**UK Environmental Change Network (ECN)**

**Bats (BA)**

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## Dataset Originator

ECN Data Centre (<http://data.ecn.ac.uk> – [ecn@ceh.ac.uk](mailto:ecn@ceh.ac.uk)), Centre for Ecology and Hydrology

## Dataset Owners

The UK Environmental Change Network (ECN) programme is sponsored by a consortium of UK government departments and agencies with an interest in understanding the causes and consequences of environmental change, who contribute to the programme through funding either site monitoring or network co-ordination activities. These organisations are the Agri-Food and Biosciences Institute, Biotechnology and Biological Sciences Research Council, Cyfoeth Naturiol Cymru - Natural Resources Wales, Defence Science & Technology Laboratory, Department for Environment, Food and Rural Affairs, Environment Agency, Forestry Commission, Llywodraeth Cymru - Welsh Government, Natural England, Natural Environment Research Council, Northern Ireland Environment Agency, Scottish Environment Protection Agency, Scottish Government, Scottish Natural Heritage.

ECN requests that you acknowledge the use of our data sets. This helps us to gauge the extent of use of each dataset and allows us to demonstrate the value of these data for research into environmental change. We also request that you send us one reprint of any publication that cites the use of our data.

## Protocol

ECN has standard operating procedures (protocols) in place to ensure that the data are comparable across the sites. Please see ba*.pdf* accompanying this document for an explanation of how these data are collected.

## Usage Notes

* Bat species are mapped (using a bat detector) and their behaviour recorded on a transect.
* The methodology is based on that used in the Bats and Habitats survey organised by Prof S. Harris and colleagues at the University of Bristol for the Joint Nature Conservation Committee.
* The transect is walked four times in each year (once in each of the following three-week periods: 15 June – 6 July; 7 July – 27 July; 28 July – 17 August; 18 August – 7 September). Surveys are not carried out when rain is heavy or there are strong winds.
* The methodology is somewhat limited in the amount of information which it can provide on the precise relationships between population levels and environmental change; nevertheless by linking ECN results to those from more widespread monitoring programmes these limitations can be mitigated.
* Please ensure that you use the accompanying quality information when using the data.

## Data Download

|  |  |
| --- | --- |
| **Field Name** | **Description** |
| SITECODE | Unique code for each ECN Site ([see 'Site Codes' below](#_Explanatory_Information_–)) |
| SDATE | Sampling date |
| TRANSECT | Transect |
| BATLOC\_ID | Location where bat seen or heard (Location where bat seen or heard (unique for each survey date). The site manager marks the location of each bat seen on the transect on a paper map and assigns these locations a number (the BATLOC\_ID) sequentially. For more information contact ecn@ceh.ac.uk) |
| FIELDNAME | Variable measured ([see field names (species codes) below](#_Explanatory_Information_–_1)) |
| VALUE | Value of measured variable |
| ACTS | Activity code – bat seen |
| ACTH | Activity code – bat heard |
| ACTF | Activity code – bat feeding buzz heard |

## Supporting Documentation – ECN\_BA2.csv

Information about how the survey was conducted is held in the supporting documentation in the file called ECN\_BA2.csv.

|  |  |
| --- | --- |
| **Field Name** | **Description** |
| SITECODE | Unique code for each ECN Site ([see 'Site Codes' below](#_Explanatory_Information_–)) |
| SDATE | Sampling date |
| BATDETECTORTYPE | Bat detector used |
| KEPTPROTOCOLFREQUENCY | Was bat detector kept at 45Hz? (Y/N) |
| ADJUSTFREQUENCY | Was frequency adjusted to aid identification? (Y/N) |
| USEREFERENCECD | Was detector output recorded and compared with CD of heterodyne calls? (Y/N) |
| USESONOGRAMANALYSIS | Was detector output recorded and sonogram analysis used? (Y/N) |

## Supporting Documentation – ECN\_BA3.csv

Information about the habitats observed on transect is held in the supporting documentation in the file called ECN\_BA3.csv.

|  |  |
| --- | --- |
| **Field Name** | **Description** |
| SITECODE | Unique code for each ECN Site ([see 'Site Codes' below](#_Explanatory_Information_–)) |
| SDATE | Sampling date |
| TRANSECT | Transect |
| BATLOC\_ID | Location where bat seen or heard (unique for each survey date) |
| FIELDNAME | Variable measured ([see field names (habitat codes) below](#_Explanatory_Information_–_2)) |
| VALUE | Code for [habitat type (see below](#_Explanatory_Information_–_3)) |

## Supporting Documentation – ECN\_BA\_qtext.csv

The ECN site managers can attach text to explaining circumstances that may affect the quality of the data. To view this text, see the quality information in the supporting documentation in the file called ECN\_BA\_qtext.csv.

|  |  |
| --- | --- |
| **Field Name** | **Description** |
| SITECODE | Unique code for each ECN Site ([see 'Site Codes' below](#_Explanatory_Information_–)) |
| FIELDNAME | The species being affected (if the whole survey is affected then this will left blank) - [see field names below](#_Explanatory_Information_–_1) |
| FROM\_DATE | Date the quality text applies from |
| TO\_DATE | Date the quality text applies to |
| DATETYPE | Code to indicate the length of time the quality text applies to  D – a single day  R – a range of days |
| CONTINUING | Code to indicate if the thing being reported is still ongoing and will continue to effect data quality  Y – still ongoing  N – will no longer affect the quality of the data |
| DESCRIPTION | Text description provided by the site manager |

## Explanatory Information – Site Codes

|  |  |  |
| --- | --- | --- |
| **Site Code in Dataset** | **Site Name** | **Location** |
| T01 | Drayton | 52°11'37.95"N  1°45'51.95"W |
| T02 | Glensaugh | 56°54'33.36"N  2°33'12.14"W |
| T03 | Hillsborough | 54°27'12.24"N  6° 4'41.26"W |
| T04 | Moor House – Upper Teesdale | 54°41'42.15"N  2°23'16.26"W |
| T05 | North Wyke | 50°46'54.96"N  3°55'4.10"W |
| T07 | Sourhope | 55°29'23.47"N  2°12'43.32"W |
| T08 | Wytham | 51°46'52.86"N  1°20'9.81"W |
| T09 | Alice Holt | 51° 9'16.46"N  0°51'47.58"W |
| T10 | Porton Down | 51° 7'37.83"N  1°38'23.46"W |
| T11 | Y Wyddfa – Snowdon | 53° 4'28.38"N  4° 2'0.64"W |

Further information about ECN sites is available at <https://catalogue.ceh.ac.uk/id/813712d4-d162-4ede-aff8-cf1c337bdc27>

## Explanatory Information – Species Codes

|  |  |  |
| --- | --- | --- |
| **Species Code** | **Latin Name** | **Common Name** |
| Bb | Barbastella barbastellus | Barbastelle |
| Es | Eptesicus serotinus | Serotine |
| M | Myotis | Myotid species |
| Ms | Myotis bechsteinii | Bechsteins |
| Mb | Myotis brandtii | Brandts |
| Md | Myotis daubentonii | Daubentons |
| Mm | Myotis myotis | Mouse-eared |
| Mw | Myotis mystacinus | Whiskered |
| Mn | Myotis nattereri | Natterers |
| XX | No bats found | No bats found |
| Nl | Nyctalus leisleri | Leislers |
| Nn | Nyctalus noctula | Noctule |
| Pp | Pipistrellus | Pipistrelle |
| Ppl | Pipistrellus pipistrellus | Common pipistrelle |
| Ppg | Pipistrellus pygmaeus | Soprano pipistrelle |
| P | Plecotus | Long-eared species |
| Pa | Plecotus auritus | Brown long-eared |
| Pg | Plecotus austriacus | Grey long-eared |
| Rf | Rhinolophus ferrumequinum | Greater horseshoe |
| Rh | Rhinolophus hipposideros | Lesser horseshoe |
| UU | Unidentified bat | Unidentified bat |

## Explanatory Information – Habitat Codes

|  |  |  |
| --- | --- | --- |
| **Fieldname** | **Description** | **Units** |
| HAB1 | First habitat type recorded near location of sighting | n/a |
| HAB2 | Second habitat type recorded near location of sighting | n/a |
| HAB3 | Third habitat type recorded near location of sighting | n/a |

## 

## Explanatory Information – Habitat Types

|  |  |
| --- | --- |
| **Code** | **Description** |
| 1 | Hedgerows: <4 m high and <5 m wide. All hedgerows are classed as continuous if the gaps are <5 m wide. Mark all larger gaps with a cross-line through the hedgerow and classify each gap as 5-10 m, 11-15 m, 16-20 m, 21-25 m, 26-30 m, 31-35 m, >35 m |
| 2 | Treelines: a line of single trees (minimum of 3) >4 m high and <2 crown widths apart; continuous and close-knit canopies |
| 3 | Treelines: as in 2. but discontinuous and spread out |
| 4 | Stone walls |
| 5 | Footpaths: small paths, usually only wide enough for one or two people |
| 6 | Tracks/bridleways: more substantial than above, with an earth or hardcore base but not tarmac |
| 7 | Roads: tarmac or similar base |
| 8 | Ditches: usually small, perhaps temporary, watercourses; see 9-12 below |
| 9 | Streams: flowing water, with no evidence of canalisation, and usually perennial flowing water. Ditches are more likely to dry up and the water flow is more likely to be interrupted |
| 10 | Fast-flowing, rough rivers |
| 11 | Slow-flowing, smooth rivers |
| 12 | Canals: man-made channels |
| 13 | Semi-natural broadleaved woodland: predominantly of broadleaved trees >5 m high with a semi-natural appearance |
| 14 | Broadleaved plantations (including orchards): tree species not native to the site, even-aged and >5 m |
| 15 | Semi-natural coniferous woodland: predominantly coniferous trees of any height with semi-natural appearance (confined to Scots pine, juniper and yew) |
| 16 | Coniferous plantations: predominantly coniferous trees which have been planted and are >5 m |
| 17 | Semi-natural mixed woodland: at least 25% broadleaved or 25% coniferous trees, of natural appearance with trees >5 m |
| 18 | Mixed plantation: at least 25% broadleaved or 25% coniferous trees, planted and >5 m |
| 19 | Young plantation: trees <5 m high, either broadleaved or coniferous, which have been planted |
| 20 | Recently felled woodland: areas for which there is evidence that woodland has been felled within the past year |
| 21 | Parkland: areas where tree cover is <30%, the majority of the trees are 30-70 m apart and a minimum of ten trees |
| 22 | Tall scrub: 3-5 m high |
| 23 | Low scrub: <3 m high including bracken |
| 24 | Beach: includes sand dunes, sand/mudflats, shingle or boulder beaches |
| 25 | Lowland heaths: lowland areas with >25% dwarf shrubs |
| 26 | Heather moorland: as above but for upland sites |
| 27 | Bog: areas of peat with vegetation dominated by heather and/or cottongrass |
| 28 | Wet ground: areas of wet ground found in association with other habitats, eg wet areas in a grass field or flushes in upland areas |
| 29 | Ponds: up to 0.5 ha |
| 30 | Lakes: more than 0.5 h |
| 31 | Standing man-made water: artificially created reservoirs and impoundments, including mill ponds |
| 33 | Upland unimproved grassland: will include some areas used for rough grazing and poor-quality grassland such as purple moor-grass, unimproved by fertilizers, herbicides or drainage |
| 34 | Lowland unimproved grassland: may be regularly grazed or mown, but may be totally neglected. Unimproved by fertilizers herbicides or drainage. Includes herb-rich grasslands on limestone, chalk, cliff-tops, etc |
| 35 | Semi-improved grassland: slightly modified by fertilizer or herbicide application, or by heavy grazing pressure and/or drainage |
| 36 | Improved grassland: grassland which has had regular treatments of fertilizer and/or herbicide but not including leys (see 40) |
| 37 | Arable: all classes of arable land, including grassland leys (short-term, normally re-seeded < 5yrs ago) and horticulture. |
| 38 | Amenity grassland: includes well-maintained non-agricultural grass |
| 39 | Rock surfaces |
| 40 | Quarries and open-cast mines: any excavation (gravel or chalk pits, etc) |
| 41 | Bare soil on unvegetated ground not falling into 39 or 40 |
| 42 | Built land: any urban areas including gardens and transport corridors |
| 43 | Others: please specify |