

## NBIS Metadata

### Species Data

The NBIS database currently holds just over 2.5 million species records covering all the major taxon groups. We are always aiming to increase our data holdings, particularly for species and geographical areas for which records are currently sparse.

#### **TEMPORAL COVERAGE**

NBIS hold species records from 1600 to present, with the majority of records covering the last 30 years. Earlier records are usually to year with more recent records having a full date. There are a small number of records with unknown date. While large datasets are generally updated annually by the County Recorders and other groups, records are received throughout the year.

#### **GEOGRAPHICAL COVERAGE**

The species records held cover the entire administrative boundary of Norfolk including the marine environment; however the west of the County is less well covered than elsewhere. Data resolution varies between and within taxa. Uneven coverage is due to casual recording and surveying effort being localised. Overall, the majority of records are at 1km or 100m resolution. See metadata for individual taxon groups for more details. NBIS also holds some species records from Suffolk and Cambridgeshire, which were collected together as part of regional audits.

#### **METHODS OF DATA CAPTURE**

Data have been collected via a variety of methods, including surveys by specialist groups, reports written by ecological consultants as part of the planning process and from NBIS staff and members of the public. The purpose of data capture is to record the species of Norfolk.

#### **ACCURACY OF RECORDS**

The majority of records submitted to NBIS are verified by the network of County Recorders. The remaining records are verified in-house by NBIS staff prior to their inclusion on the database. Although some unintentional inaccuracies may be present, none are currently known. Records are entered onto a Recorder 6 database which validates them on input with regards dates and grid references.

#### **CONFIDENTIAL RECORDS**

NBIS holds a number of confidential records which are not given out in data searches. Access to these records is via the data owner or the appropriate county recorder. Users will be signposted where necessary.

### **PRIORITY SPECIES RECORDS**

NBIS holds 209394 records of Biodiversity Action Plan Priority species and 213036 records of Section 41 (Priority) species. The currency and precision are summarised below:

#### BAP

20% of records are from 2011-2016; 27% are from 2006-2010; 30% are from 1996-2005. The remainder were recorded before 1996.

5% of records have a grid reference resolution of 1m; 2% have a resolution of 10m; 48% of records have a grid reference resolution of 100m (a 6 figure grid reference); 39% of records have a resolution of 1km; 3% of records have a tetrad (2x2km) resolution and 3% are recorded to 10km.

#### Section 41

20% of records are from 2011-2016; 27% are from 2006-2010; 29% are from 1996-2005. The remainder were recorded before 1996.

5% of records have a grid reference resolution of 1m; 2% have a resolution of 10m; 48% of records have a grid reference resolution of 100m (a 6 figure grid reference); 39% of records have a resolution of 1km; 3% of records have a tetrad (2x2km) resolution and 2% are recorded to 10km.

### **FURTHER INFORMATION**

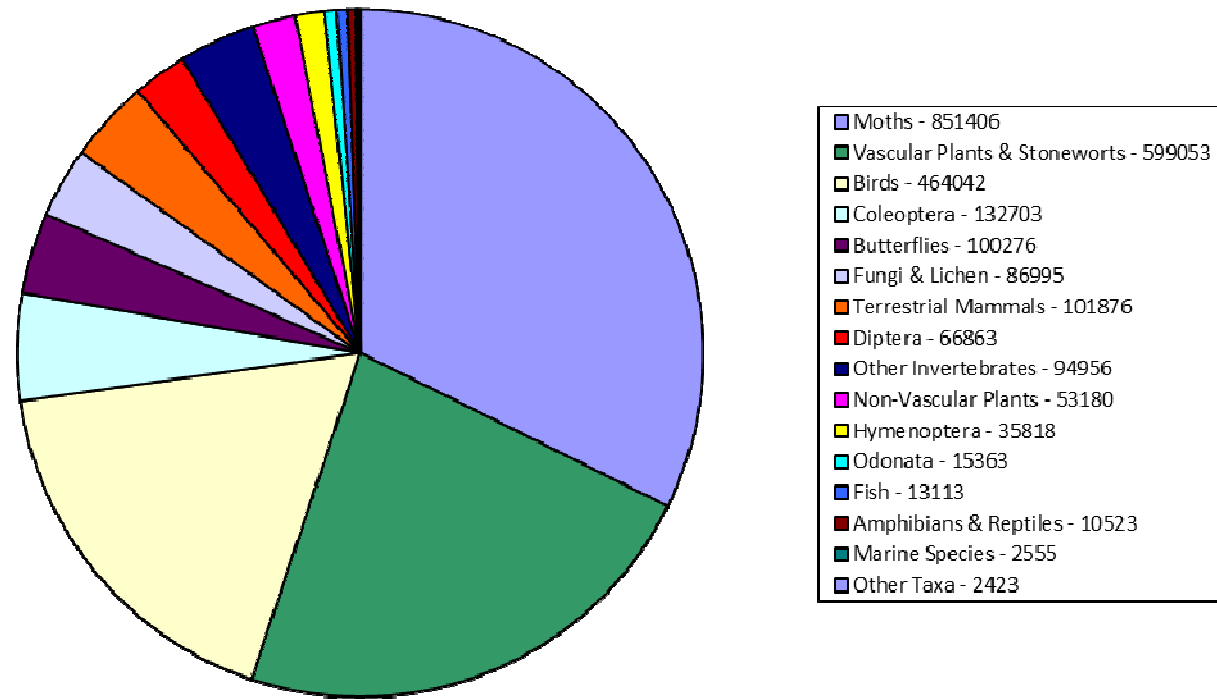
NBIS holds records for the majority of taxa found in the county. However updates of some taxon groups have not been received recently. Please contact us for details of particular taxonomic groups.

### **DATA SECURITY**

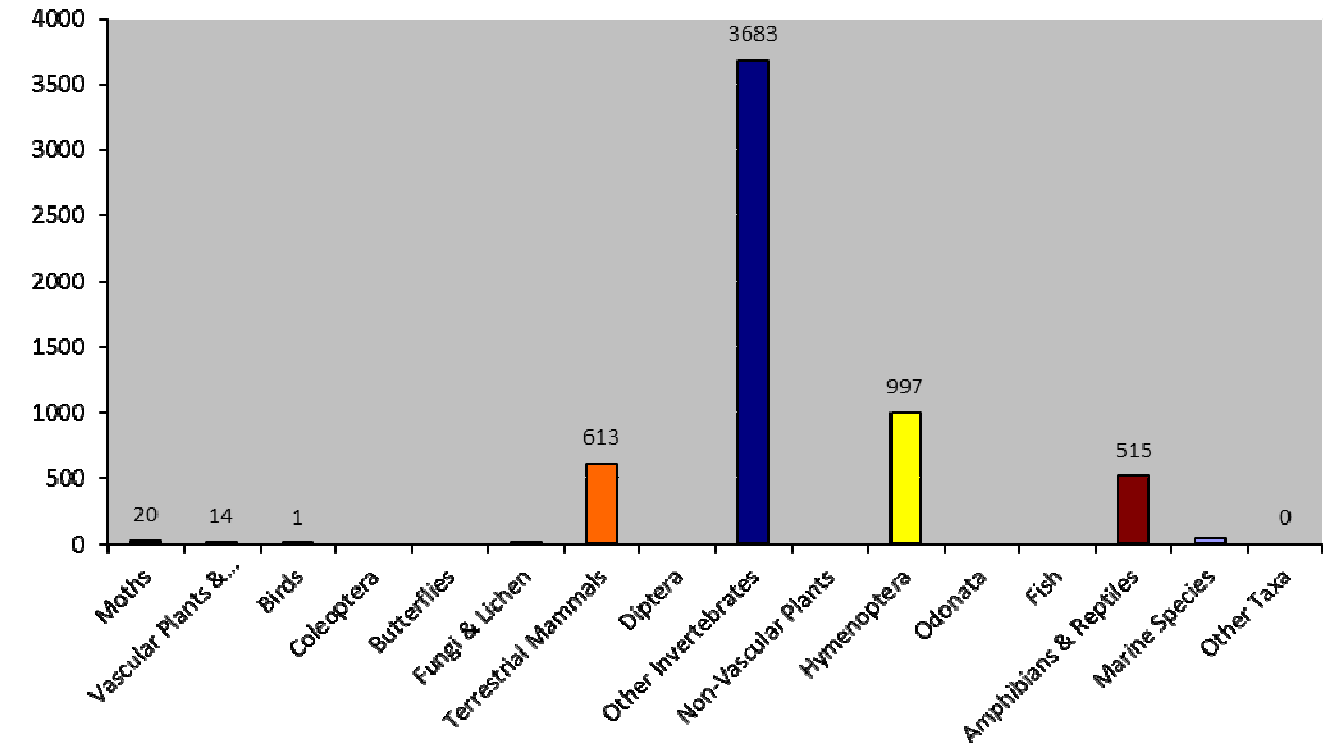
Records are kept on a password-protected, secure database which is held on the Norfolk County Council server. The data is backed up daily. The paper copies of records which have been digitised in house are either filed securely or scanned in and retained electronically in case future reference is necessary. Most paper files are held within the Norfolk Archive Centre, with a small number of files in frequent use stored in the NBIS office.

**INDIVIDUAL TAXONOMIC GROUPS**

**Total Number of Records Held**



**Number of Negative Records**



**First and Last Record Dates**

Taxon Group	Earliest Record	Latest Record
Moths	1762	2015
Vascular Plants & Stoneworts	1670	2015
Birds	1605	2015
Coleoptera	1762	2015
Butterflies	1827	2015
Fungi & Lichen	1800	2015
Terrestrial Mammals	1705	2016
Diptera	1762	2015
Other Invertebrates	1600	2015
Non-Vascular Plants	1785	2016
Hymenoptera	1818	2015
Odonata	1800	2015
Fish	1879	2015
Amphibians & Reptiles	1741	2015
Marine Species	1910	2016
Other Taxa	1900	2010

**Geographical Coverage**

Overall there is a good coverage of records across the county, though records tend to be sparser towards the west of the county.

*Moths* – Coverage across Norfolk. Records focussed on light trap locations.

*Vascular Plants & Stoneworts* – Throughout Norfolk.

*Birds* – Good coverage across Norfolk.

*Coleoptera* – Throughout Norfolk. Concentrations of records in the Broads and Brecks.

*Butterflies* – Records throughout Norfolk. Concentrations in the north and east of the county.

*Fungi & Lichen* – Good coverage to the east of the county, sparser further west.

*Terrestrial Mammals* – Good coverage throughout Norfolk, but slightly sparser to the west of the county.

*Diptera* – Fewer records in the west of the county. Concentrations of records in the Broads and Brecks.

*Other Invertebrates* – Throughout Norfolk. Concentrations around waterways.

*Non-Vascular Plants* – Concentrations to south and east of the county. Sparser to the north and west.

*Hymenoptera* – Throughout Norfolk, but sparser to the west of the county.

*Odonata* – Records from across the county but concentrated in the Broads.

*Fish* – Throughout Norfolk.

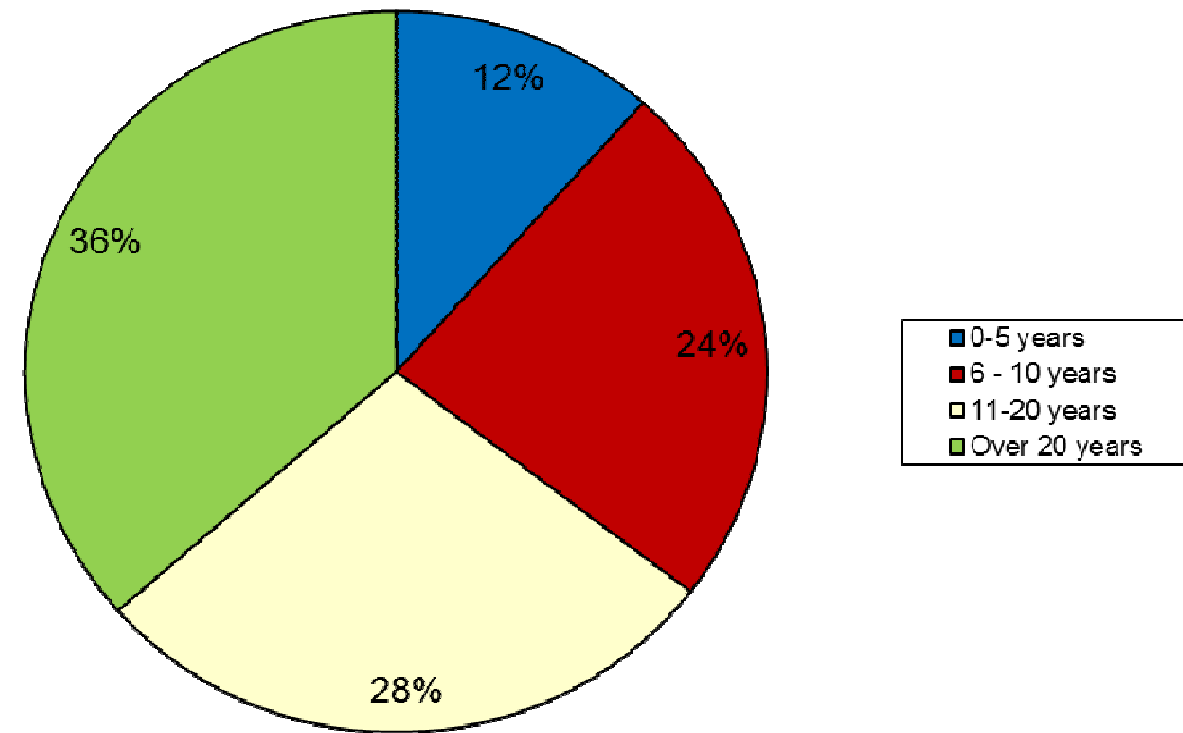
*Amphibians & Reptiles* – Throughout Norfolk, but sparser to the west of the county.

*Marine Species* – Good coverage around the coast of Norfolk

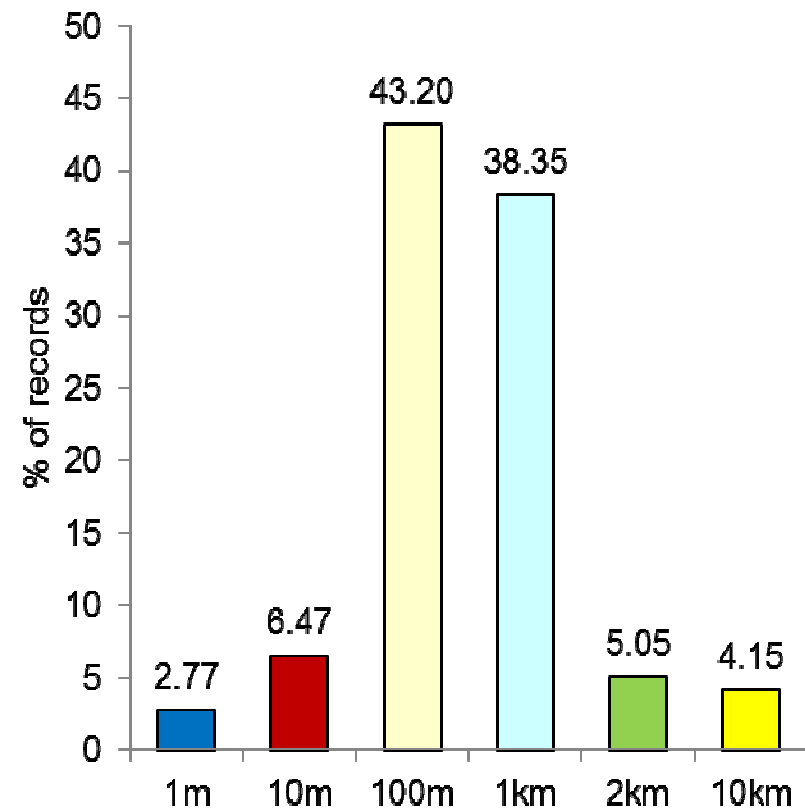
*Other Taxa* – Sparse coverage across the county.

For details of the currency of records of individual taxonomic groups, click [here](#)

### Overall Record Currency



### Overall Records Resolution



For details of the resolution of records of individual taxonomic groups, click [here](#)

## SITE INFORMATION

NBIS holds site boundary information for the following sites:

Site Type	Date Last Updated	Origin	Designator	Type of Data	Formats Available	Extent	Use Restrictions
Ramsar	2015	Natural England	JNCC	Vector	MapInfo Tab, ESRI Shapefile	Norfolk + 5km	Based on OS MasterMap so valid licence required for GIS files
Special Areas of Conservation (SAC)	2015	Natural England	JNCC	Vector	MapInfo Tab, ESRI Shapefile	Norfolk + 5km	Based on OS MasterMap so valid licence required for GIS files
Special Protection Areas (SPA)	2015	Natural England	JNCC	Vector	MapInfo Tab, ESRI Shapefile	Norfolk + 5km	Based on OS MasterMap so valid licence required for GIS files
Sites of Special Scientific Interest (SSSI)	2016	Natural England	Natural England	Vector	MapInfo Tab, ESRI Shapefile	Norfolk + 5km	Based on OS MasterMap so valid licence required for GIS files
National Nature Reserves (NNR)	2016	Natural England	Natural England	Vector	MapInfo Tab, ESRI Shapefile	Norfolk + 5km	Based on OS MasterMap so valid licence required for GIS files
Local Nature Reserves (LNR)	2015	Natural England	Local Authorities	Vector	MapInfo Tab, ESRI Shapefile	Norfolk + 5km	Based on OS MasterMap so valid licence required for GIS files
County Geological Sites (CGS)	2012	Norfolk CGS Group	Norfolk CGS Group	Vector	MapInfo Tab, ESRI Shapefile	Norfolk	Based on OS MasterMap so valid licence required for GIS files
County Wildlife Sites (CWS)	2015	Norfolk CWS Partnership	Norfolk CWS Partnership	Vector	MapInfo Tab, ESRI Shapefile	Norfolk	Based on OS MasterMap so valid licence required for GIS files
Roadside Nature Reserves (RNR)	2015	Norfolk County Council	Norfolk County Council	Vector	MapInfo Tab, ESRI Shapefile	Norfolk	Based on OS MasterMap so valid licence required for GIS files
Ancient Woodland	2015	Natural England		Vector	MapInfo Tab, ESRI Shapefile	Norfolk + 5km	Based on OS MasterMap so valid licence required for GIS files
Geodiversity Sites (point location)	2016	Norfolk Geodiversity Partnership	Norfolk Geodiversity Partnership	Vector	MapInfo Tab, ESRI Shapefile	Norfolk	

NBIS also holds site details of:

- County Wildlife Sites (Number, name and citation)
- Roadside Nature Reserves (Road name and number, the species for which they are designated and citation)
- Geodiversity Sites (Site name, site description, site type and geodiversity features)

NBIS are also able to access citations for Ramsar, SAC, SPA, SSSIs and CGS.

## HABITAT MAPPING

NBIS holds habitat data mapped in various ways for 100% of the county area.

The habitat information currently used in data enquiries where requested are from the Natural England Priority Habitat Inventory. All relevant layers are downloaded from the Natural England website whenever a new version becomes available. The metadata for these layers comes with each download and is not reproduced in this document. It is available from NBIS on request.

NBIS also holds some marine habitat mapping for Norfolk which was extracted from a European project called MESH (Mapping European Seabed Habitats) <http://jncc.defra.gov.uk/page-1542>

The rest of the habitat mapping held by NBIS consists of working files, which are specific to particular projects and are not made available for other uses due to issues such as incomplete coverage, poor currency or accuracy issues.

## Other Habitat Datasets

**Title:** Norfolk Habitat Map from Remote Sensing

**Abstract:** Map produced by Environment Systems using a variety of aerial imagery, and ancillary datasets including OS MasterMap. Developed from the pilot stage analyses from the Defra and JNCC project “Making Earth Observation Work for UK Biodiversity – Phase 2”. The purpose of the project was “to produce a habitat map of Norfolk by means of object-based analysis of remote sensing imagery. Images were segmented into objects representing individual land cover features using specified image bands and vector layers. Objects were then assigned to habitat classes based on habitat class rules that were developed from image band ratios, topographic characteristics or other contextual measures (such as distance from water). The classification process was hierarchical, such that initial classifications were resegmented into smaller objects and reclassified multiple times until the final class was reached.” The report produced for this project was: Medcalf K. A., Parker J.A., Turton, N., and Bell, G. (2013) Making Earth Observation Work for UK Biodiversity Conservation – Phase 2. Report to the JNCC and Defra. Once the pilot areas were finalised, NBIS commissioned Environment Systems to produce the rest of the map for Norfolk.

**Topic category:** Environment

**Temporal Extent:** Map produced in 2013. Created using satellite and ancillary datasets from 2011-2012.

**Dataset Reference Date:** 26/03/2014 (last edit)

**Lineage:** Dataset created by Environment Systems with input from NBIS and as part of a Defra funded JNCC project.

**Extent:** Norfolk plus 1km buffer.

**Precision:** Mapped to OS MasterMap boundaries.

**Spatial Reference System:** British National Grid.

**Data Format:** MapInfo Tab File

**Responsible Organisation:** Norfolk Biodiversity Information Service ([nbis@norfolk.gov.uk](mailto:nbis@norfolk.gov.uk))

**Frequency of Update:** Irregular

**Limitations on public access:** Public access licence conditions currently under discussion. Not currently used in standard data enquiries. Currently undergoing accuracy assessment.

**Use constraints:** Caveats must be read and understood prior to use. Mapped to OS MasterMap boundaries so recipients of the GIS files must hold a valid OS licence.

The following habitats and land uses are included in the Norfolk Habitat Map from Remote Sensing:

Habitat Type	Area (hectares)
Arable	343209.8
Bare Ground	312.9
Beach	499.98
Bracken	847.43
Coastal Floodplain & Grazing Marsh (Coastal)	1426.64
Coastal Floodplain & Grazing Marsh (High Productivity)	9317.25
Coastal Floodplain & Grazing Marsh (Low Productivity)	1899.1
Coastal Floodplain & Grazing Marsh (Medium Productivity)	5204.84
Coastal Dune Heathland	13.43
Coastal Saltmarsh (established)	2639.75
Coastal Saltmarsh (pioneer)	1462.19
Coastal Sand Dunes	527.2
Coastal Sand Dunes (Scrub)	60.81
Coastal Sediment	2107.14
Coniferous Plantation	10091.88
Dune Grassland	533.09
Felled Woodland	281.67
Fen, Marsh & Swamp	2263.8
Gardens	14525.29
Humid Dune Slacks	13.58
Improved (scrub)	32.48
Improved Grassland	24976.53
Lowland Heathland	810.38
Lowland Heathland (scattered)	326.33
Lowland Mixed Deciduous Woodland	31104.37
Maritime Cliff & Slope	102.47
Orchard	440.23
Scrub	6894.72
Semi-Improved Grassland (Poor Condition)	5451.67
Semi-Improved Grassland (Scrub)	1766.16
Semi-Improved Grassland	20566.12
Semi-Improved Grassland (Wet)	65.35
Urban	28811.92
Waterbodies	9289.8
Woodland Rides	1191.99

**Title:** Ponds in Norfolk

**Abstract:** Vector map of ponds in Norfolk produced using a desk based methods of selecting ponds from OS MasterMap, combined with some desk based checking of this method. A report was produced detailing the method ('Ponds in Norfolk: Establishing the Feasibility of Determining Important Pond Areas in the County from Norfolk Biodiversity Information Service (NBIS) Data') which is available from the NBIS website.

**Topic category:** Environment

**Temporal Extent:** Original map produced in 2010. Some updating since.

**Dataset Reference Date:** 21/08/2015 (last edit)

**Lineage:** Dataset created by NBIS.

**Extent:** Norfolk.

**Precision:** Mapped to OS MasterMap boundaries.

**Spatial Reference System:** British National Grid.

**Data Format:** MapInfo Tab File

**Responsible Organisation:** Norfolk Biodiversity Information Service ([nbis@norfolk.gov.uk](mailto:nbis@norfolk.gov.uk))

**Frequency of Update:** Irregular

**Limitations on public access:** Available from NBIS on request.

**Use constraints:** Based on OS MasterMap so only available as a GIS layer to individuals in possession of a valid OS licence.

The following habitats and land uses are included in the Ponds in Norfolk mapping:

Habitat Type	Area (hectares)
Ponds	1232.61



**Title:** Norfolk Priority Habitat Inventory Layers

**Abstract:** NBIS was contracted by Natural England to update the national habitat inventories for BAP Priority Wetland habitats and Lowland Heathland. Each of these layers was updated, for Norfolk by NBIS using further data sets and local knowledge. The Natural England digitisation standards and metadata requirements were adhered to. The following datasets were used in the creation of these updated layers:

Lowland heathland:

The Lowland Heathland Inventory; UKP Aerial Photographs; English Nature Site Information System; Norfolk Wildlife Trust County Wildlife Site Database.

Reedbed:

An Inventory of British Reedbeds 1993; English Nature Site Information System; OS 10k Raster; Broads Authority Fen Compartments; Environmental Stewardship Agreement Options; British Geological Survey Data; Aerial Photography 2<sup>nd</sup> Edition; Norfolk Wildlife Trust County Wildlife Site Database; UKP Aerial Photographs; Norfolk Wildlife Trust Fen Survey; OS MasterMap; Countryside Stewardship Scheme Agreement Options.

Lowland fen:

Broads Authority Fen Compartments; British Geological Survey data; Norfolk Wildlife Trust Fen Survey; Aerial Photography 2<sup>nd</sup> Edition; BogBASE/FenBASE; OS 10k Raster; English Nature Site Information System; Environmental Stewardship Agreement Options, Environmentally Sensitive Area Agreement Options.

Coastal & Floodplain Grazing Marsh:

The Distribution of Lowland Wet Grassland in England; OS Profile; Environmental Stewardship Agreement Options; Norfolk Wildlife Trust Fen Survey; Countryside Stewardship Scheme Agreement Options; Environment Agency Floodplains River & Tidal; Norfolk Wildlife Trust County Wildlife Site Database; Environmentally Sensitive Areas Agreement Options.

These updated layers were then fed back into the Natural England Priority Habitat Inventory Mapping.

**Topic category:** Environment

**Temporal Extent:** 2010-2011

**Dataset Reference Date:** Lowland heathland: 22/12/2010  
Reedbed: 08/09/2010  
Lowland fen: 08/09/2010  
Coastal & Floodplain Grazing Marsh: 05/12/2011

**Lineage:** Based on national Natural England Habitat Inventories and updated by NBIS using further datasets and local knowledge.

**Extent:** Norfolk

**Precision:** Mapped to MasterMap boundaries to the Natural England standards.

**Spatial Reference System:** British National Grid

**Data Format:** MapInfo Tab File

**Responsible Organisation:** Norfolk Biodiversity Information Service ([nbis@norfolk.gov.uk](mailto:nbis@norfolk.gov.uk))

**Frequency of Update:** Not updated since production

**Limitations on public access:** Available on request

**Use constraints:** Mapped to MasterMap boundaries so GIS files only available to those with a valid OS licence.

The following habitats and land uses are included in the Norfolk Priority Habitat Inventory Layers:

<b>Habitat Type</b>	<b>Area (hectares)</b>
Lowland heathland	3616.93
Reedbed	15849.71
Lowland fen	7172.11
Coastal & Floodplain Grazing Marsh	20180.42