recorder - this inhibits data flow - Lack of transparency in the data flow - do we always know where data collected goes? Whos shares with whom and how? Not knowing this either inhibits data submission or leads to duplicated effort (shaing many times) - Verification process - not enough verification capacity to ensure the smooth and swift flow of records onwards - INNS data are not always speedily available - some gets held up by the verification process - Data users have to seek data from many sources in order to be sure they are aware of all possible datasets - this is a waste of time and resources - Local services through LERCs are variable (or non-existent). Data management is at local level is variable and where it relies on volunteers is at risk from change. There is duplication of effort in creating and maintaining separate local data bases, and this adds to the complexity of the data flow. Local resources are also spread too thinly. - Digitisation & mobilisation of historic datasets is underfunded yet these are very valuable resources. - National data sharing is possible and achievable (ie NBN Gateway/Atlas) but the technology & its support is currently underfunded. - Current funding models makes organisations protective of 'their' data - a data hoard not a treasure trove!
FACILITATOR	People are keen to provide a view and input but less keen to do actually be hands on and do any work eg attend meetings, write a strategy.
FACILITATOR	lack of sufficient funds, national support
FUNDER	Insufficient funding to undertake all the monitoring that would be ideally useful.
FUNDER	Annual funding Cycle increase workload.
FUNDER	We have a finite pot of money to provide funding from and would be unlikely to be able to secure more funding without it being for a specific project. We have maybe 10 years of funding left for the , but perhaps this could be taken on by regional or national organisations in the future. - - As a funder to SBIF, it is disheartening that only SNH, the NBN and BRISC have provided funding to it over the years. A lack of buy-in from funders is a major issue.
FUNDER	SNH has been a major funder of NBN for many years, through its membership fee, through secondment of NBN's former Chief Executive for some years, and by supporting maintenance/development of NBN Gateway, and now NBN Atlas. In 2016/17 SNH contributed £35K NBN Membership, £12.5K Core Support/Development of NBN Gateway (a 25% increase over the previous FY), £25K to NBN Atlas, + £15K to support the NBN Scottish Liaison Officer - a total of £87.5K. - In 2017/18 the Support/Development component will transfer to NBN Atlas, but is expected to increase to £37.6K before falling back to ~£25K in each of the following two years. - This is a substantial financial commitment to maintain at a time when SNH's own budget is, in common with other public sector bodies, experiencing continuing year-on-year cutbacks, and this level of support may not be sustainable in the long term.
FUNDER	need more promotion
FUNDER	For many funders (SNH included now) funding is secured on an annual basis resulting in uncertainty and time going into chasing funding, this situation is not sustainable in the long-term
FUNDER	The current HLF funding is unlikely to continue in future, with consequent increase in the contribution expected. This comes at a time of budget gaps in the Local Authority which require cuts in spending, rather than spending increases.
GROUP OPERATOR	BRC not getting up to date maps out and not uploading data to NBN more regularly
GROUP OPERATOR	training - Biggest problem for me is furthering my own skills as i have limited CPD opportunities - many training courses seem to be based a long way from area . Too much admin often means i am tied to a desk while volunteers go out and do the recording, this means i am losing practical skills through lack of practice
GROUP OPERATOR	See answers to previous section re personal limitations causes by health and age. Nothing else is really anything like as significant: My increasingly poor makes microscopy and fine manipulation of specimens increasingly difficult. Genitalia dissection and other delicate procedures are now beyond me. I am seriously frustrated by my limitations



	but there is not a lot that can be done about this. For me though this is definitely the greatest problem / challenge that I face.
GROUP OPERATOR	Lack of time to give sufficient focus on the subject - we run Facebook pages, give space on the generic website, run events and link surveying into specific projects (for which we need to find funding). We also publish newsletters, postcards and posters to publicise the species we need help with.
GROUP OPERATOR	It's hard to train casual volunteers as the data we collect is quite scientific and very specific.
GROUP OPERATOR	We would like to be able to have a base where we could hold a stock of recording equipment e.g. bat detectors, mammal traps, collecting tubes, ID books etc. which we could loan out to members, or use for Group surveys. BUT we don't have any premises, or any money and everything is done by volunteers. - The only grants we have had are for uploading data to the NBN Gateway - for which we are very grateful to [REDACTED]. Ideally we would like to have a paid database manager who could also manage the equipment loans etc and maybe organise training courses etc.
GROUP OPERATOR	As above really - the activities are pretty self contained, and so not reliant on people either above or below us in the chain - so no particular problems to report.
GROUP OPERATOR	Lack of support from the site managers and active refusal to engage and shared records with the recording group. After [REDACTED] years in some cases [REDACTED] voluntary accreditation ([REDACTED]) was removed as 'just' biodiversity recording was no longer considered worthy of volunteer status.
GROUP OPERATOR	lack of an up-to-date national seabird census is a real problem.
GROUP OPERATOR	Fund raising is always a problem. It is time consuming and we're too small to be able to administer large grants and we are ineligible for some sources of funding (no charitable status). - Problems with the NBN Gateway and the Atlas are causing major problems with data validation and verification. - Difficult to recruit new recorders and struggle to make visiting recorders/academic/ surveyors aware of our existence.
GROUP OPERATOR	Recruiting new people to take on roles within the recording groups is always difficult.
GROUP OPERATOR	Detection of duplicate data is challenging, as is verification across a wide range of taxonomic groups. Frustratingly difficult to get our system to talk to those of other schemes.
GROUP OPERATOR	Nothing to add to my reply for the verifier role.
GROUP OPERATOR	Maintaining interest and supporting activities in terms of time.
GROUP OPERATOR	It is sometimes difficult to imbue members with the confidence to submit their sightings and to have them scrutinized. People see experts in the group and think "I'll never be as good as them". The idea that experts are occasionally wrong and accept that as part of the territory is hard to get across in this age of black and white information. - - I used in a distant past to accept most of what people sent me, entering it on to Recorder with the provisos which were built into the system: - 1 - certain identity - 2 - needs checking - 3 -most probably rubbish (I'm afraid i can't remember the exact wording of these caveats) - - This meant that everybody's info 'got a go' and the category 2 information might later have provided a source of extra data after subsequent discoveries. 2 & 3 categories did not appear on outputs to enquirers or on maps. - (These categories did not export with their when data was extracted later on and caused a certain amount of havoc for a while) -
GROUP OPERATOR	Lack of funding to carry out the activities national bodies expect which would otherwise be paid. - - Expectation from national bodies that recorders are mostly concerned with meeting the body's needs, which is not the case at all. - - Expectation from national bodies that recorders' voluntary time and effort is endless. - - Lack of national recognition for the successful local dynamics of data flow, cooperation and joint efforts between recorders, groups, LERC and partners
GROUP OPERATOR	Process of finding funds is rather slow and a lot of the admin and planning work rests on rather few shoulders.
RECORDER	Lack of funding for training and lack of people to deliver the training
RECORDER	Networking with other researchers working on my field is something that I would like to develop. Also I would be grateful if could be notified for other groups working on the same field.
RECORDER	Uploading data to sites such as NBN, I didn't tick it because I don't do it due to issues in the past with records not being uploaded or not being uploaded in a timely fashion.
RECORDER	Checking distributions could be helpful but the website frequently crashes and is hard to use. - Submitting spreadsheet to local recorder is straightforward, but infrequent, so information is never considered to be up to date.
RECORDER	I find i-spot very difficult to use
RECORDER	More training courses for invertebrate identification in Scotland would be useful. - Attending such sessions in England is costly. - Recording schemes are very much south England based, little leadership in Scotland. - Little visible interest in invertebrate recording from NGOs, including SNH, and little evidence of taxonomic expertise in SNH. - Funding restrictions means it is difficult to obtain paid work, most of which goes to large agencies.
RECORDER	Sometimes promotion of specific species recording schemes is not so good.
RECORDER	Not being able to manage our own data base and having to rely on the BRC
RECORDER	Picking up equipment and being tied to specific recording times makes recording a little more difficult - - I am willing to go to some trouble to record as part of a particular survey but probably would not undertake a more onerous survey more than once.
RECORDER	Getting access to data once it enters an Indicia online recording scheme can be difficult, currently access to records is limited in [REDACTED] county, due to lack of resources to develop existing data sharing functionality. Access to records submitted in offline formats and in some national schemes is also difficult.
RECORDER	Getting my records onto the NBN and publically available. This should be streamlined through verification processes such as iRecord yet it seems to take forever.
RECORDER	Submission of records remains my biggest bottleneck. I create very high quality records with a lot of associated habitat data etc. which takes too long to input. - - Also internet speeds and data limits restricting upload of photographs.
RECORDER	See above: Not sure if anything is working well because there is no active LERC in [REDACTED] county. I have started sending information to [REDACTED] LERC Centre but it is a slow and time-consuming process which is hard to justify with a heavy workload in which biodiversity is only a small part.
RECORDER	Collection using formal methods - it is hard to maintain quality control when working in isolation
RECORDER	Training can be limited, or prohibitively expensive, in parts of Scotland, particularly for some taxonomic groups. Also, on a personal level, I sometimes forget to submit my ad hoc records to the appropriate LRC.
RECORDER	Online recording systems - the iRecord black hole. Submission to LERCs much more likely to lead to data appearing on the NBN Gateway - Data submitted to NSS not making its way to NBN Gateway

RECORDER	Training and mentoring others is absolutely crucial to get more people involved but I have only such time and I need to make a living as a priority. More funding by Govt/Lottery for training/mentoring would be appreciated.
RECORDER	I have trouble knowing which data should be given to which organization and who shares data with who. For instance I tend to hand in casual sightings to my local record center and more structured surveys to the organisations who run them such as BTO and BCT but some things are less clear. For example I am a member of <b>organisation</b> and record <b>species</b> but as they make money out of <b>species</b> records I don't know if they share that data with NBN/local records centers who also make money from the records. It is too much trouble to send in records twice so I tend to just pick one organization or another.
RECORDER	Accessible training for the next generation of recorders
RECORDER	collection for national datasets can be problematic as even though you collect the data in the correct way competing projects want you to change your ways of recording to fit with their particular aims
RECORDER	It is very difficult to submit and use records as a commercial organisation without going directly through the LERC and paying a fee.
RECORDER	The transfer of data from recorders to the NBN has always seemed to be confusing. As a recorder I submit records to the active recording schemes for <b>taxon</b> but also to the <b>LERC</b> local Records Centre. I have to assume that all of these records are then passed to the NBN but I know from experience that this is not the case. This potentially results in the duplication of records. I realise that for invertebrates this is perhaps inevitable since there are liable to be difficulties with the verification of records. - It is also difficult to find out who is also collecting <b>taxon</b> records in Scotland and who to go to for assistance and advice. I am sure that this is even more relevant for those starting out recording.
RECORDER	Submission of records to local record centre has proved unsatisfactory as my records have not appeared yet on their database. - - This hobby/interest is now almost wholly funded from personal income/pension e.g. travel expenses, overnight accommodation, collecting equipment, identification books, computer hardware & software, training events and conferences, and especially lack of work space and storage facilities, etc.
RECORDER	Gaining access to low costs training in software and data analysis. A community led research group we have no direct access to academic libraries etc.
RECORDER	WE are what you would call enthusiastic and developing citizen scientists. However, you need to make it easy for citizen scientists. The world of records seems very complex. We want to know that if we submit a record of a bird or a moth for example to record that this information will be cascaded down or along to other data bases for specific species. We don't want to keep submitting records to lots of places. We in addition to submitting records to record we submit records to RSPB GardenWatch, Butterfly Count and monthly records to the Bee Conservation Trust.
RECORDER	Time - lack of.
RECORDER	Generally I'm happy with all the systems as they are. - - Sometimes it can be hard to attract course tutors to run events (particularly if they live some distance away). Many will do this for free, but given the time, effort and expenses they incur, it would be good to help fund these events (allowing their expertise to be spread to new recorders).
RECORDER	Still some areas where the ID material is poor e.g. insect ID keys
RECORDER	Internet search engines don't understand binomial names - so if you search for "Bellis perennis" in Google, you'll get Bellis perennis first, followed by all the Bellis and all the perennis. Usually this isn't a problem but if you search Google Images for something obscure it's not obvious when Google has broadened the search. - - Flickr also contains a lot of useful photos, but they're not easy to search for and generally presented without names so no use to me.
RECORDER	In order to record insects I need permission to collect, equipment, modern useable keys, access to a reliable reference collection and/or help from experts with tricky identifications as I build up my own expertise, and finally a destination for my records. To be able to upload largish numbers of records at a time is essential. - I firmly believe that keys should be available online as "living" documents that can be updated when valid feedback is provided or new species are added to the UK list. Checking species that are new to me against reliably-named specimens is time consuming so having a reference collection that is not too far away is helpful. Sadly what we're seeing is the effective closure of collections and the non-replacement of staff when they retire or worse are made redundant. - I provide all the above at no cost to the "system". I expect my records to be made freely available to non-commercial and academic users.
RECORDER	1. Not all organisations which collect and/or collate data seem to share that data with the relevant Local Record Centres or the NBN and I feel strongly that this is something we must pursue and encourage to be able to move forwards in the knowledge that we are all working towards the same aims. - - 2. The proliferation of recording areas concerns me greatly. We now have data being sent to many individual recording schemes (local, regional and national) as well as to the NBN directly and to Local Record Centres (plus others I am sure). This makes things very difficult for recorders who have to keep track of where they have sent records and where they have not and it certainly does not help data duplication and I assume changes as it goes along different lines. I strongly feel that Local Record Centres should be the main local collection/collation points for ALL records, that LRCs should go to lengths to ensure that all data (following validation/verification) is uploaded to the NBN, and that those wishing to access this data should obtain it from either the relevant LRC or LRCs or from the NBN. Fragmentation of the recording effort and complication of data paths is hampering the development of the recording base and hindering further positive evolution of the recording community and how it uses accumulated data.
RECORDER	Proliferation of recording schemes means it can be problematic deciding where to send data to reduce problems of duplication (e.g. do you send your <b>taxon</b> results to <b>taxon</b> recording scheme only or in addition send to county recorder, local records centre, etc, etc). Also, some recording schemes are better than others at forwarding data to other providers again complicating process. - - Quite a lot of variation in how different taxonomic groups work with recording community. Some are very active and offer lots of opportunities to learn through courses and field trips and others act more as just a talking shop. Would be good to see more of the former. - - Museum reference collections are increasingly becoming limited to major cities only meaning access less easy for some or just simply costly
RECORDER	Access to some sites is getting difficult but also permission to collect <b>taxon</b> - essential for accurate identification of species which often need microscopy. Some organisations./ landowners are becoming paranoid about collecting because of constraints on collecting edible species (especially commercially). Unfortunately there is a great deal of ill-informed misinformation. Others see it as an opportunity to make money and we have been asked upwards of £100 to foray some dishes. We decline to do so! - -
RECORDER	commitment and willingness to participate
RECORDER	Lack of issue- free online recording software
RECORDER	Submitting records via Mapmate and continually having problems synchronising with county recorder.

RECORDER	It is not always clear whether records are passed further up or down the recording hierarchy and so whether or not records should be submitted to different schemes.
RECORDER	As a recorder, I collect in various counties and countries, across a range of taxonomic groups. I want to share my records with LRCs, NBN, county recorders, recording schemes etc. but this would be incredibly time consuming so it puts me off sharing records. As a result, I tend to just share records with national schemes rather than at the local level so that I do not have to send out hundreds of emails a year. This is my biggest issue with recording in the UK; there are far too many levels and it is over-complicated by the sheer number of organisations/groups at both local and national levels. - - For some citizen science projects, it is not clear where the data collected ends up. Also, those data collected are not always very reliable so this needs to be considered before they are uploaded to the NBN, for example. The 'Great British Bee Count' is one example of a citizen science project, which is great for public engagement, but not so great in terms of data reliability.
RECORDER	As a person who wants to use and collect data that is useful for the purpose of conservation I find it frustrating that many of the present recording organisations do not collect quantitative data ... presence or absence is pretty valueless. The BSBI is particularly bad at this. We frequently count rare plants by walking round their sites clicking a GPS each time we find one. The files created in this way are very robust and can of course be plotted onto maps There needs to be a standardised format n some means for storing them. - -
RECORDER	Development data is not shared readily and not collected efficiently
RECORDER	More advanced search options in NBN to search for certain groups e.g. protected species by area (preferably site boundary rather than 1km square. - Access to reference collections - National Museums Scotland allows access to collections for reference use, but the very limited number of staff mean this is only available for certain taxonomic groups at certain times. - A lack of recording groups for many taxa including [redacted] as a whole. This inhibits the collection and sharing of records and expertise. - Sharing of biological records from ecological consultancies, government organisations and NGOs/recording groups. For example some taxonomic recording schemes do not share their data with NBN, which makes searching for certain groups more onerous. - Periods when NBN gateway is very slow or stops processing requests.
RECORDER	Limited funds to collect data is a constraint. Confidentiality issues associated with sharing data records.
RECORDER	Not found any problems in current searches but use is relatively low to date.
RECORDER	participating as an active member of citizen science projects or recording activities have been a bit difficult because there are so many of them and often because one, I don't have much time and two, I don't have self transportation to get there easily.
RECORDER	Getting sufficient reliable data to make an informed decision; Better maintenance of NBN so that there are far less 'down' days, Better data management of NBN with far less duplicated records
RECORDER	Data sharing with local record centre (LERC). Terms of sharing offered are unfair.
RECORDER	The potential of the Internet and online resources is only at a fraction of its potential. Recording apps are improving but cover limited taxa. Habitat - related cross-taxa recording apps and resources are virtually non-existent. E. G. An NVC identification app would be great to guide recording.
RECORDER	The endless insecurity on funding is debilitating and the risk of loss of staff is significant.
RECORDER	Introduction and increasing use of iRecord makes my role as recorder/verifier more complex, time-consuming and stressful than it was, but it does have its plus points and should improve over time, I hope. - - Loss of base county records by previous recorder makes me feel uneasy.
RECORDER	My time to process the records and my lack of computer skills.
RECORDER	The data we record is requested in far too many different ways. For some species groups organisations want detail that I would only be able to provide if I were an expert, and casual observations of presence absence don't seem to be sufficient. Even is some groups I am familiar with, I cannot just report seeing species x at site y. I have to register a site - BTO Bird track has gone down this sort of route meaning I no longer use it for most casual observations.
RECORDER	Gaining the skills and experience locally - but it all takes time and commitment, I suppose.
RECORDER	There is always the tension between the ways in which records get picked up by the local groups and get onto the NBN gateway. Frustrating as I can see that many of my records have never made it onto the national database despite being submitted to the local recorders.
RECORDER	Finding time to do it.
RECORDER	Inconsistent recording criteria between local and national schemes and different record input systems can mean entering the same data more than once in different systems. - Communication and data-sharing between county recorders, LRCs and national schemes can be slow, incomplete or even completely absent. Again this may mean submitting the same records more than once and may lead to duplicate records in datasets. - Many online data submission systems do not accept spreadsheets. Manual entry can be very time-consuming, especially for recorders with lots of records for multiple taxonomic groups.
RECORDER	It's working... I'm having fun with this. It would stop working if I couldn't ask for help with ids.
RECORDER	There is nothing problematic other than finding time to actually get out and do survey work. - - Fife Nature is TOP CLASS
RECORDER	I would like to know what records are useful ? e.g. is it really worth sending mammal records of common species . to the Local Records Centre ? - Knowing which recording scheme to use - e.g I will now record Bird records on Bird Track and will not submit these to the local records centre
RECORDER	Time taken to submit records
RECORDER	Reference material is hard to obtain in [redacted] area . There are no natural history museums closer than [redacted] . But photographs on reliable web sites are almost as good.
RECORDER	Data management because not very computer literate . - Also with a moth trap catch of 20+ species a night it is much quicker to write them down than search through a computer spread sheet.
RECORDER	Grid ref can be an issue for recorders
RECORDER	When I send email records to the council about alien species I rarely get any response so am tend to be less enthusiastic about sending additional ones.
RECORDER	Although I am grateful that local councils apparently support and foster all kinds of different ecological, environmental and biological initiatives - studies, groups and activities - I find dealing with "the council" challenging. As with all British public institutions, the overwhelming attitude emanating from Jo Council-employee is one of suspicion and distrust. The default position of many on the council is to assume a person contacting them has fallen behind in payments of some sort, is some

	kind of threat to vulnerable people, needs or wants a benefit, or represents a trendy-lefty viewpoint that is incompatible with council systems. I fall into none of these categories and would prefer it if interface with the environmental arm was separate from general council matters.
RECORDER	Data sharing has improved significantly with the advent of iRecord, but more needs to be done to develop a robust data sharing network that ensures all data gets where it is needed.
RECORDER	There is never enough time / money to support in all the of the ways that we would like. In particular, we feel that supported regular staff time is vital in fully involving volunteers over time.
RECORDER	Perhaps too many access points for recording - would like a one stop shop which means that local records are used locally.
RECORDER	I am the only active vc recorder in [REDACTED] county ([REDACTED]). - So, another vc recorder, for [REDACTED] county would be very helpful.
RECORDER	Lack of funding for individuals. - Funding is only available to organisations
RECORDER	Exchange of data between different recording databases and organisations. to many barriers in the way.
RECORDER	The National Databases are sometimes a let-down - this applies to the publically available sites such as NBN and GBIF but also my own County records. - I find it sometimes difficult to interrogate individual records or Datasets - owing to the sites slowness on the Web, NBN specially, being slow or unavailable some of the time - I find some records, many even, are not shown on the National Databases - suggesting that some collectors or collators of records are not submitting to the National databases.
RECORDER	Too many routes with which to send in records. Amongst some of these routes there is the bear minimum amount of detail to produce a record but insufficient to inspire confidence in the recorder. In several cases some of the smaller routes to do provide contact information to allow the county recorder/verifier to send any queries to the recorder.
RECORDER	I have a lot of record of species and habitats not submitted as there is no easy way to submit these records to NBN.
RECORDER	Lack of clarity on which recording schemes will accept iRecord data.
RECORDER	Training or self-study (sometimes)
RECORDER	Data from the BTO is very out of date on the NBN. - Not all local recorders are making full use of iRecord.
RECORDER	Getting casual records verified on iRecord. Our organisation has a bespoke form on there that volunteers use to record wildlife sightings, but of 1000 records over the last 4 years, only around 100 have been verified.
RECORDER	Different schemes, people, and projects use different species checklists.
RECORDER	I have no issues. - - It seems strange that commercial companies can access data and use the information to support commercial gain whilst record centres can struggle to finance themselves. It is however good that the data is being used to inform planning decisions and I would not want to reduce the use of data.
RECORDER	National to Local Recording transfer of data
RECORDER	Not all recording schemes or LERCs contributing to NBN so often distribution is unclear as several sources have to be consulted for a clear picture of species distribution. - Lack of funding. -
RECORDER	more, or even some, funding / employment opportunities - - more streamlined data entry -
RECORDER	There can be a lack of change from one survey to the next and from year to year so boredom can be an issue.
RECORDER	The centralised LERC database is THE main problem. It does NOT reflect the "cleaned" databases managed for [REDACTED] by [REDACTED] national [REDACTED]. This has led to immense frustration now going on for over 12 years... In essence the LERC database (taxon & species in particular) is full of errors and erroneous records - they have been offered the cleaned datasets but are unwilling to over write their datasets... therefore what they share with others is NOT a reflection of the verified records... frustrating to say the least.
RECORDER	I find IT recording systems complicated. I'm not a technophobe, just inept when it comes to navigating systems online.
RECORDER	some taxons are not verified frequently enough on iRecord
RECORDER	It would be advantageous to have a local recording centre as relying on a single individual, no matter how efficient and reliable, is "putting all our eggs in one basket".
RECORDER	It can at times be difficult to identify resources to help with the identification of certain species groups. Online resources are sometimes of dubious accuracy and reliability. - - Trying to find local support can be difficult for the 'enthusiastic amateur' with limited skills. - - On-line feedback varies hugely between different species and groups. Submission of records to eg irecord is easy, but if records are not checked or verified for months/years this can be demoralising or demotivating (ie whats the point of recording if no-one is interested in the record)
RECORDER	Training or self-study to increase your own skills as a Recorder or Data Collector.
RECORDER	Co-operation at an organisational level between the voluntary recording community and conservation bodies is not always as effective positive as it should be. There is more rivalry and less mutual understanding than there should be. I'd like to see voluntary recording serving the needs of conservation better and conservation bodies being more directly supportive of recording generally.
RECORDER	We have begun recording data digitally on GIS but this needs to developed internally for sharing amongst other users - i.e. local recorder at Local Records Centre.
RECORDER	Managing my own records and extracting/reporting datasets from them. I do a lot of work on specimens that can take months if not years to conclusively identify. Increasing knowledge (mine) and taxonomic revisions result in many specimens being re-identified. Extracting and reporting retrospective records and re-identifications is not straightforward as recording packages don't support it well (I use Mapmate but cannot figure out how to synch records with other users or recorders using different recording packages). - - Incomplete or out-of-date species libraries in recording packages. Mapmate does not cover some groups that I work on and has limited capacity for updating taxonomic revisions. - - Getting difficult specimens identified by referees: the Post Office is not always willing to send specimens in the post and has a bad record for damaging them. Couriers or larger, safer packaging are expensive.
RECORDER	The percentage of records that are verified after submission to iRecord is very small. This is de-motivating for recorders when they do not see their records moving on to the NBN Gateway. - - From a personal point of view it is often tempting to send records to multiple schemes in the hope that they will be used by someone. E.g. for invasive species I have found that sending the record directly to the landowner or manager has been the only way to ensure any action is taken. - - It is also unclear which organisations share their records with others and also which use records from others. -
RECORDER	Main issue (for me personally) is lack of funding for local events (eg training as mentioned in 2/19) - - Record Centre is a

	vital focus point but again the problem of funding, getting tougher as grant aid is being cut with more organisations having to compete for a diminishing pot. This results with projects not being able to go ahead (eg to engage and inform the general public). Local Authority money is also likely to vanish for anything other than what is perceived as important to the Council Tax Payers. A circular problem, if events and publicity cannot be funded to inform and educate the public, then they will not see the value of biological recording, so they will not vote to fund it! - I live in a rural county with only a couple of populated centres roughly in the centre with [REDACTED] miles to the far west ([REDACTED]) and about [REDACTED] miles to the east so recording in the less known areas is difficult, time consuming and costly (travelling etc). -
RECORDER	Data management of our own records. We are currently in need of a bespoke database, which is proving hard to find/create, or to find time to create.
RECORDER	clunky search engines, tedious and time consuming data submission forms, duplication of information across different organisations and requests to supply data that is already available elsewhere! Too many 'apps' requiring different platforms or access to internet in the field where it isn't available. 'Apps' that are inflexible about ad-hoc locations.
RECORDER	Being able to upload a photograph online of the recording would be advantageous for referring back.
RECORDER	Knowing who to send an ad hoc record to - there are so many and you do not know if they communicate with each other. In my village, we have a village page linked to iRecord; we are in the [REDACTED] area [REDACTED] which has a page linked to iRecord; we are in the [REDACTED] local [REDACTED] Recording Group Area and they have their own collection; I have an app that links to the [REDACTED] national scheme [REDACTED] Society and then there is NBN. - It is also insulting to send in a record of a brown hare and be told that this is a species which is difficult to identify so I need to have it assessed!
RECORDER	Sometimes transport for volunteers is an issue.
RECORDER	training courses sometimes not local and difficult to travel to by public transport -
RECORDER	There are too many different organisations and different places to record the data - difficult to figure out who to give your data to sometimes. e.g. iRecord, iSpot etc.
RECORDER	Sharing of mapping data. Sometimes distribution maps not available on particular websites (not linked to NBN for some reason)
RECORDER	sharing of data from organisations such as SNH & SEPA
RECORDER	Data flows - in particular with advent of online recording and app, there are so many more data out there and it is an increasingly difficult burden on data collation time/resources. Also, for lots of recorders, despite best intentions, recording schemes, records centres, etc., cannot enact smooth data flow pathways so recorders are sometimes being asked for same data from multiple sources and sometimes data that goes to one source is "lost" in that it is not integrated into the recognised and validated regional datasets,
RECORDER	I tried I-spot but couldn't work with it. There is often a long time lapse between supplying photo & specimens and getting ID confirmed. Sometimes I think some recorders are not really doing anything with the records I provide as and just rely on their own research/finds. -
RECORDER	Use of reference materials to check distribution of species. This does not apply to [REDACTED] LERC [REDACTED] but I have had difficulty in gaining access to similar resources in [REDACTED] Region.
RECORDER	As ever the long term funding of volunteer support officers is an issue as it funding the data mobilisation. The BDS has an unpaid volunteer Country Recorder but the number of records coming in has now increased massively over the last 10 years and this creates a capacity issue. Likewise with the [REDACTED] local group [REDACTED] funding has now run out and data mobilisation is reliant on one expert volunteer who cannot go on doing it for ever. The data flow is working pretty well but the speed at which records can be mobilised will be hampered by a reduced capacity to do so. - A one stop shop for all biological recording voluntary activities based regionally would be a useful focus. The [REDACTED] local group [REDACTED] does provide this to an extent but does not have the capacity to deliver volunteer support to a number of new recorders. Many natural history organisations are struggling with an aging membership and a difficulty in getting new office bearers, so finding a way to support these organisations or finding a new way to make them sustainable is something that needs to be addressed.
RECORDER	I do not have any particular difficulties at my level of recording as an individual member of the public.
RECORDER	Far too many competing routes for submitting records (mostly online now, but the few remaining paper ones aren't without problems too). Hardly any collect all info in the most useful format; even the best of them are unnecessarily clunky; the worst are awful. Some don't even work with some common web browsers. (If Amazon & Tesco had such poorly-designed online forms, they'd never sell a single product!). - Even after a record has been submitted, there are often very long delays before records submitted to some schemes are published on NBN - if ever (some just seem to disappear forever). - Difficult or impossible for contributors to most schemes to select & view their own records after submission, much less edit them (the BTO is an exception). Even scheme verifiers can find it difficult to manage records in iRecord (e.g. to delete an erroneous record), even if they are alerted to a problem immediately. A few records submitted to iRecord seem to become genuinely lost - I don't just mean they don't reach NBN, they are lost from Indicia.
RECORDER	Introduce systematics to University courses so the amateurs can call on this expertise in their quest to identify
RECORDER	Some databases are quite difficult to use but [REDACTED] organisation [REDACTED] does give us support when we get into difficulty.
RECORDER	Living in a remote mountainous area it is not always possible to get out when needed. I am also increasingly concerned about sporting estate muir burning methods and unregulated fencing which makes walking and species recording difficult. Also the mass slaughter of species such as mountain hare in my area.
RECORDER	I'm afraid I am only involved in activities that I either do through my profession, or that fit in well. There are other activities which I cannot participate so easily because usually their timing coincides with when I am busiest in my work - I don't think that can be changed.
RECORDER	More promotion / coverage - More on outcomes of what is recorded / done - answering the so what question
RECORDER	Lack of funding for record keeping / collating for recording group.
RECORDER	The thing that doesn't work well is the identification and assessment of records from schemes that are outwith the National Moth Recording Scheme as detailed above: My primary interests are moth recording and bird recording and the collection and management of these records by the Butterfly Conservation National Moth Recording Scheme (BC NMRS) and the British Trust for Ornithology/Scottish Ornithologists Club respectively works well. I'm the [REDACTED] taxon [REDACTED] recorder for VC [REDACTED] [REDACTED] and the only difficulty I have is in identifying and obtaining moth records that have been submitted to other recording schemes and various on-line applications e.g. iRecord/iSpot and my own local [REDACTED] Record Group. These records tend to be casual records often from non-specialists, however they can be very valuable as they may come from visitors to areas that moth recorders with traps might not visit. In [REDACTED] county [REDACTED] this is very much the case where



	there are very few resident recorders. Whilst BS NMRS do their best to repatriate records that they have identified from these various schemes it is often difficult to assess the records as the records contact details may not be readily accessible and the requirement for an acceptable record may have not been met. Most mothers who operate traps as residents or visitors to [REDACTED] county, do submit their records to [REDACTED] the CMR but I'm sure there are many good records [REDACTED] don't get. There is a limit to the time most CMRs will devote to "mining" all these schemes, and dealing with the problems of assessing these records.
RECORDER	Beewalk website I find to be a bit counterintuitive.
RECORDER	I haven't had access to reference material since I retired, so I'm not always able to submit a record in case my ID was wrong. I dislike killing things and often a photo isn't enough for someone else to ID a specimen. - What is working less well for me nowadays is the tempting training sessions that are on offer that I can't get to. I think this is more my problem than the organisers', however. There are events not too far away, that I miss due to poor time management. - I like to keep my own equipment, and I am currently using a TrophyCam with a busted hinge because replacement hinges aren't sold; but mostly I would like to find out more about how this camera actually works, with questions that practical training doesn't seem to address. - Most of my records are for plants or animals I wasn't expecting to see, hence, common species don't get into my records very often.
RECORDER	I need some individual training on things as simple as loading photographs but such skills seem to be assumed these days
RECORDER	Access to records from many parts of Scotland is not at capture level and is only presence or absence making them of limited use.
RECORDER	As I said above I have become less active due to other commitments as well as creeping age!
RECORDER	Generally I find what I am looking for. - For submitting records the [REDACTED] local group system works well for me.
RECORDER	It can be difficult to find relevant resources; much of what's available has a N American bias. I am gradually building up a list of worthwhile UK resources but it would be good if a fuller list were available centrally for all to use.
RECORDER	Deciding which record centre to submit records to.
RECORDER	Nothing in particular apart from my own ignorance.
RECORDER	online form not very user friendly & sometimes act oddly eg Capcha verification
RECORDER	no comments one way or the other
RECORDER	There are a lot of venues through which to send data. However, not all of these seem to flow through to where the data needs to be. - For example, one may submit data to ARC via NARRS or their "record pool" - but that data does not seem to go anywhere but ARC. It receives no local verification prior to reaching NBN for example, and can if generated by novice recorders provide data which are not valuable. - Or one may also submit to Froglife where there is equally poor data flow - and data are not fed back to the local records centres where it would be of more value. - Thus, accessing these data actually proves exceptionally problematic, or impossible.
RECORDER	It would be good if all data collectors and schemes used irecord.
RECORDER	growth in the number of online recording/observation websites and apps not affiliated to a recording scheme and verification/validation of data and repatriation of local data. - - Lack of local expertise - -
RECORDER	Quality of cetacean methods vary and standardisation is a greater issue due to wide range of stakeholders that collect these data for different purposes. Data access can also be problematic due to issues concerning IPRs, commercial value of data, etc.
RECORDER	NBN should act as an umbrella and final place for records but its quality control is so poor that its record sets are hopelessly unreliable and I avoid it. - - The proliferation of digital recording schemes and apps is very confusing for a recorder who tries to collate data sets.. - - RECORDER is far too clunky and full to be usable by normal recorders
RECORDER	The flow of data from recorders to the people who need them isn't clear. In fact it appears to be confused, disjointed and inefficient. I often don't know who to supply my data to and who will eventually have access to them when I do (I want maximum exposure of the records I collect). - - Related to this is the lack of visibility of my (and others) records. When I submit them to a scheme I expect them to make their way on to the NBN (at a good resolution) so that I can see the contributions I'm making and see the distribution of things I'm interested in.
RECORDER	as above, but my biggest issue is just sitting down and making the time to sort out my records and submit them regularly.
RECORDER	It would be a help if formal training days in the [REDACTED] area of Scotland did not need travelling for more than 1-2 hours to reach the site.
RECORDER	It can be difficult to submit records whilst out on site. I have started using apps to help with this. Would be good if there was an app from our local record centre.
RECORDER	Some LBRCs and individual recording schemes do not provide a useful professional and/or efficient service. Some rely on individuals/volunteers who so not have the time/resources to provide a professional service. - - NBN is notoriously cumbersome, user unfriendly and unresponsive. Increasingly it has become necessary, albeit more time consuming, to approach individual organizations directly, which negates the purpose of having NBN in the first place. - - The recent requirement to obtain individual permissions from data providers has made the process even less efficient. Data providers should make their data (unless confidential) freely available as a principle or at the very least specify what purposes the data can and cannot be used for. For queries/liaison, it should be possible to open communication directly with the data provider rather than anonymously via NBN as a middle man. NBN unnecessarily complicates and delays the process. - - On mammal recording scheme I provided data to was very slow in uploading data (e.g. it took at least six months for data to appear on their web site). A query about whether my data had been received was dealt with in a pretty unprofessional manner and as a consequence I stopped providing data to this scheme, which is not in the spirit of biological recording. - - I am also aware that, sadly, some schemes do not co-operate and share data between themselves. Such parochialism is not in the spirit of biological recording wither and harms rather than benefits it. - - At the other extreme, the BTO's very successful and widely shared Birdtrack recording system is being heavily promoted with (as yet) no scientifically demonstrated benefit, a fact indirectly acknowledged by the need to conduct further research into how this data set can be used. The system can be hugely beneficial if it can be demonstrated to be scientifically valid and could be another example of how to collect and freely share large volumes of biological data.
RECORDER	Having got used to using the NBN Gateway, the new 'Atlas' website seems much more difficult to use, at least for the kinds of things I want to do. - Just getting out and about to record in a large and sparsely-populated area with poor infrastructure is becoming increasingly expensive. It would be nice if some grants were available to assist with travelling expenses. - It would help individual recorders if the local group was able to loan out equipment such as bat detectors, microscopes, trail

	cameras etc, but there is no money for this kind of thing, and nowhere to store stuff since we have no premises (other than people's houses).
RECORDER	Sometimes there are several different organisations or groups that cover the same or similar subjects, and it becomes difficult to know which to join or assist with. There is usually no obvious statement of how the different bodies collaborate or share data. There is also a general worry that contributing to some data records may make data available to members of the public who would use the data for bad purposes e.g. badger baiters.
RECORDER	Reporting to national schemes for individual organisations but would also like to enter ad hoc records can be collated nationally - unsure that this happens - -
RECORDER	we have limited staff and so the sample sizes can be kept small
RECORDER	Knowing how and where data is used e.g. sending bird records to a local bird report - how are those records captured elsewhere, are they being used elsewhere?
RECORDER	I am aware I will not be getting to others that might come across this species. I ask all the current surveyors each year if they know of anyone else and this grows slowly.
RECORDER	Training in identification is too infrequent and I can't often attend by the time I find out about it.
RECORDER	as a beginner in <b>taxon</b> , it would be good there was a local <b>taxon</b> group to exchange experiences with
RECORDER	Lack of co-ordination, access to data, knowing where data goes
RECORDER	JNCC Seabird Monitoring Programme information is woefully out of date. The publically available online database on population size has not been updated since Oct 2010. It is difficult to access data on seabird breeding success, or European Seabirds at Sea data. Clearly this monitoring programme, which is of vital importance, is under-resourced
RECORDER	It is a challenge to widen the number of people recording data, while keeping a close eye on the quality and accuracy of the records. Since the system is dependent on volunteers, a priority is training and mentorship. - Also, time is taken up checking and validating the records submitted, to ensure 'clean' data-sets.
RECORDER	Recording ad-hoc data
RECORDER	It is sometimes unclear to which organisation casual records should be sent, either because a sighting is in a certain geographical area, or to avoid duplication of records, or out of ignorance that the organisation even exists. - - It can be disheartening if records don't appear (even provisionally) on the species distribution maps on an organisation's website, though it's understandable if they are short-staffed.. - - Sometimes I experience difficulties with a reporting website (e.g. selection maps are blank or form an incomplete mosaic; drop down species selection lists are also sometimes blank); I haven't discovered the cause, it may well be my computer but it's still frustrating when it occurs.
RECORDER	Wildlife records for geographical areas (of Scotland) without organised local recording schemes and where the taxonomic group is also not covered by a national recording scheme, leading to 'gaps' in recording coverage.
RECORDER	There is not an emphasis on submitting recordings individually as there is usually a general species list collated and submitted. I do not have much experience of submitting my own records and am therefore not very confident about doing so. However, I would be able to get advice from members of the groups on this.
RECORDER	<b>national scheme</b> changed their computer recording system last year and I had problems with it, resolved by those at HQ, but it is too soon to say whether it will be easy this year or not (no <b>taxon</b> seen so far)
RECORDER	Lack of continuity in species dictionaries. Shortage of joined up thinking. Shortage of taxonomists.
RECORDER	Lack of co-ordination and in some cases even active disengagement with regards record sharing - - Different recording systems/spreadsheets
RECORDER	It all works pretty smoothly.
RECORDER	Data Management
RECORDER	Accessing up to date data from NBN and making sure RSPB datasets and those of other organisations are accessible to everyone, as well as being up to date.
RECORDER	Too many different systems for different taxa. For example, I rarely pass on my butterfly records as I can't add them to BirdTrack, but I do add some dragonfly records. So some of my data is being lost in terms of its broader use. I don't have time to use multiple systems, and only use BirdTrack.
RECORDER	Works not well: if you want the data to be available for multiple users, you have to submit data to various schemes as not all organisations freely exchange data between each other
RECORDER	Access to records on the NBN Gateway has been problematical over the last few years. - Serious reservations about AoLS and whether it meets the needs of amateur recorders and recording groups - Working in an under-recorded areas and finding that access to data is either restricted, only available at low resolution and repeatedly having to ask every time I wish to access a restricted dataset. We need an open data policy - Access to scientific journals for amateur recorders is prohibitively expensive (c. £35 per download) which limits access to information on identification, distribution, taxonomy etc.
RECORDER	As a county recorder I am sent data from some online sites such as irecord. there seems to be proliferation of casual recording sites with different standards and some of this data may not get back to me or the national scheme
RECORDER	As a casual, ad-hoc general, member of the public recorder it is not always clear where best to submit mixed records to obtain maximum value for minimum effort. Many people have never thought of submitting records from their gardens or surrounding and have no idea how useful that would be.
RECORDER	The lack of (up to date) identification literature for some taxonomic groups- particularly for arthropod groups. - - The unclear connections between recording organisations- between schemes, groups, and ultimately iRecord and NBN atlas.
RECORDER	Communication is sometimes difficult- finding your nearest ringing trainer or county moth recorder for example.
RECORDER	Data management of own records - getting them from notebook to computer more efficiently! Using BirdTrack will help greatly with this, once I start using it.
RECORDER	Data flow to national schemes and other interested parties is still not ideal, and the switch from NBN Gateway to NBN Atlas will make dataflow almost impossible to achieve whilst keeping data safe from misuse. -
RECORDER	Across the UKOTs, there is no consistency in any monitoring programs, data collection or curation approach.
RECORDER	Collating records from citizen science and judging their worth (and reliability) is an increasing problem. Getting more people to record what they see is great, but there comes a point when the data being generated is of little or no use, and it takes a long time to sift through the chaff to find the wheat.
RECORDER	It's frustrating to submit records and not then see dots appear on maps. Not everyone is picking up records from IRecord, and I don't have time to submit my records in a number of formats to a number of people across taxonomic groups and

	geographic areas.
RECORDER	Ensuring open access to data - Identifying opportunities for data integration and/or interrogation - - both reduce value add from data collected
RECORDER	The increasing popularity of photography can make it harder to get across the message that natural history, recording and conservation sometimes still requires specimens to be retained and studied. The loss of museum funding makes this situation worse, resulting in people becoming less familiar with the value of specimens, and less able to find out how to get involved at that level. - - Access to land for recording, especially when specimens are required, seems to be getting more difficult - permission often has to be applied for in advance, assuming that a landowner can be found, which makes it difficult to take advantage of unplanned spare time. - - Online technologies such as iRecord are making it easier to share data, but there is still a lack of consensus between recording schemes and records centres as to how data can be shared and stored.
RECORDER	Converting interested people into hard core taxonomists or specialist recorders is problematic despite the amazing reference material now available as literature and on the web and despite the great concern in young generations for the health of the environment. As a museum curator, getting across the need to take a small number of samples to enable accurate identification of species eg of invertebrate is a difficult message. - - There is now huge confusion in amateur recorders as to how best to report data to ensure it is used most effectively. National recording initiatives do not seem to have appreciated the role that LERCs perform in getting data to local decision makers and that free access to all data threatens this supply of information and although a laudable aim there needs to be a system put in place to fill the gap of LERCs if they are unable to survive financially as a result.
RECORDER	Fragmentation - data held in multiple places - supply of grid references in Lat Long format from irecord apps
RECORDER	The least successful area for me is concerned with keeping abreast of national schemes and their requirements. I would prefer to submit my records in one lump and they often span across a dozen national schemes.
RECORDER	It is important to be able to have a search function that is not restricted in terms of search terms. The full range of data present in the original submission plus any additional information added subsequently should be available to use as search terms. It is currently not possible to do this using iRecord. If the search options available are restricted then the usefulness of the platform is dramatically reduced.
RECORDER	There is a lack of one-to-one mentoring for new/ developing botanical recorders. However, there are opportunities to engage with experts in group outings/ workshops. The vice-county recorder network is ageing and not all VCR are au fait with the technology. - - Data entry is a time consuming task... I started using BirdTrack, but found it quicker to type up in Excel. - - There is also a need to keep a track of where you send records, to avoid duplication.
RECORDER	Local - confusion among recorders now as to where to send data because of conflicting messages from national data custodians. Lack of funding streams. Reliant on data enquiries to sustain income (because of lack of funding) yet national bodies insist on making that data freely available to the detriment of that income, whilst not identifying alternative income streams - - Regional - Lack of enthusiasm to work at a regional level due to lack of funds - - National - Poor data flow advice with little agreement among all concerned. Emphasis on data use by national bodies with little regard to how data is actually used locally and regionally. This also impacts on funding streams for data gathering, collation, management and dissemination potentially jeopardising mobilisation of data. Too much data appears to be used once, eg for national atlases or DEFRA projects, and sitting in data warehouses with unrealistic access for critical users such as planners, LA ecologists and conservation managers, developers and project managers. Too much data is being 'grabbed' by one off schemes and national bodies resourced sufficiently to produce apps that would appeal to recorders who largely are unaware their data is not used efficiently in the way they expected - - Despite much recent insistence, from Natural England to change LERC structures, governance, change data systems and prioritise data capture for their own needs, to the detriment of local wishes, as a requirement for funding via annual service agreements they stopped all agreements and such funding. - - This meant LERCs were/are susceptible to increased jeopardy and increased costs to enable them to readjust structures etc to other user needs
RECORDER	Data services such as NBN wanting to publish everything open source with no return to recorders. - - Data services such as irecord expecting all data to be good quality and expect volunteer verifiers to check data day in day out and expect no return. -
RECORDER	Information on species distribution and records is not always up to date and of more concern is that some schemes, organisations (including national) and recorders do not make their information publicly available.
RECORDER	reaching more people to submit records - PR - on site advertising - working with boat based potential contributors
RECORDER	The main issue is finding volunteers who are reliable and willing to participate for more than the short-term. - - [REDACTED] WeBS counts and despite the increasing popularity of birdwatching find it difficult to find volunteers willing to commit to counting a site one day a month.
RECORDER	It can be an expensive hobby and although moth traps and generators are available to borrow from Butterfly Conservation, it would be good to be able to access "Citizen Science" funding for personal purchases. Maybe that already exists, in which case the details should be easier to find.
RECORDER	Viewing records for specific species or groups is a rather long-winded process currently (via iRecord). - - Lack of funding for scheme organisers to run identification training workshops. We want them to be free to encourage more new recorders, but cost are unavoidably incurred by us as the organisers.
RECORDER	Finding time to do some of the recording (also weather issues when doing transect) - Lack of active BRCs for some areas for which I have data.
RECORDER	Records not always being verified on online systems
RECORDER	Data flow can be confusing. Locally many recording groups are now using iRecord to capture data and share it with the local environmental record centre. However it's not always easy to find out if iRecord data is being picked up and used by national schemes and societies, or if you should submit the records via another route. More transparency around data flows and verification would be helpful.
RECORDER	Issues with some [REDACTED] LERC species maps that link to NBN Gateway due to taxonomic name changes, so only most recent records since name change occurred are displayed - this seems to be beyond [REDACTED] LERC's control. [REDACTED] LERC also do their best to update maps, but with small number of staff with large workload, it may be several months before these appear. However, these are usually more reliable than NBN maps that contain some erroneous datasets (& currently don't have most up-to-date [REDACTED] LERC or Butterfly Conservation data). There are also issues with National Moth Recording Scheme maps: MothsCount website says 'We are currently unable to display the NMRS provisional macro-moth distribution maps using webservices due to technological incompatibility with our website and the new NBN Gateway. We are working on a solution to this and will let you know when this problem is resolved.' These are only provisional maps though, as updated



	maps will only be made publically available when national atlas is published in 2018.
RECORDER	A) Too many routes of data transfer. It's confusing - especially for beginners but not only. I'd support moving to centralise to one national biodiversity records portal - though the recording landscape is probably already too fractured?? This makes data verification a lot more complicated than it could be. - B) Projects that are not run by "amateur" idealists are usually too short-term these days. That is not in keeping with the very nature of biodiversity research or conservation needs. This needs changing. The problem is down to funding cycles - so alternatives have to be developed. - C) Budgets to help with travel costs etc for volunteers seem to be a ubiquitous issue in the nature conservation world. - D) Access to more advanced courses on free species ID for volunteers seems to be very much missing. - E) We have to rely on too many low skilled volunteers. Too few ecologically trained professionals and specialists seem to be able to have time to volunteer their skills in the NGO conservation field outside of their work place. Is there a way to get specialists more involved with volunteers? - They are needed to guide projects. I've straddled both worlds in <span style="background-color: black; color: yellow;">area</span> and found the separation of the two "tribes" concerning. - F) Too many biodiversity duties are pushed from local authorities onto the shoulders of "cost free" volunteers as they keep getting rid of biodiversity staff, like ranger services and biodiversity officers. Not sure how that could get addressed from our end.
RECORDER	No problems encountered so far.
RECORDER	I do not have any problems with what I do just now in relation to my own records, though I would like more biological recording apps.
RECORDER	Aware that despite working in the sector, I don't hear about all of the different schemes looking for records. - Can be difficult to know where is best to submit data to. Don't want to cause duplication, but at the same time want it to be available for local decision making as well as specific study or research. Not always clear if I submit records via one survey or to one scheme, if it will all be made available to the LERC or NBN Atlas
RECORDER	Can't think of anything specific.
RECORDER	No current problems.
RECORDER	Not every birder is using the same system for keeping their records - there are multiple online systems for instance. Many birders are also technophobes too (much like a lot of naturalists too, probably) which also adds to the issues.
SCHEME OPERATOR	See answers for 'data recorder' section: There is never enough time / money to support in all the of the ways that we would like. In particular, we feel that supported regular staff time is vital in fully involving volunteers over time.
SCHEME OPERATOR	Receiving and passing on records is complicated and difficult because some people or records centres do not allow us to release the records they give us.
SCHEME OPERATOR	Managing historic data supplied by individuals/record centres under license is problematic as we are limited to how we can use the data (e.g. they aren't open). One example of this is us not being able to transfer our data management software of choice (iRecord) as it's an open platform.
SCHEME OPERATOR	We would like to organise effective local networks for volunteers participating in the scheme, while taking into account data protection issues.
SCHEME OPERATOR	Obtaining funding to maintain long term recording of the UK Seabird Monitoring Programme and periodic seabird census
SCHEME OPERATOR	lack of funds available for all concerned. - Pressure from national bodies to conform to their need first rather than the needs of recorders and local data managers
SCHEME OPERATOR	Issues with computer literacy and use of the recording website.
SCHEME OPERATOR	Recruiting, supporting, training and mentoring your Scheme's Recorders and Verifiers - volunteers now have many more options for participating in citizen science than ever before, so extra effort is required to recruit them and keep them engaged in our projects. However funding to support and encourage volunteers is extremely difficult to come by. - Fundraising and grant reporting - funding for biodiversity monitoring is under continual squeeze.
SCHEME OPERATOR	The way the recording scheme I'm involved with is set up, local coordinators all hold a local 'master copy' of the database. The national scheme then takes a copy each year, to be combined into one national dataset. - I've found it quite challenging at times administering my own database system (I currently use MapMate) locally, as it can be difficult to access technical support when things go wrong, or if you're trying to undertake some complex data analysis.
SERVICE PROVIDER	Data management in order to provide services is very problematic and takes up far too much time, affecting the amount of development we can do.
SERVICE PROVIDER	Capacity to undertake continual organisational and personal development when staff capacity is limited through funding pressures.
SERVICE PROVIDER	See previous sections: While we have been successful in bids for a number of recording projects, long term sustainable funding (like in everything!) is needed. Having sufficient staff resources would overcome most issues.
SERVICE PROVIDER	With a large and diverse range of users across the whole of the UK and beyond, it is impossible to create something that every single person is happy with. We need to prioritise and work for the majority, even though this will not please everyone.
SERVICE PROVIDER	We are not well known outside the biodiversity recording sector. Users of the NBN Gateway have not always made the link to the NBN. - there is an expectation that we should be delivering more than we do. It is not widely understood that we are a small team with no guaranteed funding. Many members do not contribute financially but expect services for a reduced cost. - There is still a lack of trust by some users based on misinformation from years ago - a feeling that we are going to sell their data and make it available at higher resolutions without permission. The NBN Atlas should help to cement the links and overcome old obstacles. - There is still a reluctance by large conservation organisations to share data at all. eg WWT, Woodland Trust - Many users eg academics and consultants are not contributing to the NBN but are significant users.
SERVICE PROVIDER	Training and self-study.
SERVICE PROVIDER	Support for Recorder 6 limited. Database has many flaws/ problems.
SERVICE PROVIDER	lack of funds
SERVICE PROVIDER	Public sector cuts have squeezed our income in recent years. This has not really hampered our capacity to fulfill our aims, but more senior officer time is spent on negotiating funding than is sustainable in the long term.
SERVICE PROVIDER	Lack of a common standard in the formatting and components of records - The same (or slightly altered) records arriving from more than one source, thus increasing the risk of duplication in our database
SERVICE PROVIDER	Financial constraints on development of services. Uncertainty over the sustainability of funding to enable good long term planning.
SERVICE PROVIDER	Technology is the key barrier as is uncertainty of funding. - I think there are also knowledge gaps (mainly around data

	management) to provide the best possible services to data users too.
SERVICE PROVIDER	Insufficient capacity to make use of all available tools (e.g. web services) - Short-term funding agreements carry high overheads and breed continual uncertainty - Inconsistency of approaches to using available data (e.g. data not used to screen forestry grant applications - why not) - Engagement by some Local Authorities and not others - some use data widely in planning process, others not at all
SERVICE PROVIDER	The withdrawal of access controls from the NBN's data-sharing infrastructure introduces some problems: - - As a data provider, we no longer have a straightforward mechanism for sharing high resolution data with national partners such as the Environment Agency. - - As a data user, we no longer have a straightforward mechanism for accessing high resolution data from the national recording schemes, for use in our data request services. - - The lack of a long-term plan for supporting Recorder6 is a risk for us, as it forms the basis of our core systems.
SERVICE PROVIDER	I receive wildlife records in various formats, some of which are hand written and subject to interpretation. - As part of a <b>organisation</b> our ability to encourage recorders is limited due to a lack of a dedicated website (not permitted). The <b>organisation</b> also has rules with regards to security and the Recorder 6 software package is no longer customisable by us due to this issue. We now have to rely on the <b>organisation</b> IT department which also has difficulty with the bespoke nature of the Recorder software. The same is true for the NBN Record Cleaner.
SERVICE PROVIDER	Though some time is spent on all of the services selected above, often it is not as much as we would like (e.g. development and continual improvement of services; technical development; showcasing services) as time resource is very tight. Often things get to the ideas stage but do not progress to action due to time. - - Again with time and money tight, the inclination is often to make do with what we have because it is doing the job, even if we know there will be more innovative ways to do things. Though technical development would pay off in the long-term, the short-term disruption and time and expense required can often be a barrier - - Money is increasingly tight for everyone so there will be need to develop and provide additional services. However, it can be hard to find the time for innovation and with small organisations, knowhow may not be in-house to know how to take it to fruition. - - Engaging new audiences can be challenging, particularly younger people. Expert recorders are aging and there is a need for succession planning. - - Ensuring compliance can be very time consuming. With changing portals and licencing (e.g. NBN Atlas and Open Data) and rights to records staying with the original recorder, it can be difficult to ensure that an LERC has all the necessary permissions. When originally incorporated into the LERC database, they will have had the correct permissions to use as required, but agreements may not have covered all eventualities (crystal balls would be very useful!). This can be a barrier to sharing data and extremely time consuming to sort out. - - Often rely on forums for technical queries that cannot be resolved in house. Can be incredibly useful, but at other times, questions won't be answered - others have their own things to get on with! Though if it was a piece of work or project, if expertise was required, an expert (e.g. one of the Recorder experts) could be contracted in, if it is purely a query or check, that isn't really feasible.
SERVICE USER	Data availability is problematic and not as good as it should be due to lack of LERC resources and lack of training available to us as a service user and to the LERC as a web developer
SERVICE USER	Very limited data coverage for this area. - Very limited budget to access LERC services.
SERVICE USER	Obtaining 'inverse' data, i.e. species per site rather than sites per species.
SERVICE USER	Lack of data submission to <b>LERC</b> by key organisations e.g. SNH.
SERVICE USER	Its very expensive for small consultancies. - The data provided is sparse, unverified and often out of date, and doesn't cover key groups of species.
SERVICE USER	Records are often historical
SERVICE USER	Funding is insecure and we are lucky that our staff have not moved on. - I think we need to develop additional services so that new income streams can be developed to make the centre more robust. This requires investment which is hard to source at this time. - It would help if there was a consistent policy across Scotland so that our LERC was seen to be part of a coherent push to provide similar service across the country. - This would also make it easier to get local authorities to treat LERCs as service providers and therefore worthy of support.
SERVICE USER	Too early in our working relationship with our LRC to know.
SERVICE USER	I suppose a one stop shop with all data housed with whole country coverage would be easier but that would require common standards and independent funding of records centres covering all of Scotland that are currently reliant on income from commercial activity (i.e. selling data to developers and consultants) .
SERVICE USER	Same
SERVICE USER	Most events are far away. In the big cities or London, not practical, or financially sensible to travel to.
SERVICE USER	Increasing number of services and training events that require to be paid for is a concern for volunteers. It might lead to loss of recorders, especially those on lower incomes.
SERVICE USER	As not all data collectors share their data, there are unnecessary gaps in data provision.
SERVICE USER	Some of the people who come to courses are clearly consultants who see it as free training and never submit records
SERVICE USER	lack of easily available local information. - Lack of data for more specialised taxonomic groups
SERVICE USER	Imminent demise of the Gateway and EasyMaps.
SERVICE USER	Some areas of Scotland do not seem to be covered with dedicated data recording at present. This makes it difficult to submit records relating to those areas, and is not conducive to encouraging public participation in recording.
SERVICE USER	NBN Gateway often was slow or did not work (pink squares!) so could not access information.
SERVICE USER	national support, lack of funds
SERVICE USER	A lack of data for certain local authority areas makes supplying biodiversity evidence to the planning process much less effective. This lack of data also make quantitative prioritisation of action on species and habitats less effective. These issues are being targeted by a temporary funded project across <b>area</b> ) to create a records centre as an extension of <b>LERC</b> .
SERVICE USER	NBN Atlas is preventing data flow
VERIFIER	not being able to see up to date maps
VERIFIER	Recording equipment (moth traps, generators, batteries microscopes, dissection materials) are expensive and require constant maintenance and upgrade. - Equipment (static bat detectors and moth traps) get stolen and the cost of this has to

	be borne by the recorder as there is no insurance scheme which would pay out for such losses of unattended equipment. - Lack of time for verification of records, particularly if dissection is needed to confirm ID of specimen.
VERIFIER	Some of the species I work with a very unknown so can be difficult to get accurate descriptions/evidence to compare ID components
VERIFIER	I am not aware of a standard specification/qualification etc for recorders and I imagine that this will vary enormously between taxonomic groups. For <b>taxon</b> there is no formal 'County Recorder' system and am acting in a voluntary capacity for the record centre. Some sort of central guidance would help.
VERIFIER	Not easy to use museum reference material as there is no reference collection in local museums. - Most local county/city museums do not make/store collections any more because of financial constraints or lack of qualified curatorial manpower. They pass on their biological collections to the National Museums. - I have to liaise or go to the National Museums of Scotland in Edinburgh to get a good reference collection.
VERIFIER	Finding the source of some records. There are numerous records held by NBN, LRCs, NGO's, Recorders and schemes which lack vouchers or the source of the data is unknown, meaning that verification is difficult to impossible.
VERIFIER	Same answer in 2/19
VERIFIER	Specialist ID e.g. requiring a specimen, genitalia preparation etc. is still a weakness with invertebrate ID. Will need development of better methodologies and better dissemination of how to do it along with the availability of equipment.
VERIFIER	My increasingly poor <b>taxon</b> makes microscopy and fine manipulation of specimens increasingly difficult. Genitalia dissection and other delicate procedures are now beyond me. I am seriously frustrated by my limitations but there is not a lot that can be done about this. For me though this is definitely the greatest problem / challenge that I face.
VERIFIER	There are so many places where records could be stored, so it is difficult to know how much searching to do to find records for your county. Once you find the records, it takes time to sort their format and verify them. The more systems they are held in, the more complicated the process of amalgamating them it.
VERIFIER	There are problems with iRecord in my area; some have been addressed but it's complicated. - I'm still recording on a county AND a vice-county basis - that's complicated too. With iRecord, I will not see some records of interest to me. The recorders in my local history society differ in their approach to vice-county and county records. - The records submitted via iRecord are to some extent more casual than previously; this bias will tend to ignore difficult and scarcer species.
VERIFIER	unskilled recorders jumping to conclusions about species identification, ie mink v otter. - Takes time to talk to the recorder about the sighting and details.
VERIFIER	A standard format for submission to recorders that is used by all to submit records would make verifying more efficient.
VERIFIER	Work needed on our database to flag up unusual sightings. Time required to incorporate verification with other tasks.
VERIFIER	People in this role are elderly and not being replaced by younger volunteers as they retire. Little and decreasing levels of expenses support available against increasing costs.
VERIFIER	Too many differing recording schemes/methods, some with no opportunity to effectively contact the original recorder. Recorders who are perhaps not sure of how to submit records in a format that eases the task of the county recorder as a substantial amount of reformatting is often required, A single scheme could arguably address this last point.
VERIFIER	Records submitted using recorders' own spreadsheets. - Getting data submissions from some recorders. - Other online recording systems: - iSpot isn't a recording system, but some recorders believe that it is. - Butterfly Conservation's own recording system.
VERIFIER	Getting access to training courses as I am so far from where most of them occur. Funding attendance of those courses.
VERIFIER	Lack of funding
VERIFIER	As before <b>LERC</b> ..
VERIFIER	Scarcity of local recorders in my patch. Poor access arrangements to collections in <b>taxon</b> Museum. Low scientific value of the records I am being asked to verify (There is an inbuilt conundrum here - if the record is of something common and expected, you are more likely to accept it than if it is out of the ordinary and potentially more valuable) - - I find it very difficult and frustrating to learn and remember how to use some of the less intuitive recording software, especially when handbooks or instructions are mainly on-line and drafted in a language that assumes you are on top of the jargon, or when the relevant information is not all held in one place. -
VERIFIER	When refereeing, I get to keep the specimens so posting them back isn't a problem for me :-)) If I were to do more of this for specialised groups, returning specimens would not be easy (costs and the difficulty in getting to post office in working hours)
VERIFIER	Often verifier time constraints are a barrier to getting larger datasets verified. - - iRecord is not a reliable alternative due to lack of verification for certain groups in certain locations.
VERIFIER	Records submitted to iSpot have insufficient data and cause more work for county recorders (as do some other online methods of recording)
VERIFIER	The verification works well for me as on the most part it is done by someone else.
VERIFIER	No problems just the inability to get publicity for <b>taxon</b> even though we have made some spectacular new finds. Have a dedicated science correspondent for the national newspapers to publicise how important records are in our understanding of shifts in climate
VERIFIER	The ability to easily to identify and recover records from other schemes - is a problem. Nobody withholds records but you can spend an awful lot of time getting to such records and assessing them.
VERIFIER	The time to set up training and mentoring events is a bit of an issue as, by definition, it takes place in an already busy field season
VERIFIER	While the local network of regular recorders works well, the systems for picking up ad hoc records are a nightmare. There is duplication from systems such as iRecord and data from the local biological records centre. There are too many variations in how data from online resources arrives with me - all systems for example should use a common personal name interface. Some records arrive without personal contact details so that it is impossible to contact the recorder. Some systems do not require recorders to submit a place name, and a grid ref. is deemed to be sufficient. The combination of various issues makes verification extremely difficult such that it becomes an exercise in confirming conventional wisdom. If I cannot follow up a sighting of a rare species then the record is rejected even if it is plausible -
VERIFIER	The proliferation of digital recording 'schemes'. I can't find all the relevant records and they often are not in a standard format and are missing data.
VERIFIER	confused/broken data flows and a plethora of divergent recording systems makes it hard to access all the data out there and prevent duplication of verification. - - There could be an improvement in/refinement of some of the verification rules in iRecord.

VERIFIER	There are not enough verifiers in the species group I work on ( <b>taxon</b> ) so large areas of the country do not have a verifier. Even where there are verifiers, people sometimes have to wait a long time before their record gets verified (including by me! - We are all busy people). - Slow broadband speed has been a significant barrier to efficient verification, especially where photos are involved - they took ages to appear on screen. But a new local service provider has recently become available and it's amazing how this has improved the speed at which I am able to verify!
VERIFIER	(see answers to same question in previous section): It is a challenge to widen the number of people recording data, while keeping a close eye on the quality and accuracy of the records. Since the system is dependent on volunteers, a priority is training and mentorship. - Also, time is taken up checking and validating the records submitted, to ensure 'clean' data-sets.
VERIFIER	As a verifier on iRecord I am asked to verify identifications which have no evidence. This is nonsense. NBN is filling up with incorrect identifications from Seasearch divers, government scientists and contractors. Incorrect records distort mapped information and are hard to remove from NBN. I have flagged likely incorrect records in the past but I need to easily see the source of any outlying or suspicious records. Also in this day of species splitting with DNA evidence there are cases where all records of a species must be flagged as aggregate species. A simple example is the common grey sea slug, <i>Aeolidia papillosa</i> , which is now known to be two species. Most of the records of <i>A. papillosa</i> from shores in the UK and Ireland are probably <i>Aeolidia filomenae</i> . See: <a href="https://en.wikipedia.org/wiki/Aeolidia_filomenae">https://en.wikipedia.org/wiki/Aeolidia_filomenae</a> for a reference to the DNA study. In fact it is not certain how to identify the two species any more and more research is needed to discover reliable external characters for identification and habitat preferences of these two species.
VERIFIER	Bird recorder - fewer people are submitting written evidence to substantiate their records
VERIFIER	People undertaking to do surveys but not carrying them out or, carrying them out & not submitting the data.
VERIFIER	Open data policy for biological records - Can be difficult to find a verifier for more obscure taxa
VERIFIER	lack of local recorders. records that do not get sent to the national scheme. - People that do not know of the national scheme or recorders
VERIFIER	Verification of Citizen Science records and judging their worth (and reliability) is an increasing problem. Getting more people to record what they see is great, but there comes a point when the data being generated is of little or no use, and it takes a long time to sift through the chaff to find the wheat. And there is often a lot of chaff.
VERIFIER	The high degree of interest and the funded projects that have focused on encouraging new recorders are welcome, but have resulted in large numbers of relatively inexperienced recorders wanting to get involved, and often relying on a small pool of more experienced people to provide or check identifications, verify records, and provide mentoring and tuition. This is rewarding but time is finite and it is not always possible to keep up with demand. - - The sheer volume of information and the number of people with which to engage can be overwhelming. Online systems are getting better but are still problematic in some areas and insufficiently resourced. - - As a verifier I still have to spend lots of time managing and collating data that arrives in different formats from different places, with mismatches in species names being especially problematic.
VERIFIER	It is difficult to get across to younger people the need for accurate verification/identification and the limitations of photography. - - Finding time to check other people's records is increasingly difficult.
VERIFIER	The local BSBI recorders insistence plant records should go to them and not to the LERC yet as they are involved in the new national atlas. Since <b> </b> local atlas, this has caused friction among recorders. Local planners and ecologists need relevant data much quicker than the BSBI recorders are able to do and they need it in the formats they use, not simply as 1km resolution maps. - - The same recorders also suggest they are the only such experts able to verify plant data. - - As a LERC response
VERIFIER	Data services like NBN that rely heavily on volunteer recording community to provide high quality data free and open-source without enough support. - -
VERIFIER	There are many on-line recording methods - iRecord, Facebook groups, other Apps and so on. There is no formal way of gathering records from these schemes. Records can be uploaded with recorder aliases that are effectively anonymous and so the recorder cannot be contacted for verification purposes. Many good county records are ignored or lost as a result.
VERIFIER	See section B (3/19): Viewing records for specific species or groups is a rather long-winded process currently (via iRecord). - - Lack of funding for scheme organisers to run identification training workshops. We want them to be free to encourage more new recorders, but costs are unavoidably incurred by us as the organisers.
VERIFIER	No issues for the ones I verify.
VERIFIER	Online verification rules are sometimes out of date or based on incomplete data.
VERIFIER	Issues with some <b>LERC</b> species maps that link to NBN Gateway due to taxonomic name changes, so only most recent records since name change occurred are displayed - this seems to be beyond <b>LERC</b> 's control. <b>LERC</b> also do their best to update maps, but with small number of staff with large workload, it may be several months before these appear. However, these are usually more reliable than NBN maps that contain some erroneous datasets (& currently don't have most up-to-date <b>LERC</b> or Butterfly Conservation data). There are also issues with National Moth Recording Scheme maps: MothsCount website says 'We are currently unable to display the NMRS provisional macro-moth distribution maps using web services due to technological incompatibility with our website and the new NBN Gateway. We are working on a solution to this and will let you know when this problem is resolved.' These are only provisional maps though, as updated maps will only be made publically available when national atlas is published in 2018. It was time-consuming to find useful records from NBN Gateway datasets among several erroneous ones & also to avoid duplication of records already in <b>LERC</b> database. It can also be difficult to track down records from other sources not submitted directly to me or <b>LERC</b> & make contact with original recorders, though Butterfly Conservation sorted & forwarded iRecord & outstanding RiS data to VC <b>taxon</b> recorders this year to aid verification for inclusion in national <b>taxon</b> atlas.
VERIFIER	Records requiring descriptions normally need followed up; many are not submitting, those that are generally need chased; many observers believe once posted on social media that is the end of the recording process, or at least that is the end of their interest in it. - - ad hoc records can be found all over social media and I do not have time to systematically gather all of them. - - e-bird is taking off and requires work converting from American species names. -
VERIFIER	There are lots of online systems all collecting bird records which aren't joined up. There are too many online locations that a county recorder should go to harvest records - not all of them collect good quality records or have the right attributes.

## APPENDIX 6: List of priorities for SBIF attention <back to contents>

All respondents were asked the following question:

Given that the SBIF Review could potentially identify and facilitate many key improvements across our biological recording network, what would be your top three priorities for earliest or greatest attention?

All responses are presented below classified by the following broad themes:

- ACCESS TO EIA DATA
- ACCESS TO EXPERTS AND OTHER RESOURCES
- AN IMPROVED NATIONAL TO LOCAL DATA INFRASTRUCTURE
- FULL COVERAGE OF SCOTLAND
- FUNCTIONALITY AND EASE OF USE OF ONLINE TOOLS
- IMPROVE RECORDING OF EFFORT AND ABSENCE
- IMPROVED COORDINATION AND INTEGRATION, REDUCED DUPLICATION
- IMPROVED DATA AVAILABILITY
- IMPROVED DATA QUALITY
- OPEN DATA
- OTHER
- OUTREACH, NETWORKING, TRAINING AND CAPACITY BUILDING
- PROMOTION OF THE VALUE OF BIODIVERSITY DATA AND RECORDING
- RECOGNITION AND FEEDBACK
- RECORDING OF PRIORITY OR UNDER-RECORDED SITES OR SPECIES
- STANDARDISATION, CONSOLIDATION OR CENTRALISATION
- SUFFICIENT SUSTAINABLE RESOURCING
- USE OF BIODIVERSITY DATA FOR DECISION-MAKING
- VERIFICATION

THEME: ACCESS TO EIA DATA
A lot of data is collected by developers but not publically available to other developers.
Encourage local authorities to make all ecological data submitted in support of planning applications publicly available so Scheme Recorders can get data into databases.
Engage commercial developers to share their biological data, especially from EIAs, by showing them the benefits that can be gained (e.g. from adjacent developments, case studies, etc.). Developers are not necessarily opposed to data sharing but need to be proactively approached.
Get all development data collected as part of the planning process
Involving consultants more in this process - getting them engaged and getting commercially collected data into the system
Making the data which comes out of post construction monitoring more accessible -so it is actually possible to look at impacts of constructions
THEME: ACCESS TO EXPERTS AND OTHER RESOURCES
Access to local experts and equipment
Assisting volunteers in accessing sites in the field
Improve access to identification materials, etc.
Increasing up to date ID resources (keys etc).
THEME: AN IMPROVED NATIONAL TO LOCAL DATA INFRASTRUCTURE
A distinction or separate platform for historical pre-1990 records
A new system for data management. Recorder 6 is an old bit of software that is STILL seen as the best product for the job. This needs a replacement.
Ability for the single system to cascade records down to species specific systems
Address data management at local level
An easier way to link charges of data supply for commercial use to revenue going back to the running of record centres e.g. a levy on all planning applications being paid to ERCs.
Avoid the need for records to be entered through different systems for different taxa
Better organisation of the records and the community without the need for so many questionnaires!
Clear structure so we know who is doing what
Clearer use of data for commercial purposes.
Coordinating or overarching structure for Scotland
Create an SBIF for England
Create one place where people can get records.
Creation of new or strengthening of existing local or regional biological data centres
Develop and propose an integrated national to local structure to deliver SBIFs aims.
Development of strategic level products
Elimination of parallel systems and partial datasets, so that there is a single, effective, 'go to' resource for all biological records - e.g. NBN Atlas

enable easier system where our data can be loaded onto national marine plan interactive map.
Establish a network of regional centres to support biological recording (paid, not voluntary)
Get broad agreement on this structure from stakeholders.
Having a National Data base recording system for all taxa
lobby for funding to have a central database staffed by paid professionals
More efficient Local Records Centres
More joined up systems - fewer, bigger, better!
national recording centre with local backup
National web site
One online location which provides a portal to data discovery and data download
Promoting the Local Environmental Record Centre network and their ability to support recording
Provide support and training and national processes for data flow and verification through the BRC, NBN and national schemes and LERCs
provision of a professional (i.e. funded) national verification service
Rationalisation of funding and support for smaller groups
Recorder6: Develop a plan for continued development / support for the Recorder6 software, or a suitable successor capable of managing the big, structured data-holdings held by LERCs and national schemes.
Replace NBN by an efficient and responsive Scottish data portal
Resolve conflict over LERC funding versus desire for free access to environmental data
Securing the network of LRCs
Set up funded and staffed data hubs in areas which currently don't have them.
Simplify the many diverse recording systems in place
Simplifying the system (I know that's the whole point)
Single repository for all records
Support and enhance the role of existing LRC's
<b>THEME: CLARITY ON, AND IMPROVEMENT OF, DATA FLOWS</b>
A single place or single method to input records
A structured mechanism for getting records validated and onto the NBN Gateway not dependent on one person.
Access controls on NBN Atlas
Access controls: Review the situation regarding provision of access controls on the NBN's data-sharing infrastructure.
Accreditation for users to quickly gain access sensitive records
Agree a coherent data flow
All recorders to support key online recording scheme (iRecord would be my preference)
Better promotion of national monitoring schemes (again, following the BTO's lead with birds)
Building consensus over data flows
Clarify data pathways for recorders / data collectors.
Clear and specific data flows (current model is vague and general). May need to be per taxon group; one size fits all may not work.
Consolidation of LRCs as the main recording points for receipt of records.
Consolidation of records from multiple sources
Convincing organisations, businesses and individuals to submit and share data.
Cross referencing system so casual records are directed to the appropriate organisation; avoid duplication and missed records.
data access controls on NBN Atlas
Data exchange between online databases
Data flow between organisations.
Data flow between organisations/schemes
Data flows
Data sharing (helping mobilise data from collection to data partners)
Ease of gathering, verifying and passing records onto the relevant recording scheme.
easier collection channels - so many option - confusing
Easier submission of data for commercial consultancies.
Easy access to others information
Encourage use of iRecord
Encouraging submissions to be made using email or apps.
Ensuring that records are passed on to all levels of the system

Ensuring that records can be held and made available at varying resolutions for security purposes
Getting verifier data on to maps asap
I'm confused by all the options available for recording - which ones are connected to each other, which are "best" etc
Improving data flow pathways between LRC and various recording schemes and NBN.
Improving mechanisms for data submission and flow
Lists of recognised and reputable recording schemes, how to access them etc
Moves to ensure that all data received by LRCs, once validated and verified, is quickly uploaded to the NBN.
Much faster and more transparent pathway for processing, verifying and publishing these data
one-stop, easy submission of records, my records then forwarded to LERC, Recording Scheme etc
Promote national schemes as the preferred route for submitting records to the local recorder/verifier who can provide feedback
Promote NBN Atlas (Scotland) as the tool for all data sharing
Promoting good recording practice and data flow without adding to the confusion by creating new recording websites.
Promotion of the numerous methods that can be used to record and send records
Provide a clear data path for recorders related to all the different ways data can be submitted to a plethora of schemes
Providing a mechanism for sharing sensitive records with key users
Proving a single access point for biological data with a standard data format and licence conditions
Rationalise data flow and somehow bring together all the various schemes for appropriate verification
Reduce the number of differing recording schemes.
Simplified mechanisms for transferring information to Record Centres
Simplify data flows
Simplifying the data flow pathway so everybody knows where to send data to make it most effective.
Since feeding all data into a central, accessible location is probably unachievable, it would be good to at least provide links to other potential sources of additional data on any individual species to ensure no available data source is missed
Sorting out access/data request/editing controls/sensitivity issues on the NBN atlas.
Speed up the process of making records available to the public
Streamlining data flow processes to minimise duplication and create consequent savings in resources
Streamlining of data entry for different groups
<b>THEME: FULL COVERAGE OF SCOTLAND</b>
a Biodiversity Records Centre for Tayside
A local records centre
all regions should have biological recording centres
Biological recording support for all local areas
Ensure that all local areas have an established LRC
Ensuring baseline LERC resourcing/coverage is consistent across Scotland
Establish a comprehensive recording system for Scotland so that all areas are covered
Establishment of a record centre or similar in Dundee / Angus
Even coverage of Scotland by a network of local biological record centres
Even provision of biological records centres across Scotland
Full coverage of PROPERLY FUNDED LERC s across Scotland
Full geographic coverage of Scotland
Full national coverage by LERCs
Get all regions on a standardised recording system
Get Scotland coverage with sustainable data management
Good LERC coverage with a focus on securing comprehensive, up to date data sets for all areas
Improve record keeping and storage of information in Angus area
local records centre in all areas
Local Records Centre provision across all of Scotland
Provision and support for a recording network that adequately covers the whole of Scotland and all practicable taxonomic groups.
Provision of the kind of service provided by LERCs (including data searches and recorder support, etc.) for all areas in Scotland
Support a LRC network across Scotland as the hub of local and national recording
Support the establishment of a network of LERCs across the Country
Support the existing Local Record Centres to expand where they reasonably could - eg NESBReC could be expanded to include Angus. Fife could be expanded to include Perth & Kinross and Dundee. Our Cities are very important too.
Uniform coverage of Local Record Centres across Scotland

THEME: FUNCTIONALITY AND EASE OF USE OF ONLINE TOOLS
A level within the system to make it accessible to citizen scientists
A single portal accessible by one click of a button!!
A sophisticated database for personal use.
A workable national online platform where recorders can easily view the product of their efforts
A workable, reliable simple NBN Gateway replacement. Probably an upgraded NBN Gateway
Ability to add images to local recording forum
Ability to enter data for all geographic areas of Scotland
App development
Better links to GIS data for reports investigations etc
Better maintenance of NBN so that there are far less 'down' days
Creating of a useable website to input data
Creating of a useable website to interrogate data
Detailed interrogation of individual records
Development of key tools (iRecord)
Digital reference collection
ease of consulting / retrieving data
Ease of display
ease of entry of data
easier method of submitted records
easily useable cloud/web based records submission or recording tools
Easy access online recording forms
Easy recording for non-specialists
Easy to enter records
Ensure everyone has access to a simple online submission tool, wherever they are
give volunteer recording more security when it comes to data management
Have tick charts for the public
I'd like printed detailed instructions on how to use the iRecord website that I can refer to each time I use it.
Improve access to data by online customization
Improve search functions
Improve the iRecord website software.
Improved search facilities in NBN gateway e.g. legally protected species
Improving ease of data input online
Improving system for dataset submission and management wrt NBN Atlas
Improving the interface for data submission and retrieval
Intuitive reference facility
Keep it simple as far as technology goes
keep the IT simple
Lobby to make Atlas useful with access to record details
maintain interactive mapping with pinpoint records of species
Make download of data for specific areas easier.
Make it easier to add records
Make it easy for these recorders to submit to NBN or other national database
Make upload easier and quicker
Making it easier to submit records eg online
Making sure the NBN Atlas is fit-for-purpose.
More/better online platforms for submitting data (following the BTO's lead in this area)
Need for a user-friendly and accessible tool for harnessing data
Online portal(s) accepting spreadsheets
Online version of Recorder 6
phone apps
Provide easy-to-use offline database templates for a variety of recording schemes
provide free online tools for recorders



Simplify NBN. Have all records in one place, freely accessible, but it needs to be more user and recorder friendly.
Up to date and easy to access & filter datasets
Up to date and easy to access maps
Update methods to incorporate modern technology
updating the SMP database to allow submission of bulk data (in an appropriate format)
user friendly online access to data
user friendly online data entry
Wider spread of hand-held electronic data recording devices and software for use in the field
<b>THEME: IMPROVE RECORDING OF EFFORT AND ABSENCE</b>
address distribution bias in atlases caused by lack of data or at least identify these areas. (here be dragons)
clear indication of how the records were collected so results can be compared meaningfully
Developing the systematic recording of recording effort as well as records
<b>THEME: IMPROVED COORDINATION AND INTEGRATION, REDUCED DUPLICATION</b>
A nationally co-ordinated network of local centres
Amalgamation of disparate schemes into one portal
Better communication between local and national levels
Better coordination of data input to NBN to avoid duplication of effort
Better data management of NBN with far less duplicated records
Better integration between datasets at local and national level and between organisations
Better networking between data collecting organisations
Better networking, less egos
Bringing independent data aggregation and supply organisations together to work with, not against, each other
Business cases to ensure there are no duplication of work
Consistent recording platforms
Coordinate all the different recording groups/schemes to ensure all data makes its way onto the system, not just sitting in notebooks & on personal/group computers.
Co-ordination between data holding groups to prevent duplication of work
Coordination between different groups and also national areas
Data integration
Data integration, e.g. BirdTrack/e-bird
Dealing with the plethora of recording systems to ensure that national scheme recorders can easily access records
Discourage proliferation of many online recording systems (including my own organisation's ( <b>national scheme</b> ))
Ensuring local groups work together to collect all data and have a system to feed into the national data base
Exchange of records between different recording schemes/software/organisations.
Get all recorders participating in iRecord
Greater co-operation
Greater co-operation between national and local groups
Greater integration of different databases
Greater integration of small group interests
Improve effectiveness of working relationship between recording community and conservation authorities
Improve the present recording centres, making them available to accept and distribute records.
Integrated one stop shop for records
Join up the recording community more, especially LERCs and recording schemes.
Manage duplicate records better: identify original source and which are duplicates
Many fewer, but much better, routes for submitting records
more joined up working between organisations
More open communication to allow sharing of ideas
Note data samples that may be duplicates
Reduce duplication of entry ( e.g. I'm recording on Bird Track so will not record duplicate information)
reduce the number of reporting sites/systems
Remove preconceived ideas that scheme, recorders and verifiers have of systems other than their own.
simplify processes
technological incompatibility between NBN & other organisations' websites

THEME: IMPROVED DATA AVAILABILITY
Access to all records where consented
Better online access to records for recorders
Close up data gaps
Communicate what is available
Comprehensive recording of private findings where consented
conversion of paper / personal historical data (as much as can be found) and provided online
Co-ordinate effort to audit the currency of data, address gaps in data coverage and develop guidance on a structured approach to ensure nation-wide coverage for all taxon groups
data accessibility
data sharing
Data sharing capability
Data to be accessible
difficulty of finding all datasets of interest to county recorders/verifiers
Digitisation of paper datasets
ease of access
Ease of data access
Encourage SNH, SEPA, Forestry Commission to submit biological data into LERCS
Ensure that LRCs and recording schemes submit their records to the NBN
Ensuring that organisations that receive funding from public bodies like SNH make their data available to LERCs and NBN Atlas as standard.
Ensuring that records from all recording agencies are submitted to NBN and updated frequently.
Get affiliated organisations to make data available at capture level
Get up to date BTO data onto the NBN
Getting data more accessible across all the organisations that provide data
Greater ease of data availability
Improve access to vouchers, datasets
Improve availability of data through the NBN
Improving the accessibility and awareness of the data
Incorporate habitat areas and not just focus on point data
Increase data accessibility
Increased access to datasets e.g. from ecological consultancies, government organisations and recording groups
Increasing capacity for users to get and utilise data
Maintain publically available seabird monitoring database up to date - data available within a year of submission
Make all seabird data available for direct public download - colony counts, breeding success and European Seabirds at Sea data
Make data more easily available
More datasets
More freely available datasets
more records added to NBN Gateway
Need for more data to be publicly available
THEME: IMPROVED DATA QUALITY
An online database where wrong records can be publicised and corrected.
as above [establishment of a record centre or similar in Dundee / Angus] - this is vitally important. Current data is exceedingly historic and inaccurate
Data collection at higher resolution
Data quality
Data to be of a high quality
erroneous/doubtful records in datasets accessible via NBN
Getting data more up to date
How data is used to analyse trends
Improve the accuracy of non-sensitive records, focus on lepidoptera
improved location resolution of records
Inaccuracy of LERC databases (at least for the Taxa I deal with)
Improving base line data
Linking these datasets to NBN leads to erroneous records populating some maps
Look at how to link records with specimens.

More use of photographic evidence for records
Provide opportunity to indicate if a physical specimen linked to a record is available.
Quality control of data sets
Regular updating of maps showing presence of species
Retain metadata (e.g. source of data such as citation, voucher, image)
Some level of quality assurance that any source used is reliable and accepted as such for records.
updating the SMP database to include recent data
<b>THEME: OPEN DATA</b>
A review of open data which gives full and proper consideration to the sustainability of LERCs and holdings of privately collected and owned data.
Accessible data, freely available
All records made Open Access
Central data storage and open access
Encourage more people to make their records available without restrictions.
Encourage open data sharing
Establishment of open data principles across the biological recording network
Figuring out a way that certain organisations can continue to make money despite their data being open thereby encouraging them to add their data to the NBN atlas - it will only be useful if all the necessary data is up there.
Free, open, on-line access to all records.
How to make open data work
OD - investigating an appropriate way for it to operate within the sector
Open access
Open access of all data (with the usual provisos)
Open data
Open data culture
Preventing misuse of data in commercial activities
<b>THEME: OTHER</b>
a new national seabird census
Awareness of preciousness of what we still have (celebrating with / through arts and other not scientific channels)
Consider how data is used to make meaningful NON-ENVIRONMENTAL decisions in the public sector
Fewer acronyms
I feel this document seems to be preoccupied with collecting data for academic use I want it for practical use
I would love for scientists to stop collecting 'specimens' by killing insects and sticking pins in them. Record without killing please.
increase taxonomic diversity
Keep listening to recorders
local knowledge and application
More emphasis on the marine environment
Seek the opinions of county recorders. Do not assume that they are represented by local biological record centres
Single point of contact
Speed of response
<b>THEME: OUTREACH, NETWORKING, TRAINING AND CAPACITY BUILDING</b>
A handbook on how to do biological recording .
Aiming to reach small communities and community councils
availability of keys
Awareness raising
Better publicity on recording schemes.
Bring on board more verifiers, training as required.
centralised publicity for highlighting what training events are available across Scotland (at all levels)
Community peer to peer development to develop enthusiasm and knowledge of citizen scientists
Creation/strengthening of a network of local wildlife rangers and biodiversity teams
Developing new recorders
Ease of finding groups or websites which could assist in identifying species etc.
Educate people in the UKOTs to value accurate data collection, storage and management
educating children
Education

Education - species identification
emphasis on citizen science
Enabling verifiers to help document data quality, but without swamping them or taking them for granted
Encourage involvement by communicating volunteer opportunities for citizen science e.g BTO Garden Birdwatch
Encourage more Universities to offer courses in Botany
Encourage people to get involved in data collection
Encourage people to specialise, take part in surveys and not be too generalist
Encourage Recorders to become ID course trainers
Encourage support for recording community from academics and consultants
Encouraging more record from new groups
Encouraging more volunteers
Engaging with young people
Enhancing the capability of the verification network either through training or recruiting new verifiers
Ensure that LERCs can play an active role in encouraging local recording, managing local data and interpreting this data to local people, groups and businesses
Get better support to the volunteers
Getting more people to submit their data for recording
Getting the word out more for others to be involved
Getting young people recording
Greatly increase the number of monitors to speed up recordings
Guidance on where to find information re identification, recording
I'd like to continue recording scientifically accurate data but I do not use social media and don't particularly want to "join in" socially, so need to be kept in the loop by email
Identification Courses
Increase identification training.
Increase public awareness of, and engagement in, simple surveys to expand the recording network.
Increase taxonomic expertise across Scotland
Increase the LERC's capability to conduct public recording events
Increased access to courses run by experts
increased and improved access to training to increase numbers of data collectors
Increased availability of training for some niche or specialist species
Increased networking opportunities for recorders
Increased training courses for taxonomic specialists
Increasing taxonomic expertise (particularly among younger age groups).
Investment in professional naturalists to provide local support to volunteers
Involve community in supported projects to increase biodiversity (e.g. plantations etc.)
Involve more volunteers by training skilled biologists in management.
Involve retired people in management of above.
Involvement of schools and universities
linking researchers with recorders
Local training to ensure recorded data is correct.
More local identification courses
More local opportunities to improve recording skills in the field
More training days
More training sessions
More volunteer support
Networking for researchers
Online resources for species ID
Paying more attention to developing skills over time, rather than focusing on bringing in more and more novices
Printed floras for Ireland's counties
Promote data collection among the public
provide easy access to learning about wildlife identification
Provide free training to local communities across the country.
Publicity of rare species in the media

Raising environmental awareness in the general public.
share with the wider public the wonder that is beneath their feet
Support a structured, ongoing identification and recording scheme for volunteers to develop expertise
Support for people who want to get involved
Support for taxonomic training schemes
Support local ID courses
supporting dissemination of out of print identification literature
Taxonomic training programmes for all to produce future expertise
Train and encourage more recorders of plant, fungi, and animal species
Training
Training
Training
Training
training and support for biological recorders to improve skills
training course eg as available from <span style="background-color: black; color: black;">XXXX</span> WLTrust
Training courses in identification of species
Training for use of new NBN Living Atlas (e.g gis visualisations for habitat and species "stepping stones" planning)
Training for volunteers, mainly in botanical identification and experience
Training if you want less usual taxa recorded
Training in using resources and record submission methods such as iRecord for amateur recorders.
training on suitable collection options. often an add on at events - perhaps a whole training session
Training opportunities (e.g. free/affordable 1-day workshops or field trips) in identification and recording techniques.
Training resources (in some species groups there appears to be no 'next generation' of fieldworkers)
Training surveyors in standard methods
Volunteer engagement
Wider engagement - making it easier to submit records & get involved in surveys
<b>THEME: PROMOTION OF THE VALUE OF BIODIVERSITY DATA AND RECORDING</b>
Provide greater public awareness of your work and value of recording at local levels
Be more publicly involved in discussions about recording
Greater priority on and interest in biodiversity recording among local authorities, Government and private companies leading to increased employment opportunities
Greater promotion and awareness raising of biological recording.
Improve recognition by national & local government and attract better funding
increase awareness of wildlife recording to the general public
Promote the services and value of the NBN Trust in supporting data in the UK
Promoting the importance of local recording as key for decision makers
Promoting value of, resourcing and access to physical collections with government
Promotion
Promotion of the importance of recording
Raise the profile of the recording community in the public and political eye
Recognition by local and Scottish governments of the importance of biological data
Scottish Government recognition of the importance of biodiversity data
to see governments valuing and supporting biological recording and setting national priorities we can all work towards to best support our common environmental goals
Wider appreciation that biological recording is important and that its results are meaningful and relevant to communities
<b>THEME: RECOGNITION AND FEEDBACK</b>
Acknowledging and celebrating role of LERCs
Celebrate the work of all recorders better
Datasets copyrighted to recorders
Encourage and value the enormous contribution of volunteers of all levels of ability/experience
Feedback on trends and information species context at a local level
Good feedback and recognition
Greater feedback on how data is used - I get lots from BirdTrack eg - just the opening screen can be inspiring
provide support for LERCs and local groups that acknowledge their role

Recognition of verification processes
Rewarding data collectors and recorders
<b>THEME: RECORDING OF PRIORITY OR UNDER-RECORDED SITES OR SPECIES</b>
forming specialist working groups to examine the status of specific taxonomic groups
Increase data for under-recorded areas and taxa
Prioritising collection of further data
system to prioritise recording of species that are struggling
<b>THEME: STANDARDISATION, CONSOLIDATION OR CENTRALISATION</b>
Avoid proliferation of recording methods
centralise records
collating records from across years to show changes in distribution and abundance
Common format for submitting records.
Condense the number of different places to record your data - keep it simple.
consistent approaches and services across Scotland with clear information on roles of all stakeholders
consistent record keeping and access to data throughout Scotland
Data to be collected in a consistent manner
Ensuring that data searches are standardized and proportionate
Establish standardised software
Everyone using the same species checklist, which is kept up to date.
Focus on institutions rather than individual recording
Have ONE recording scheme
maintaining up to date, online species checklists & libraries
Promote the standardisation of data entry processes to ensure maximum data quality is held.
Reduce the number of Recording Centres
Robust records all available in one place.
similar methods for collation of records
Single high level records system
Standard query service
Standardisation of approach in recording
Standardisation of useful and effective methods, and easy access to what these should be
Standardise recording methods
standardise recording schemes data input
Standardise sharing of data collected
Standardised recording criteria and clear, unambiguous data flow pathway to assist in data mobilisation
Streamlining of all the different recording schemes to a smaller number
supporting development/introduction of standard standalone recording software
Use of standard methods
<b>THEME: SUFFICIENT SUSTAINABLE RESOURCING</b>
Adequate funding
Agreement on priority needs and work on sourcing funding for delivery
Completing the network of LERCs in Scotland and ensuring that funding for LERCs is secure and sustainable.
Core government funding for all LERCs so that all can provide completely open data to all
Encourage funding for Records Centres
Ensure LERCs are adequately funded on a long term basis (to avoid the managers spending time on funding applications)
Ensure that funding for biological recording and data provision is secure and sustainable.
Ensuring appropriate funding of the organisations involved
Financial support
Fund jobs for longer so staff are consistent & have experience
Fund training courses
Funding for BSBI
Funding for data collection
funding for data providers
Funding for education for recorders.
Funding for events/workshops to encourage more recording

Funding for groups to organise specific area recording days.
Funding for individual groups to manage records.
funding for local training events to improve skills
Funding for more conservation projects to be secured
funding for recorders or for people wanting to do specific research
Funding for recorders/LERC volunteers
Funding for recording schemes and local records centre
Funding for volunteers
Funding support for these centres
funding to ensure projects have a data collection/survey aspect
Funding to groups to provide training of recorders.
Funding to support recording locally
Get agreement on the minimum service that a LERC should provide and secure funding for this
Identify a business model to ensure sustainability into the future.
identify sustainable funds
If there was some money to pay a volunteer for processing data then some of the time pressures may be relieved; we have huge volunteer effort on recording generating many 10's of thousands of records annually but close to zero effort on assisting with managing those records
Improve iRecord through extra resource
increase money available to employ people to keep records checked and up to date
Increased funding for reference collection curation and retention of museum staff
Information on access to funding - put pressure on SNH to open grant system again.
iRecord: Continued investment in the iRecord system, with a particular focus on transparency around data flow and verification; so users can understand what's happening to their data and where it's going.
LERC funding over the long-term. How do we continue this in the face of budget cuts?
Make some arrangement whereby large organisations (Govt. Departments, local Authorities, statutory bodies etc.) which use biological data, make a contribution towards the cost of collecting and managing it.
More funding
More resources (money)!
More secure longer term financial base.
More support for Indicia websites and online recording
Move away from short-term funding agreements
Need for local authorities to provide funding for record centres
Promoting value of and resourcing of data submission with government
Provide central or local locations for paid verifiers to determine tricky species by dissection.
Provide funding for database development and management
Resource the Local Records Centres appropriately
Returning a portion of the funds generated from the use of biological data to scheme organisers and the data sharing platform
Secure funding for that structure.
Secure future funding for the existing Local Record Centres.
Secure long-term funding to maintain the Seabird Monitoring Programme with provision for periodic (15 years) whole-colony census
Secure, properly funded bases for regional data management with appropriate staff
Seriously look into funding the biological recording infrastructure through a levy imposed on commercial developments in return for free access to data
Small grants for recording groups to buy equipment for lending out to members, or using at public events e.g. BioBlitzes
Some help with expenses.
Stop undermining LERC business models
Support for LRCs
Support LERC's more so that they can support their local recording community and local wildlife
Support local recorders and groups, and recording schemes more to help local conservation projects
Sustainability of service
Sustainable funding for LRCs
Sustainable funding for the kind of services provided by LERCs and for recording (short-term and uncertain funding is problematic)
Sustainable funding model
Sustainable funding systems
Volunteers reimbursement
We have data which we collect but do not have resources to input into record centres. Resources need to collate all data.

<b>THEME: USE OF BIODIVERSITY DATA FOR DECISION-MAKING</b>
as above [Establishment of a record centre or similar in Dundee / Angus]- and impacts on development decisions!
Ensure end-users such as Forestry Commission, SGRPID and Local Authorities use the data to inform development
local authorities should have to update their records regularly
Monitoring of use of biological data in decision making
Planners in local authorities to insist on consultants contacting LERCs for data for all relevant planning applications
Scottish Government policy that relevant data, where available, should be used in all relevant decision-making.
Strengthen the duty on public and private organisations to use biological data in decision making
Use monitoring to support data gathering to build evidence for urban greening where funds are lacking for developers/councils to get this. It is important to provide operational evidence for wider implementation of these measures in terrestrial and coastal areas.
<b>THEME: VERIFICATION</b>
Assistance for LRCs in validation/verification of records received.
Automation of verification
availability of reference collections or experts happy to check difficult identifications
circulating a list of verifiers for specific taxonomic groups
Data validation/verification/avoidance of duplication.
Data verification
Encourage new identification methods and improve access to ID material through the web
Ensuring all new data submitted to NBN is validated/verified
Ensuring records are appropriately verified.
Ensuring validation of records (Many records in some areas are submitted but not checked).
Get the verification discussion underway
good verification
Increase verification
List of experts to act as verifiers of records
New ideas for promoting recording of description species; many are photographed, there may be easier ways to submit, I suspect paperwork puts some people off
Remove the reliance on volunteer verification and provide a funded scheme of approved professionals
Sound validation of records
Support verifiers more so that they can help improve the quality of data on NBN
Verification
Verification of existing data

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\*\*\* END OF APPENDICES \*\*\*