

Bristol Regional Environmental Records Centre (BRERC)



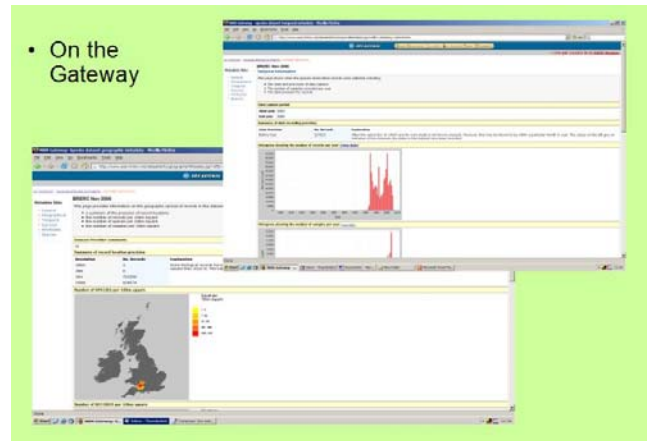
Report to the National Biodiversity Network and Natural England July 2007

The submission of data to the 'Gateway'

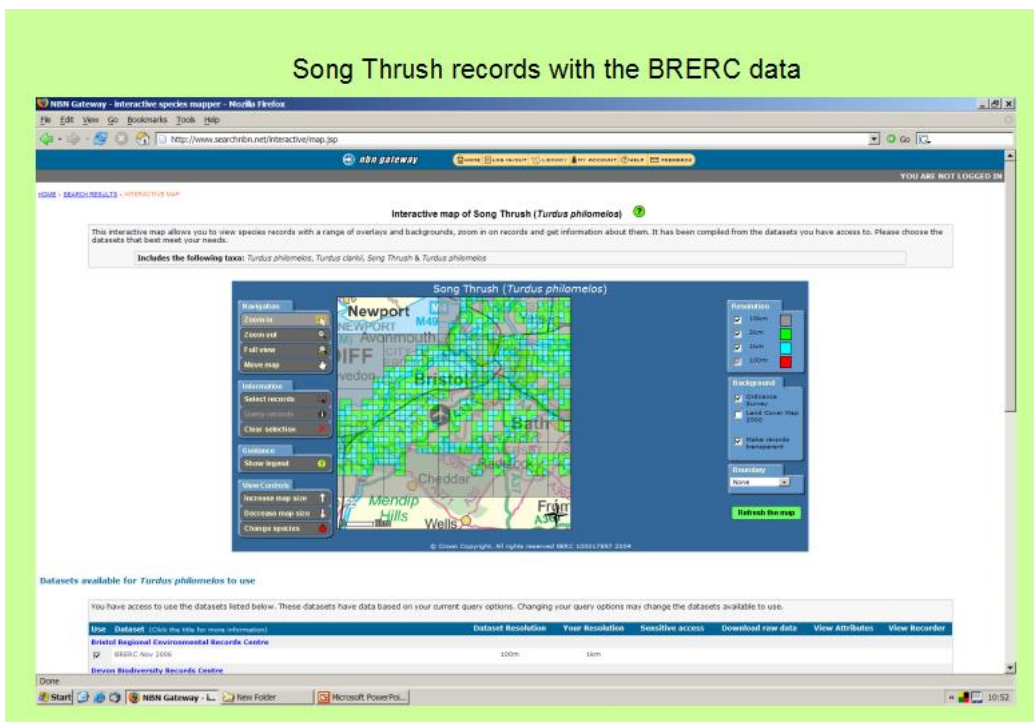
Song Thrush records on the Gateway without BRERC data



On the Gateway



Song Thrush records with the BRERC data



BRERC strongly recommends other Local Records Centres to submit their species data to the National Biodiversity Network Gateway

Executive Summary

BRERC strongly recommends other Local Records Centres to submit their species data to the National Biodiversity Network Gateway.

We aim to make the tool we produced available for use by others to submit data in similar ways.

Introduction

Bristol Regional Environmental Records Centre (BRERC) is the central repository for biodiversity and geodiversity records covering the 'Avon' areas of Bristol, North Somerset, South Gloucestershire and Bath and North East Somerset. BRERC is also referred to as a Local Records Centre (LRC).

The National Biodiversity Network's Gateway is in effect a web-based portal and central repository of biodiversity records at the national level. The Gateway enables anyone to access data via the internet. The National Biodiversity Network (NBN) have been keen to include the records held by LRCs and have made efforts to encourage them to submit records.

Until recently BRERC, along with other Local Records Centres have not been confident about submitting records to the Gateway for various reasons, but in particular because of fears that doing so could undermine the current business models of some LRCs, including BRERC. The NBN and Government bodies desire that environmental data should be freely available to anyone, including those using the information for commercial purpose. However LRCs are reliant on charges made to commercial organisations for a significant proportion of LRC funding streams. Concerns are therefore held that submitting data to the Gateway could result in commerce by-passing LRCs in favour of acquiring their data needs via the Gateway alone.

Additionally BRERC has not routinely interrogated the Gateway for data not held by BRERC, particularly when we conduct data searches.

BRERC wished to examine why we do not submit data and why we don't make better use of the Gateway for our own needs, in order to identify some of the obstacles to doing so. It was felt that some of the obstacles could be perceptible rather than real, and a consequence of historical development.

We approached Natural England and the NBN Trust with our thoughts and we agreed to carry out this Project as a pilot to test some of the technical aspects and possible impacts on our business and role as an LRC. They in turn would use the data we provide as a demonstration of LRC capabilities and consider new approaches to funding LRCs with regard to data collection and capture.

It is known that many of these issues are shared by other LRCs.

Summary of work completed

The work entailed preparing BRERC electronic species data and then submitting this to the Gateway team; the Gateway team validating the records for their systems; testing the access controls; evaluating any obvious impacts on BRERC business; consider using and accessing the Gateway for routine data searching services carried out by BRERC; reporting our findings to the NBN and other LRCs.

In order to prepare the data so that it can be imported and interrogated by the Gateway BRERC produced a translation tool in MapBasic. This tool translates .dbf files into .txt files in the format required by the Gateway.

BRERC data is held in Lotus Approach relational databases and is exported in .dbf formats to enable calculating fields to be converted into data fields. Calculating fields enable information such as statuses to be continually up-to-date but the resulting calculated data is essentially cosmetic until exported.

The tool is opened and operated within MapInfo Professional.

Some areas have been very successful whilst other issues need addressing.

Time taken

In order for this Project to be evaluated fully we conducted two submissions of data over several months. The first submission consisted of the transfer of approximately 900,000 records as one data set. The second submission consisted of the transfer of approximately 1,060,000 records as two data sets. Because of continuing sensitivities badger sett data has not been included in the submitted data.

The first submission necessitated significant time establishing the formats required by the Gateway, producing and testing the BRERC tool.

Before the second submission was carried out BRERC reached critical thresholds for the electronic file size of our main species database and subsequently BRERC produced a second Main database clone to house new records whilst developing a replacement database (still ongoing). In addition the BRERC member of staff who produced the tool left our employment.

Because of the database and staff issues BRERC anticipated difficulty in preparing and resubmitting data to the Gateway. Due to other commitments the data was prepared over a period of weeks, to test different ways of combining the data from our two main databases. We also chose to submit two separate data sets – one set comprising sensitive data, the other set comprising non-sensitive data. During the submission process we decided to include several members of staff to assist with/watch to ensure the process was understood by as many as possible.

The actual second submission of two prepared data sets took a matter of about an hour or so.

Technical aspects

1) The tool produced in MapBasic has been designed specifically for BRERC with regard to how we manage data, although generic versions could be produced.

2) The chosen formats required include NBN Taxon Version Keys that identify species, but do not require the species name or other fields BRERC uses for in-house maintenance. This means there is a need to include Taxon Version Keys in our databases.

It also means there is a need for the Gateway team to make the relevant Keys available easily. There had been some confusion as to which version of the NBN Keys are current and how should they be accessed. Initially we had been provided with an incorrect set and this caused unnecessary delays in the validation stage carried out by the NBN team. On the Gateway, and on the NBN Species information pages on the NBN website, for most species there appear to be several different codes with similar structures that appear to be Taxon Version Keys. Navigating to the correct keys needs to be simpler. There is a need for a downloadable nationally 'approved' species dictionary.

In order to allow for different levels of access to sensitive data it is necessary to mark such records as being sensitive. BRERC does this by having a separate calculating yes/no field for 'sensitive'. The calculation takes the information from our drop-down lists database for 'Record type/Sex Stage/Abundance'. An example is where 'Record Type' is a sett then that is also marked as sensitive in that database.

3) At the beginning there appeared to be some confusion, or breakdown in communication among Gateway staff, regarding the purpose of the Project. This was resolved quickly but highlighted the need to ensure as many staff as possible are adequately informed of the various Projects they may be involved with. All of the NBN team and relevant Natural England officers have been approachable at any time and have acted quickly to try and resolve any issues raised. All of the successes we have had with this Project can be attributable to the sincere and honest assistance BRERC has received from those within the NBN team and Natural England.

4) There are genuine concerns about how the data can be accessed via the Gateway. BRERC holds its data holdings as one large dataset and were reluctant to split the data merely to satisfy the manner in which the Gateway manages data. BRERC have chosen to make all records available to all via the Gateway at a one kilometre resolution.

BRERC granted downloadable rights at full resolution of all records to Natural England (at the request of Richard Alexander). The data set downloaded was the first submission and did not include sensitive data. Badger sett data has not been included in the submitted data. Access is essentially granted to data sets and not to parts of data sets.

There are occasions when we may wish to grant someone full access to certain sensitive records but not all the records. For example it would be desirable to grant access to sensitive bat roost records to the local Bat Group but we may not wish to grant them access to sensitive otter holt or badger sett data. At present the access controls do not appear to be able to be selective in this way.

Splitting the data into several data sets could be a way to resolve the access issue but currently this then engenders considerable resource and time implications for BRERC. Because of this we realised we did not wish to split the data and have requested the Gateway team append the sensitive and non-sensitive data sets together. We intend to address the issue as a separate pilot and in the meantime will treat potential requests from enquirers for sensitive data on a case-by-case basis, possibly providing relevant data directly from BRERC.

The Gateway needs to continue to improve filtering for access controls that would negate the need to split data sets.

Currently BRERC has confidence that sensitive data can be screened and can only be accessed by those granted so by BRERC.

5) In our view the Gateway site can be difficult to navigate around and consequently difficult to extract exacting and specific data quickly and without unwanted data attached. Some of the symbols and acronyms used can be difficult or time consuming to understand. Accessing and understanding the maps on the Gateway and related web sites need to be clearer since these are the main ways people will look at the data.

6) BRERC has had concerns about how effectively it could manage data it submits on the Gateway, with the Gateway tools available. One of the main issues has been the time it takes to understand how the site works and how and what is possible with regard to managing the data.

The previous provision BRERC had made was the submission of certain species data as part of the South West NBN Pilot Project in 2004. At that time the submission of our data was a requirement of that project and as such BRERC did not have the confidence that it had much control over the management of that process. A consequence was that BRERC then did not feel able to engage as much as it wished, mostly due to time and resource pressures that could not allow the luxury of taking the time to fully understand and utilise the Gateway. In essence the Gateway became a potential burden on BRERC's limited resources.

Since 2004, to their credit, the NBN teams have made considerable progress to address many of the issues raised by LRCs and others. Setting access controls and other features are much simpler. The NBN Meta Data Model and other guidance have been made much simpler and more practicable. The concerns LRCs have had regarding commercial enquirers, general or core funding and standards of data management have been acknowledged and are beginning to be included on national agendas set by the NBN and Natural England.

7) Submission to the Gateway generates meta-data, charts and analysis available on line. Whether this information is automatically generated or not it is a useful resource for the BRERC management as it provides some of the information the BRERC Steering Group and Joint Advisory Committee often request.

8) Incorporating searches for data on the Gateway still takes longer, and can be more cumbersome, than we need. In many cases access to data in detail has to be requested from the data provider and this incurs an impractical delay for the data search service. This is one of the main reasons why BRERC has not routinely used the Gateway. The Gateway needs to continue to improve the way in which access controls are used to reduce the amount of delay for data originators grant and provide detailed access.

*****Key Point:** *LRCs need to incorporate internal protocols and systems that aid the processes for responding to Gateway generated requests and for granting detailed access where appropriate.****

9) The promotion of the Gateway as a conduit for data mobilisation, and the proliferation of database programmes such as MapMate are thought to have resulted in the duplication of many records. In addition the universal drive for data flow may have been at the expense of standards regarding verification and validation.

*****Key Point:** *LRCs, the NBN and national schemes and societies need to address the issues of duplicates and potential lack of validation and verified data being submitted to the Gateway.****

10) The issue relating to the Taxon Version Keys could have been resolved sooner if there was a downloadable national species dictionary. At present there are numerous dictionaries and lists with national identifiers referring to checklists. BRERC uses a unique reference number for species held in its database. Although probably not taxonomically or scientifically correct these unique numbers do allow for instant checking and updating of statuses etc.

*****Key Point:** *BRERC recommend that a downloadable, and nationally 'approved', dictionary is produced as soon as is possible.****

Business aspects

- 1) The main concern has been that by making data available to the Gateway we inadvertently undermine our business model in that commerce and others would no longer seek a charged service from BRERC.
- 2) The provision of sensitive data could undermine relationships with the recording and community groups that are vital in the mobilisation of data, whether or not any inappropriate release of sensitive data was real or an incorrect perception.
- 3) BRERC has therefore taken a risk of alienating itself among the LRC and data custodianship community and importantly local users and recorders. We have had to place considerable good faith in the NBN teams but feel this has been well placed.
- 4) The duration of the Project has not been long enough for a full assessment of potential impacts. To date there appear to be impacts that balance themselves out.

We have had some commercial consultants approach us for a charged service after they have seen our data on the Gateway. This equates to more charged work for BRERC.

We have had some members of the public and community groups approach us for more information about the records they come across on the Gateway. This equates to more uncharged work.

Attributable enquiries have been few and have not adversely affected our business. As more become aware and make use of the Gateway we anticipate an increase in our workload. This increase would probably occur whether we have submitted data to the Gateway or not as it is a natural progression of internet usage.

- 5) Many consultancies, government and non-government agencies have expressed an interest in accessing BRERC data via the internet, although our local authorities currently prefer to have direct access. Most require habitat and sites data along with the species records.

*****Key Point:** *The current limitation the Gateway has denies it the opportunity to replicate a data search conducted by LRCs such as BRERC, particularly regarding the inclusion of habitat and site data. Even if this could be resolved then the impact on our business models could then be jeopardised. These two issues both need further consideration by all.****

Maintenance

- As part of its routine data management BRERC aim to provide regular submissions of its species data to the Gateway, subject to resources.
- BRERC aim to retain the relevant fields in the new main species database we are developing.
- BRERC aim to produce Protocols and guidance on the processes involved for BRERC staff and volunteers.
- BRERC are aiming to develop ways to routinely incorporate searches on the Gateway when conducting our data search services.

BRERC strongly recommend that data providers to the Gateway be required to automatically grant LRCs access to the submitted data at full resolution (apart from exceptional circumstances or where commercial sensitivities arise). This would allow greater mobilisation of data and would help LRCs to incorporate Gateway held data in data searches, screening, research and project work. This might seem at odds with the fact that currently most or all LRCs do not allow full access to all. However this would be in recognition of the role LRCs have as data custodians and key nodes within the NBN and the professional standards that we apply in managing and disseminating data.

Conclusions

- BRERC are pleased to have had the opportunity to take part in this Project.
- We are confident that we can satisfactorily manage the BRERC data on the Gateway.
- We recognise that BRERC has been slow to develop protocols and systems in-house to exploit the resources of the Gateway.
- BRERC does not feel the submission of data to the Gateway has adversely affected our business.
- The submission of the BRERC data means the Gateway now holds an extra 1,060,000 records for the 'Avon' area.
- **Initial discussions with some other LRCs have led them to consider favourably the possibility of them submitting data.**

Recommendations

- BRERC strongly recommends other Local Records Centres to submit their species data to the National Biodiversity Network Gateway. BRERC have chosen to make all records available to all via the Gateway at a one kilometre resolution.
- The NBN and Natural England should continue a supportive dialogue with LRCs to help enable them to submit their species data holdings to the Gateway.
- The NBN and Natural England should continue to consider the funding requirements of LRCs and identify long term and sustainable funds, particularly in light of the increased workloads of LRCs resulting from recent legislation and regulations.
- BRERC strongly recommend that data providers to the Gateway be required to automatically grant LRCs access to the submitted data at full resolution (apart from exceptional circumstances or where commercial sensitivities arise).
- There is a need for a downloadable nationally 'approved' species dictionary.
- The NBN and Natural England need to ensure as many staff as possible are adequately informed of the various Projects they may be involved with.
- The Gateway needs to continue to improve filtering for access controls that would negate the need to split data sets.
- Accessing and understanding the maps on the Gateway and related web sites need to be clearer since these are the main ways people will look at the data.
- The Gateway needs to continue to improve the way in which access controls are used to reduce the amount of delay by data originators to consider, grant and provide detailed access.
- LRCs need to incorporate internal protocols and systems that aid the processes for responding to Gateway generated requests and for granting detailed access where appropriate.
- LRCs, the NBN and national schemes and societies need to address the issues of duplicates and potential lack of validation and verified data being submitted to the Gateway.
- The current limitation the Gateway has denies it the opportunity to replicate a data search conducted by LRCs such as BRERC, particularly regarding the inclusion of habitat and site data. Even if this could be resolved then the impact on our business models could then be jeopardised. These two issues both need further consideration by all.

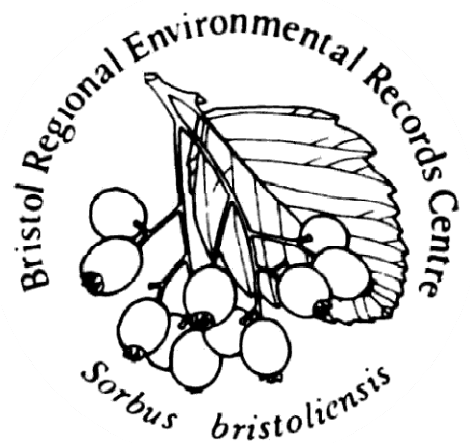
Appendix 1

Technical document on the BRERC NBN Data Transfer Tool

Appendix 1

Bristol Regional Environmental Records Centre (BRERC)

Technical Document on the BRERC NBN Data Transfer Tool
July 2007



Overview

This document describes the overall process and the data elements being transferred to the National Biodiversity Network, for BRERC species data.

For each element, the BRERC Main database column from which the data is extracted is given, together with any special processing that is required.

The program to extract the data is written using MapBasic and is referred to in this document as the **NBN Data Transfer Tool**.

Any records where special processing cannot be done, will be skipped and an error reported. In some cases a warning message may be output. In this case the record *will* be output to the data file.

Process

Query for required data set

Perform a query for the particular records required from the BRERC main database.

Once on the NBN Gateway, access to the data is defined by dataset. If different access restrictions are required for different types of records, then the data must be extracted accordingly into several datasets.

Only those records where the following field is non-blank must be included.

- NBNumber2

Export data

The following columns should be exported to a .DBF file for the data set queried in section 2.1. The order is not important.

- Grid_Ref
- Place
- Abundance
- Sex_Stage
- Record_Type
- Recorder_Code
- Determiner_Code
- Original_Grid?
- Precise_Date
- YEAR_DATE
- Source
- unique_No
- NBNumber2
- BRERC_Status
- BAP
- SensitiveRecord

Run NBN Data Transfer Tool

In MapInfo run the tool NBNdata_transfer.MBX. A form will be displayed (fig 1).

You should specify the table created in step 2.2, together with the names of the 2 output files.

Set the radio buttons to indicate whether you want to send a new dataset, or whether you want to re-send an existing one.

Click on a dataset in the list to use as default values, or to re-send.

When re-sending an existing dataset that you want to replace on the NBN Gateway, you must specify the correct Gateway-Id.

Complete the metadata details and press the **Next** button to start the conversion process. To exit the tool, press the **Cancel** button.

The NBN Data Transfer Tool will create a file that includes both the Metadata and Data sections, according to the NBN Exchange Format specification (version 2.1). Any errors or warnings encountered during the conversion process will be written to a log file.

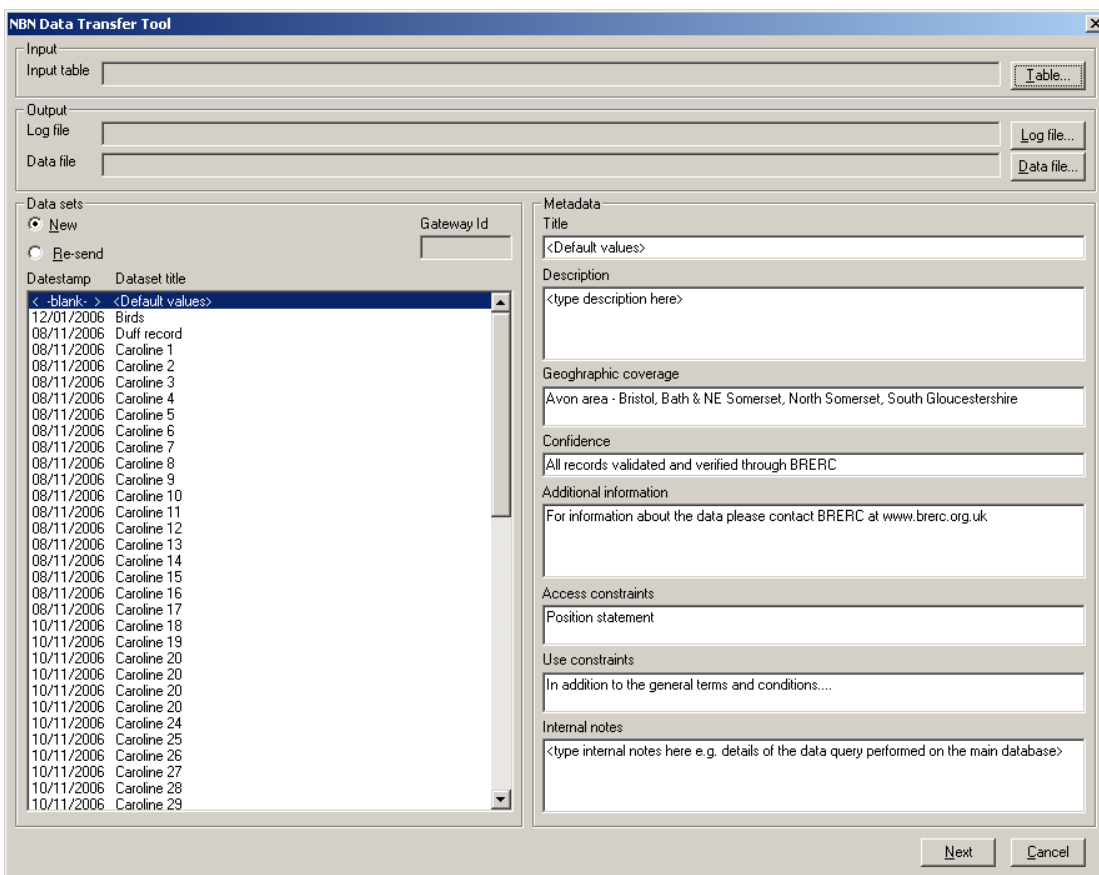


Fig 1

All the fields in the Metadata frame are sent to the NBN, except for **Internal notes**. This field is used for BRERC purposes only. For example, details of the query used to extract the data set could be recorded.

Log file

The log file will give summary information about the number of species records processed.

It will also contain details of any records that have errors and have been skipped (i.e. do not appear in the data file). Records are skipped when the format of certain data elements cannot be converted to the NBN format. For details refer to section 2.3.1.1.

In some cases a Warning may be reported. The record will be output to the data file, but you may decide to remove it. For details refer to section 2.3.1.2.

Errors

If you want to send the specific records to the NBN you will have to correct the data on the main database first, and then repeat the process from Step 2.1

The errors that may be reported are as follows, where NNNN is the BRERC id for the record in the main database and <value> is the item of data in error:

Record id: NNNN.NN BRERC Id not an integer - record skipped

This error is output if a non-integer Id is found.

Record id: NNNN BRERC Id is '0' - record skipped

This error is output the Id has a value of 0.

Record id: NNNN BRERC Id is blank - record skipped

This error is output if a blank Id is found. The RecordKey field is mandatory on the NBN gateway.

Record id: NNNN BRERC Id > 30 characters - record skipped

This error is output if the Id is longer than 30 characters. This would exceed the length of the corresponding field on the NBN gateway.

Note: BRERC field less than this, but added validation in case increase the column width later.

Record id: NNNN NBNnumber2 is blank - record skipped

This error is output if NBNnumber 2 is blank. This field should always have a value. See section 2.1 for further details.

Record id: NNNN NBNnumber2 is > 16 characters - record skipped

This error is output if NBNnumber2 is longer than 16 characters. This would exceed the length of the corresponding field on the NBN gateway.

Record id: NNNN Grid reference format error(non-digit): <value> - record skipped

This error is output if a non-numeric character is found in a position other than the first two characters of a grid reference.

Record id: NNNN Grid reference format error(not 2 to 12 figure): <value> - record skipped

This error is output if the grid reference is not a 2,4,6,8,10 or 12 figure number.

Record id: NNNN Precise date: <value> is not a valid date - record skipped

This error is output If the precise date is not blank, but is not a valid date, or is later than today, or is earlier than 01/01/1700.

Record id: NNNN YEAR_DATE format error, not 4 characters: <value> - record skipped

This error is output if the YEAR_DATE column does not contain a value that is 4 characters long.

Record id: NNNN YEAR_DATE format error, Digit 1 not '1' or '2': <value> - record skipped

This error is output if the YEAR_DATE column does not have a first digit of 1 or 2.

Record id: NNNN YEAR_DATE format error, Digit 2 not valid: <value> - record skipped

This error is output if the YEAR_DATE column does not have a second digit that matches the first digit entered. If the first is '1' the second should be a '9', '8', or '7'; if the first is '2' the second should be a '0'.

Record id: NNNN YEAR_DATE format error, Digit 3 not numeric: <value> - record skipped

This error is output if the third digit is not a number character.

Record id: NNNN YEAR_DATE format error, Digit 4 not numeric: <value> - record skipped

This error is output if the third digit is not a number character.

Record id: NNNN YEAR_DATE format error, Year later than today: <value> " - record skipped"

This error is output if the YEAR_DATE specified is later than the year part of Today's date.

Record id: NNNN Sensitive format error: <value> - record skipped

This error is output if the SensitiveRecord column contains a value other than Yes/No or blank.

Record id: NNNN Recorder is > 255 characters - record skipped

This error is output if the Recorder_Code is longer than 255 characters. This would exceed the length of the corresponding field on the NBN gateway.

Note: BRERC field less than this, but added validation in case increase the column width later.

Record id: NNNN Determiner is > 255 characters - record skipped

This error is output if the Determiner_Code is longer than 255 characters. This would exceed the length of the corresponding field on the NBN gateway.

Note: BRERC field less than this, but added validation in case increase the column width later.

Warnings

Tab character removed from record: NNNN , Element: <element>

If a tab character is found within a field, it will automatically be replaced with a space in the data file. This warning will be output if such a change is made. The Element indicates which item of data was affected.

Line-feed character removed from record: NNNN , Element: <element>

If a line-feed character is found within a field, it will automatically be replaced with a space in the data file. This warning will be output if such a change is made. The Element indicates which item of data was affected.

Carriage-return character removed from record: NNNN , Element: <element>

If a carriage-return character is found within a field, it will automatically be replaced with a space in the data file. This warning will be output if such a change is made. The Element indicates which item of data was affected.

Record id: NNNN Warning: Grid reference prefix not 'ST' or 'SO': <value>

This warning will be output if a grid reference is found that does not start with the characters "ST" or "SO". Whilst such an occurrence may be feasible for areas just outside of the BRERC region, other unusual codes may need checking. No change is made to the item in the data file (other than reducing a 12 figure grid reference to 10 figures).

Output

This section describes the data elements that will be extracted from the BRERC species data into the output file.

The output file includes the optional **Metadata** section and the mandatory **Data** section.

Metadata section

Fields that are likely to remain the same for all data sets will be defaulted automatically via the NBN Data Transfer Tool. The values will be read from a table, so that they can be modified without changing the NBN Data Transfer Tool.

Fields that are variable for each data set are entered via the NBN Data Transfer Tool.

The metadata information is stored in a table, and can be used again when issuing updates to data sets. This also keeps a historical record of which datasets were previously extracted.

Metadata element attributes

exchangeFormatVersion

Default to "2.1"

datestamp

Default to today's date in the format "dd/mm/yyyy "

gatewayId

Blank for new data sets.

Can be specified in the Metadata form, where an existing data set is being replaced.

NBN Gateway column	Dataset.datasetKey – char(8)
BRERC dbse column	datasets.gatewayId - Character (8)
Special processing	Restricted to 8 characters by NBN Data Transfer tool. Must be specified when re-sending an existing dataset. Must be blank for a new dataset.

DatasetTitle

Variable content.

Entered via Metadata form

NBN Gateway column	Dataset.datasetTitle – varchar(200)
BRERC dbse column	datasets.DatasetTitle - Character (200)
Special processing	Restricted to 200 characters by NBN Data Transfer tool. Mandatory.

DatasetProvider

Default content to:

"Bristol Regional Environmental Records centre"

NBN Gateway column	Organisation.organisationName – varchar(100)
BRERC dbse column	datasets.DatasetProvider - Character (60)
Special processing	Restricted to 60 characters by NBN Data Transfer tool. Mandatory.

Abstract

DatasetDescription

Variable content.
Entered via Metadata form

NBN Gateway column	Dataset.description – text
BRERC dbse column	datasets.DatasetDescription - Character (254)
Special processing	Restricted to 254 characters by NBN Data Transfer tool. Mandatory.

DataCaptureMethod

This optional element will not be provided for BRERC data.

DatasetPurpose

This optional element will not be provided for BRERC data.

GeographicCoverage

Default content to:
“Avon area – Bristol, Bath & NE Somerset, North Somerset, South Gloucestershire”

NBN Gateway column	Dataset.geographicCoverage – varchar(4000)
BRERC dbse column	datasets.GeographicCoverage - Character (254)
Special processing	Restricted to 254 characters by NBN Data Transfer tool. Mandatory.

TemporalCoverage

This optional element will not be provided for BRERC data.

DatasetConfidence

Default content to:
“All records validated and verified through BRERC”

NBN Gateway column	Dataset.Quality – varchar(4000)
BRERC dbse column	datasets.DatasetConfidence - Character (254)
Special processing	Restricted to 254 characters by NBN Data Transfer tool. Mandatory.

Additional information

Default content to:
“For further information about the data please contact BRERC at www.brerc.org.uk”

NBN Gateway column	Dataset.additionalInformation – varchar(4000)
BRERC dbse column	datasets.AdditionalInformation - Character (254)
Special processing	Restricted to 254 characters by NBN Data Transfer tool. Optional.

AccessConstraints

Default content to:

NBN Gateway column	Dataset.accessConstraints – varchar(4000)
BRERC dbse column	datasets.AccessConstraints - Character (254)
Special processing	Restricted to 254 characters by NBN Data Transfer tool. Mandatory.

UseConstraints

Default content to:

NBN Gateway column	Dataset.useConstraints – varchar(4000)
BRERC dbse column	datasets.UseConstraints - Character (254)
Special processing	Restricted to 254 characters by NBN Data Transfer tool. Mandatory.

Survey

The optional element(s) to describe surveys will not be provided for BRERC data.

Occurrence attributes

The following occurrence attributes will be specified, to explain the additional optional data elements included in the file. These fields will be included in each data set.

Location

BRERC dbse column	Place
<Name>	Location
<Description>	The location of the species recorded.
Special processing	none Note: This information cannot be sent in the SiteName field, because the column width on the NBN Gateway would truncate the values.

Abundance

BRERC dbse column	Abundance
<Name>	Abundance
<Description>	The abundance recorded, which may include DAFOR codes.
Special processing	none

SexStage

BRERC dbse column	Sex_Stage
<Name>	SexStage
<Description>	The sex or stage of the species recorded.

Special processing	none
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RecordType

BRERC dbse column	Record_Type
<Name>	RecordType
<Description>	The type of record or method of recording used. However this field is also currently used to capture information about the species and/or it's activities (for data management purposes).
Special processing	none

OriginalGridReference

BRERC dbse column	Original_Grid?
<Name>	OriginalGridReference
<Description>	Whether the Grid Reference specified was the original value supplied by the recorder (Yes or No)
Special processing	none

Source

BRERC dbse column	Source
<Name>	Source
<Description>	The source of the data, e.g. a particular project name.
Special processing	Default to "BRERC" if the column is blank.

Status

BRERC dbse column	BRERC_Status
<Name>	Status
<Description>	The status of the species in the BRERC region. This field refers to the 'BRERC Notable Species List' that also includes nationally notable, protected and UK and local BAP species.
Special processing	none

BAP

BRERC dbse column	BAP
<Name>	BAP
<Description>	Biodiversity Action Plan. Lists a. UK BAP species and SOCC species of conservation concern; b. SW BAP species; c. local BAP species (NSOM, BNES, BCC, SGLOS)
Special processing	none

Data Section

For each data element, the NBN Data Transfer tool will check for Tab and end of line characters within a string. These will be replaced with a single space and a warning will be issued in the log file.

RecordKey

BRERC dbse column	unique_No
Description	Unique primary key of record within the BRERC database
Special processing	The field is defined as Numeric (10.2) although the values should only be integers. Convert to a string value. Issue an error if a decimal part exists. Mandatory Max length = 30

SurveyKey

This optional element will not be provided for BRERC data, as survey information is not specified in the metadata.

SampleKey

This optional element will not be provided for BRERC data.

Date information

If a **Precise_Date** is specified, populate the **Date** field, otherwise complete the **EndDate** and **DateType** fields as indicated below.

StartDate

This optional element will not be provided for BRERC data, as it would be blank for all records.

EndDate & DateType

If the **Precise Date** is blank, the **YEAR_DATE** column is used to populate these fields as follows:

EndDate

BRERC dbse column	YEAR_DATE
Description	Text field (10) should be YYYY
Special processing	Issue an error if the field is blank. Issue an error if the field is not 4 characters in length, or non-numeric characters are found. Issue an error if the field does not start with "17", "18", "19" or "20"; or is later than today.

DateType

BRERC dbse column	none, fixed text "-Y"
Description	Signifies that only the end date is known to the nearest year.
Special processing	none

Date

BRERC dbse column	Precise_Date
Description	Signifies the date the species record was recorded.
Special processing	Ensure that the date is of the correct format (DD/MM/YYYY) and issue an error if not. Issue an error if the date is in the future.

Species information

When the data is extracted from the Main database only those records where the NBNnumber2 column is not blank should be selected.

If this field is blank, the species record will be skipped by the NBN Data Transfer Tool and an error reported in the log file.

TaxonVersionKey

BRERC dbse column	NBNnumber2
Description	This is equivalent to the NBN Taxon Version Key.
Special processing	Issue an error if a blank value is found. Issue an error if the length > 16

BiotopeKey

This element will not be provided for BRERC data, as it would be blank for all records. It is only required for Habitat data, which we are not providing.

Location information

GridReference

BRERC dbse column	Grid_Ref
Description	The grid reference. Could be a 2 to 12 figure reference
Special processing	Gateway can accept 2 to 10 figure references. 12 figure references need to be reduced down. Check that the Grid Reference is a valid Ordnance Survey Grid reference of the format AANNNNNN, where AA is a 2 character prefix and NNNNNN is a numeric 2 to 12 figure reference

East and North

These elements will not be provided for BRERC data, as the alternative GridReference is given.

Projection

BRERC dbse column	none – fixed value of “OSGB”
Description	British National Grid
Special processing	None

Precision

BRERC dbse column	none
Description	The spatial precision of the georeference in metres.
Special processing	Derive from the length of the grid reference. 2 fig = 10000 4 fig = 1000 6 fig = 100 8 fig = 10 10 fig = 1

SiteKey

This optional element will not be provided for BRERC data.

SiteName

The column on the Gateway has a max length of 80, which cannot be increased. Rather than truncate the data in the BRERC Place column, the information is being sent in the occurrence attribute *location*.

This optional element will therefore not be provided.

Other Information

Recorder

BRERC dbse column	Recorder_Code
Description	List of recorder codes, if there was more than one recorder, otherwise a single code.
Special processing	NBN max length = 255 none

Determiner

BRERC dbse column	Determiner_Code
Description	List of determiner codes, if there was more than one determiner, otherwise a single code.
Special processing	NBN max length = 255 none

ZeroAbundance

This optional element will not be provided for BRERC data, as all species records provided would have a value F=False (which is the default value if the field is omitted).

All BRERC records with a Zero abundance have a species name that contains “negative” in the name. These records do not have a corresponding NBN Taxon Key, so they will be excluded (i.e. NBNumber2 blank).

Sensitive

BRERC dbse column	SensitiveRecord
Description	T = true (additional access restrictions apply) F = false
Special processing	Convert Yes = “T” Convert No or blank = “F”

Occurrence Attributes

The following fields will be included at the end of each record, in the order given. For further details refer to section 3.1.8.

- Location
- Abundance
- SexStage
- RecordType
- OriginalGridReference
- Source
- Status
- BAP