

NBIS Annual Reports 2016-17 & 2017/18



Introduction and NBIS objectives

The Norfolk Biodiversity Information Service (NBIS) is a Local Environmental Records Centre covering

Thanks to its position and diverse range of habitats, over 16,300 different species have been recorded in Norfolk since 1670. 219 of these species were recorded between April 2017 and March 2018. The North Norfolk coast is a mecca for bird watchers, the Broads are a stronghold to the rare Norfolk Hawker dragonfly and Swallowtail butterfly, whilst the Brecks host a number of plant and invertebrate species unique to the area.

2324 of these species are classified as 'Species of Conservation Concern'. This means they are rare, threatened or protected by law. NBIS also holds 21,620 records of 57 invasive non-native species.

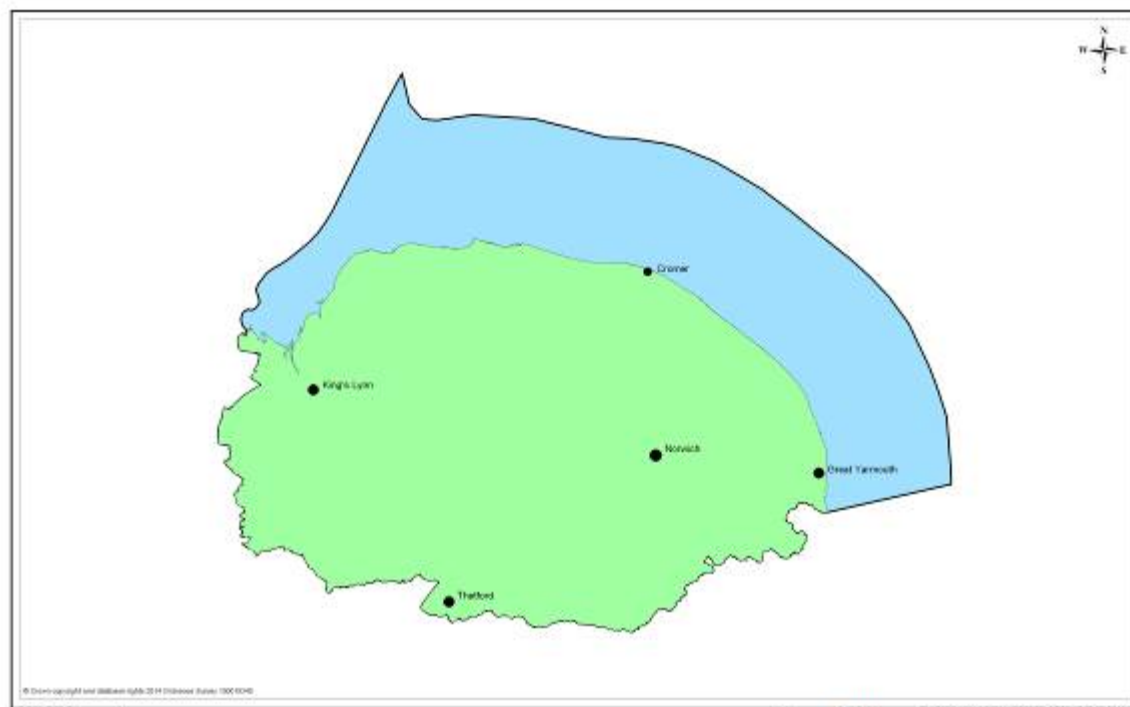
the county of Norfolk. NBIS is a member of the Association of Local Environmental Records Centres and operates within the framework of the National Biodiversity Network.

Based at County Hall, Norwich the service sits within the Environment Team of Norfolk County Council, part of the Communities and Environmental Services Department.

NBIS aims to be a single, central point for obtaining high quality environmental information for Norfolk, providing quick and easy access to information on species, geodiversity, habitats and protected sites.

To fulfil this aim NBIS operates under the principles set out in its [Operational Framework](#).

NBIS is guided and supported by a Steering Group that meets twice each year and is made up of representatives of its users. These include funding partners (County and District Councils, IDBs, Consultants and Environment Agency), Norfolk and Norwich Naturalists' Society, Norfolk Wildlife Trust, Rivers Waveney Trust, amongst others. The steering group now works under a [Terms of Reference](#) since our meeting in October 2015. These terms of reference are reviewed every 2 years and were reviewed and agreed in the October 2017 meeting.



In 2016/17 NBIS had **2.33fte paid staff, plus ~0.5fte Year in Industry Student from UEA** – details below.

During 2016/17 NBIS had four NBIS volunteers, working on average 2 days a week each.

Staff:

- Martin Horlock – Senior Biodiversity Officer (0.33fte) – Line manages NBIS staff.
- Sam Neal – Biodiversity Officer (Information) (1fte) – Manages the day-to-day running of NBIS and GIS and project work.
- Lizzy Oddy – Assistant Biodiversity Officer (Information) (1fte) – Data enquiries, data management & project work.
- Year in industry – Danielle Engelbrecht (0.5fte NBIS)

Volunteers (in-house):

- Tom Hinson (BNG and other works, inc events)
- Sara Marshall (BNG work placement)

Volunteers (remote)

- Duncan Butler (BNG analysis work)
- Miles Jolly (BNG work placement through Easton and Otley)
- 785 plus survey (in the field) volunteers for BNG, see below.

In 2017/18 NBIS had **2.33fte paid staff, plus ~0.5fte Year in Industry Student from UEA, plus additional handover/cover/project work for 1fte until September 2017** – details below.

During 2016/17 NBIS had four in-house volunteers, working on average 2 days a week each.

Staff:

- Martin Horlock – Senior Biodiversity Officer (0.33fte) – Line manages NBIS staff.
- Sam Neal – Biodiversity Officer (Information) (1fte) – Manages the day-to-day running of NBIS and GIS and project work.
- Nicola Dixon (maternity cover from April 2017) – Assistant Biodiversity Officer (Information) (1fte) – Data enquiries, data management & project work.
- Year in industry – Katherine Rushen (0.5fte)
- Year in industry handover/enquiries cover and additional temporary project work - Danielle Engelbrecht (1fte until September 2017)

Volunteers (in-house):

- Tim Holt-Wilson (Candidate County Geodiversity Sites boundary mapping and attribute updating)

Volunteers (remote)

- Miles Jolly (BNG work placement through Easton and Otley)

Much of the species data held by NBIS and made available for planning and conservation decision making is provided by the voluntary network of County Recorders. These people are members of the Norfolk and Norwich Naturalists Society and are experts in their taxonomic fields. They provide or check all of the records going on to the NBIS database to ensure high quality data, spending hours of their own time verifying the records for us each year. We would like to express our thanks to these recorders and all the volunteers who record and gather species records over the year. Without the dedication and support of the recorders, County Recorders and volunteers we would struggle to be able to function as an effective Local Environmental Record Centre.

Partners

Our Service Level Agreement (SLA)/MOA partners for 2016/17 are:

- Environment Agency
- Norfolk County Council
- South Norfolk District Council
- Anglian Water

Our Service Level Agreement (SLA)/MOA partners for 2017/18 included those listed above with the addition of Breckland District Council.

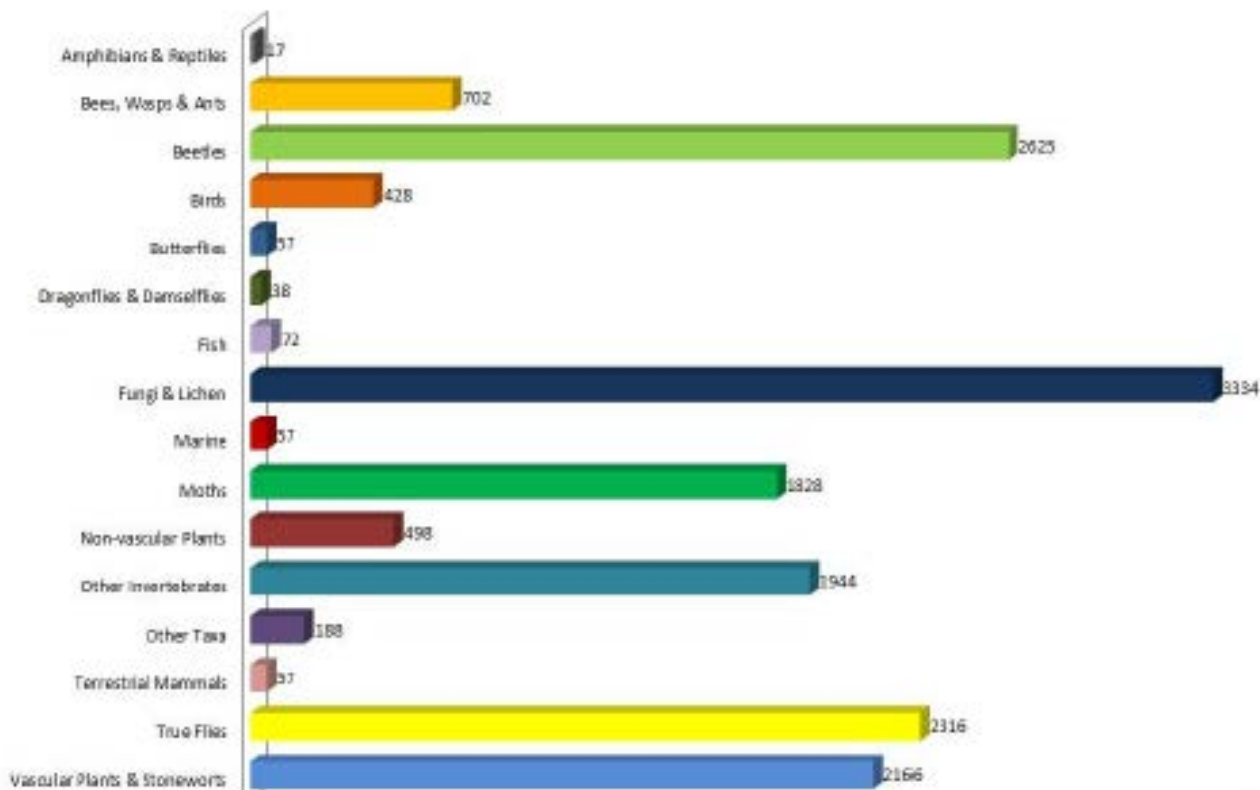
We are currently in negotiation with several Local authorities, IDBs and Network Rail about continuing funding or establishing new SLAs.

10 ecological consultancies by March 2017 were bulk-buying data searches in a rolling programme.
12 ecological consultancies by March 2018 were bulk-buying data searches in a rolling programme.

The NBIS Steering Group, made up of funding and advisory partners meets regularly to ensure the sustainability and direction of NBIS. We are very grateful for the time and commitment that our Partners give in attending meetings and providing guidance. For more information see our Steering Group [Terms of Reference](#).

Data Holdings

How many species have been recorded in Norfolk?



Species diversity in Norfolk, by taxonomic group (based on data held by NBIS, March 2018)

2016/17:

The NBIS database currently contains **3,171,900 species records** (as of 31st March 2017, including a number from our neighbouring counties of Suffolk and Cambridgeshire, collated as part of cross-county biodiversity audits). **In 2016-17 597,642 records were imported. Compared to 60,000 in 2015-16.**

2017/18:

The NBIS database currently contains **3,250,635 species records** (as of 31st March 2018, including a number from our neighbouring counties of Suffolk and Cambridgeshire, collated as part of cross-county biodiversity audits). **In 2017-18 1,351,496* records were imported.**

**The large number imported is due to a replacement of the moth dataset with an updated version.*

Habitat and land-use mapping has now been completed for the whole county as part of a project trialling the use of remote sensing for habitat mapping.

Upload of data to the NBN Atlas

NBIS loads species data onto the National Biodiversity Network (NBN) Atlas (previously the Gateway) online, this as one dataset containing the majority of verified and non-sensitive data NBIS holds. Details of metadata of this dataset can be provided on request.

These data are available to our Defra body funding partner the Environment Agency at full resolution. They are visible to the public at 10km resolution.

Data Agreements (as of March 2018)

| Current Data Agreements Type of Agreement | Organisation |
|---|--|
| Hosting Agreement | Norfolk County Council |
| Licence (negotiated annually) | Environment Agency |
| Service Level Agreement (negotiated annually) | South Norfolk District Council |
| Service Level Agreement (negotiated annually) | Breckland DC |
| Service Level Agreement (revised agreement sign and due to be live November 2018) | Anglian Water |
| We are working towards Data Exchange Agreements with our County Recorders | Norfolk and Norwich Naturalist Society and its members/ County Recorders |
| Draft data exchange agreement being discussed. | Wildfowl and Wetlands Trust; Norfolk Wildlife Trust; BTO. |
| We are in discussions for a SLA starting in 2018 | North Norfolk DC |
| We are in discussions for a SLA starting in 2018 | Broadland DC |
| We are in discussions for a SLA | King's Lynn and West Norfolk DC |
| We are in discussions for an agreement | IDBs |
| Early stages of a possible funding agreement | Network Rail |

Green = live agreements; Orange are agreements in discussion.

Data Enquiries

Responding to data enquiries is a core function for NBIS and is a daily task. Requests come in from sources such as ecological consultants, conservation bodies, local authorities, students and interested members of the public; often wanting to know about protected species (and sites) in a particular area. NBIS aims to respond to all enquiries within 5 working days and to enquiries from our funding partners within 3 working days.

NBIS continues to operate the Regional Standard Enquiry Service. This service, the result of a 12 month project undertaken by NBIS, was developed with ecological consultants and will ensure that anyone requesting a data search for planning purposes from the region's LERCs will receive a standard set of protected species and site data within 10 days.

Number of each enquiry type processed each year:

| | 2014/15 | 2015/16 | 2016/17 | 2017/18 |
|--|------------|------------|------------|------------|
| Commercial Searches | 285 | 386 | 439 | 444 |
| Non-commercial Searches | 63 | 74 | 37 | 49 |
| Partner Searches (Including Districts) | 57 | 20 | 17 | 9 |
| TOTAL | 405 | 480 | 493 | 502 |

Summary of general NBIS record centre statistics for the past 3 years

| Stat | 2015-16 | 2016-17 | 2017-18 |
|---|---------------------------|--|--|
| LRC size | 2.33fte, plus volunteers) | 2.33fte, plus volunteers and Year in industry) | 2.33fte, plus volunteers and Year in industries) |
| Total number of species observations | 2612119 | 3,171,900 | 3,250,635 |
| Habitat data % cover? | 100 | 100 | 100 |
| Estimated % data on NBN Atlas | ~75 | ~75 | ~75 |
| Number of local authorities with SLAs / partnership agreements | 2 | 2 | 3 |
| Number of data exchange agreements with voluntary groups or county recorders | 0, but in discussions | 7, in discussions with 15 | 12, in discussions with others |
| Number of data enquiries | 480 | 493 | 502 |
| Total amount of time spent on these enquiries (hours) | 260 | X | X |
| Proportion of data enquiries that are non-chargeable (%) | 15.41 | 7.51 | 9.76 |
| Total amount of time spent on these enquiries (hours) | 36 | X | X |
| Average number of hours per week contributed by vols (office based) | 7 | 25 | 6 |
| Number of externally funded projects worked on | Estimate - 8 | Estimate - 14 | Estimate - 10 |

Local Sites Monitoring

On behalf of Norfolk County Council, NBIS monitors Single Data List 160-01 (previously National Indicator 197) – percentage of Local Sites (Wildlife and Geodiversity) in Positive Conservation Management (PCM). Data was submitted to Defra end of January 2017.

Government guidance published on 13th October 2014 states that public authorities can use this indicator to measure their commitment to the **“biodiversity duty”**, part of the **Natural Environment and Rural Communities Act 2006** - more details about this guidance [here](#). The data contributes to the Defra Biodiversity 2020 indicators which are used to measure the success of England’s biodiversity strategy. It is now also a ‘Vital Sign’ for the environment team at NCC.

2016/17:

The data submitted to Defra in January 2017 presented a 3% loss in Local Sites in PCM (on the previous year) in Norfolk for the year 2015/16. A total of 72% of Local Sites are therefore in PCM. This year was the first year of the new Countryside Stewardship scheme and therefore due to IT issues this data was not available for use in our analysis and hence the drop in percentage in PCM. Norfolk’s result is still above the England average of 48%, which also saw a drop of 2% on the previous year.

On behalf of Norfolk County Council, NBIS undertakes the analysis of this indicator (with assistance from Norfolk Wildlife Trust) and reports the findings directly to Defra, as required under the SDL. The 2015/16 figures (for the period of 5 years up to March 31st 2016) can be viewed for Norfolk and by district in the PDF that can be obtained from NBIS: **‘SDL-160 2015-16 district summary’ (available on request)**. A map of sites in and NOT in PCM for the whole of Norfolk can be obtained from NBIS: **‘SDL-160 2015-16 Results Map’(available on request)**. A PDF showing the changes in PCM over time compared to the England average is available from NBIS: **‘PCM Trends 2016’(available on request)**.

2017/18:

The data submitted to Defra in January 2018 presented a 3% increase in Local Sites in PCM (on the previous year) in Norfolk for the year 2016/17. A total of 75% of Local Sites are therefore in PCM.

On behalf of Norfolk County Council, NBIS undertakes the analysis of this indicator (with assistance from Norfolk Wildlife Trust) and reports the findings directly to Defra, as required under the SDL. The 2016/17 figures (for the period of 5 years up to March 31st 2017) can be viewed for Norfolk and by district in the PDF that can be obtained from NBIS: **‘SDL-160 2016-17 district summary’ (available on request)**. A map of sites in and NOT in PCM for the whole of Norfolk can be obtained from NBIS: **‘SDL-160 2016-17 Results Map’(available on request)**. A PDF showing the changes in PCM over time compared to the England average is available from NBIS: **‘PCM Trends 2017’(available on request)**.

NBIS has provided Annual Monitoring Report data to a number of local councils in 2016/17, as required.

County Wildlife Sites (CWS)

NBIS works with staff at Norfolk Wildlife Trust (NWT) and through the Local Sites Partnership to coordinate, create and provide to users the CWS annual update. Data and information for the 2017 update is available and downloadable to partners from the NBIS website: <http://www.nbis.org.uk/local-sites>

NBIS, volunteers and NWT have undertaken an exercise to assess the mapping of all CWS to ensure that they meet national standards and that any changes or losses to sites can be recorded.

This project is nearing completion with almost all of the 1300 sites remapped in GIS and new maps for citations produced. Completion of the program of ground-truthing is all that remains for the final by NWT.

The 2017 annual update included some changes from the remapping exercise.

Regional and National Collaboration

NBIS joins other Record Centres within the East of England and staff attended two regional Record Centre meetings during the year. The meetings facilitate discussion about sharing best practice, joint-working options and provide a regional overview from Natural England and the Environment Agency

Staff also attended the ALERC Conference in Birmingham in October 2016/17 and the NBN Conference in Edinburgh/Cardiff in November 2016/17.

NBIS has continued to maintain a presence on the CWS steering group, Geodiversity Partnership group and the Communities and Nature Working Group.

The Biodiversity Officer (information) represented NBIS on the council of the Norfolk and Norwich Naturalists' Society as a voting member, and as a member of their Research Committee. Also the officer represented NBIS on the Norfolk Ponds Group, Journal of Breckland Studies and the Brecks Biodiversity Delivery Group meetings.

NBIS has continued membership of the Association of Local Environmental Records Centres (ALERC) and following the launch of the accreditation process in July 2012 NBIS began work to meet the necessary criteria in preparation for applying for accreditation in 2015. NBIS was assessed in August 2015 and following a successful result officially an accredited LERC. This means that NBIS demonstrated that we were meeting or exceeding a set of criteria draw up by ALERC to ensure LERC's are providing a good service to their users and providers.

Accreditation is valid for 5 years, after which NBIS will need to be re-assessed.

Events

NBIS continues to promote its services through attending wildlife themed events.

In 2016/17 and 2017/18 we attended the following:

- Wild about the Wensum (April)
- Wild about the Brecks (August) (2016 only)
- Banham Zoo bioblitz (September) (2016 only)
- Wild about Norfolk (October)
- Spring Fling (April 2016 & 2017)

In 2016/17 and 2017/18 NBIS also attended and organised a number of workshops, bioblitzes and other events for the Breaking New Ground project, see project section.

Supporting Recording

NBIS operates a fund to support wildlife recording in Norfolk. This fund consists of the monies raised from commercial enquiries during the previous year and is designed to reinvest in our local recording network to provide the records we need to process these enquiries. The fund runs during the financial year with any remaining monies rolling over to the next.

For 2016-17 and 2017-18 our priorities were to gather species data from the following:

Under-recorded groups

Fish

Invertebrates

Non-native Invasive Species

Habitats

Farmland

Marine

Brownfield (Open Mosaic Habitats on Previously Developed Land – as defined in the new Biodiversity action Plan)

Areas

West Norfolk and the Fens

South Norfolk Claylands

In 2016-17 no significant projects were funded:

In 2017-18 the following projects were funded:

- National Nathusius' Pipistrelle Project – Norwich Bat Group
- Birds of the Brecks/Flowers of the Brecks wildlife ID guides – NBIS/Brecks Soc/BTO partnership

Update from one of last years' projects...

Last year NBIS provided funding for a PhD student from UCL to undertake research on **effects of pond terrestrialisation on pollinators**. The funding was to enable the purchase of time lapse cameras and moth traps essential for field research.

The study investigated pollinating insect groups around the margins of 8 open canopy and 8 over-grown ponds . **Data collected as part of this project will be incorporated in the NBIS database.**

Preliminary results from this study show that the **number of bees and wasps**, the total **number of pollinators** and the **number of flowering plants** are **all greater in ponds where there is management to maintain an open canopy**. It is hoped that a second year of data , which has just been completed, will allow any statistical significance between pollinator diversity at the different pond categories to be fully revealed.

This work is none the less beginning to demonstrate that ponds are im-portant for insect pollinators in the farmland landscape and providing **data** pointing to the fact that pond **conservation techniques** are benefitting these communities rather than hindering them.

As this work is further ana-lysed, it is hoped that the apparent shared conserva-tion interest between farm-land ponds and pollinating insects will be made very clear and will influence **agri-environmental schemes** across the country.

by Richard Walton

NBIS – NatSoc Recorders' Meeting

The 2017 NBIS Recorders' Meeting, held jointly with the Norfolk and Norwich Naturalists' Society, took place on the 30th March 2017 at the Abbey Conference Centre. Attendees enjoyed food and networking before the meeting began, with the theme of '[New to Norfolk](#)'.

Unlike the previous year's event where there were 10 equally-timed presentations of 10 minutes, this year involved longer more detailed presentations. Patrick Barkham was the entertaining and thoroughly interesting keynote speaker, followed by 4 naturalist speakers and general NBIS updates.

The 2018 meeting took place on 19th March 2018 at the Norfolk Snowsports Club. The theme was "Hi-tech recording". Speakers included Kathy James from Sea watch Foundation and Mike Toms and Nick Moran from BTO.

Projects

Data Exchange Agreements

>Local Biological Records Centres are partnership organisations established as hubs for the collection and supply of wildlife data to a wide range of users. This provision is underpinned by a **complex network of data exchange** between local and national wildlife recorders. Overtime these relationships can become blurred and the role of interested parties confused.

In order to clarify these relationships and increase the transparency with which data can be exchanged between the records providers NBIS has embarked on a process of **establishing data sharing agreements with our data providers**. This has so far focussed on the key relationships that we have with county recorders, as well as the national societies and the NBN

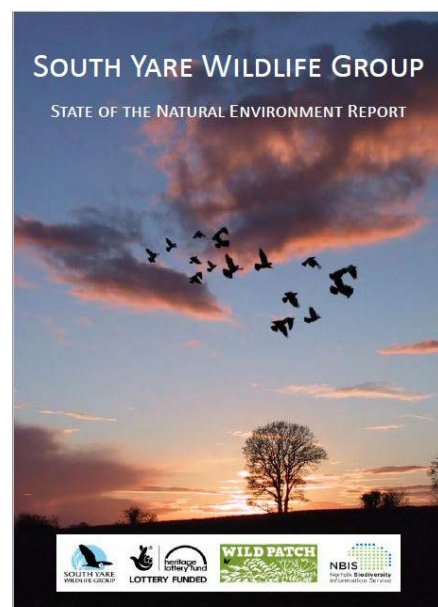
So far **7 Data Exchange agreements** , with a further **discussion**. These coming months as we data agreements with a

county recorders. A second round of consultations have been planned for June 2017 where we hope to be able to engage more recorders in this pro-cess.

This process of engaging with country recorders has been both interesting and informative and has already resulted in changes to the way we work which has **improved the way we manage the data we hold**. Many thanks to all those who have taken part in this process so far and we look for-ward to building on this work in the future.

South Yare Wildlife Group State of the Environment Report

South Yare Wildlife Group commissioned NBIS to write a **State of the Environment Report** for their area. The report covers topics such as landscape and geodiversity, protected sites, habitats and land-use, species, water quality and local action groups. The report was launched at one of the group's evening meetings and copies provided to members.



Agreements have been 15 currently under should follow in the continue to finalise number of other

Breaking New Ground — Wildlife Recorders of Tomorrow

>**The Brecks** is an important area for wildlife both in a UK and international context. However many of the species records come from a few well recorded designated sites, with recording often done on an ad hoc basis. This means that it is often difficult to detect changes in the biodiversity of the area. There is a **need for wider recording** of the Brecks area and a **structured** programme of species surveillance and monitoring.

In order to address this NBIS has been involved in a HLF funding project called **Breaking New Ground**, which was an overarching theme for several smaller projects, aimed at increasing public awareness in the heritage and landscape of the Brecks. As part of this project NBIS led on the **Wildlife Recorders of Tomorrow Project** which focused on improving skills and involvement in wildlife recording.

Progress of this project has previously been reported on since it's start up at the end on 2014/ beginning of 2015. This report now summarises successes of the project as a whole **following its completion in June 2017**.

In total **785 people volunteered** as part of the project and many more were engaged in the project through bio blitz and other public events. This massively exceeded the project target of 60 and came from across the skills spectrum from those new to recording to wildlife experts . In total **974 hours were volunteered** to the project time which is worth **£133, 031**. Thank-you very much to all involved.



As a result of this project **records were received from 384 sites, 23 which were monitored and 361 which were recorded for at least one taxonomic group**. This again exceeds targets to monitor 10 sites and record at 40. In total a massive **32,210 new records** have been generated and greatly add to our understanding of wildlife in the area.

As part of the project **over 40 workshops, training days and talks** have been delivered to develop wildlife recording skills and encourage interest in bio-logical recording. In addition **4 successful bio blitz's** took place at Brandon (October 2015 and July 2016), High Lodge (July 2016) and Little Ouse Head-waters (June 2016).



These events covered a wide range of topics including birds, mammals, plants, fungi and a number of invertebrate groups including bees, hoverflies and bug sorting marathons. One of the very exciting finds of the July

weekend was the **Ashy Furrow-bee (*Lasioglossum sexnotatum*, pictured)** a very rare bee, previously only seen once in Norfolk in the 1980s, was found in St Leonards Churchyard in Mundford!

Positive feedback from these events has included:

The project was picked up well in the local media including promotion of our bee workshop in an **EDP** article by Mark Cocker and an article on the Lunar Yellow underwing Workshop in the **Bury Free Press**. Features on **Radio Norfolk** and **Brecks FM** also help promoted workshop's, as did blogs and articles calling for volunteers published by **Norfolk Wildlife Trust**.

"I enjoyed the Bioblitz, it was nice to meet people that I have known on the Norfolk & Norwich Naturalists Society Facebook group over the year."

Bid-Rex (Biodiversity Data Regional Exchange)

>BID-REX is an **Interreg Europe funded project** focussing on better utilisation of biodiversity data in the delivery of policy. **The project will develop an interactive interregional partnership to explore and exchange best practices through identifying information needs for decision makers, matching information to needs**, improving data flows and capacity building for decision-makers and data providers.



What will we be doing?

Norfolk County Council and the University of East Anglia are delivering the project in the UK and will **build on recent work such as the Breckland and Broads Biodiversity Audits, the Norfolk Living Map and the Norfolk Species Surveillance Network**. We will work with data users and providers to assess data **needs of decision-makers** and the way in which these are met, high-light examples of **best practice**, assess **future needs** and ways to access da-ta, focus on the use of **added-value data** such as opportunity maps and ecological network models.

What has happened so far....

Norfolk partners held the **first stakeholder workshop** on the 7th November 2016 to engage with stakeholders and help them identify how best to rein-force high quality relevant biodiversity data and conservation decision making.

On the 17th January 2016, Norfolk County Council hosted a meeting with stakeholders from **Local Environmental Records Centres (LERCs)** to investigate the issue of **Open Data** with regards to ensuring sustainable access to biodiversity data.



Norfolk County Council has attended the Natural Environment Research Council's **envExpo 2017** to showcase the work of BID-REX and present to decision makers the value of new technologies such as Earth observation

2017 - 18 Update

In September 2017, Norfolk County Council held the **third Local Stakeholder Workshop** at the Natural History Museum with partners from the **National Biodiversity Network and the Association of Local Environmental Records Centres**. Discussions focussed on the ways in which biodiversity data can be made available via the NBN Atlas in particular the way in which **Open Data layers of modelled and interpreted data** can be published.

The fourth Norfolk **Local Stakeholder Meeting** was held in January 2018 in King's Lynn and focussed on **better understanding the biodiversity data needs of end users**, such as site and regional conservation managers.

Norfolk County Council staff also attended two meetings hosted by BIDREX European partners, in Bilbao and Budapest to exchange experiences and good practice.

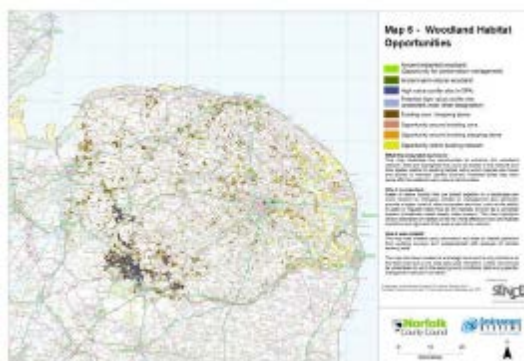
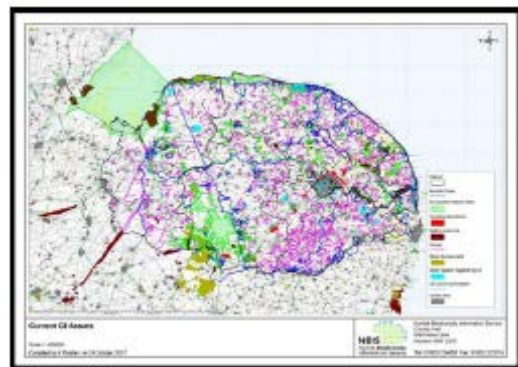
This project will continue in 2018-2019.

More information on the BID-REX Project can be found at <https://www.interregeurope.eu/bid-rex/>

Norfolk Green Infrastructure Mapping Project

Commissioned by the Norfolk Strategic Planning Officer Group, this project aimed to:

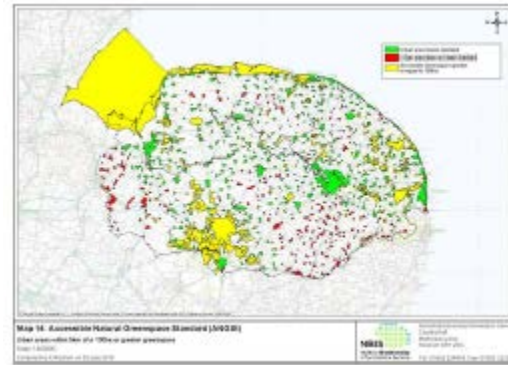
- Make the 'connections' between green infrastructure (GI) and growth, providing the Local Planning Authorities with a deliverable approach to addressing GI matters to enable and support growth
- Map the GI network of Norfolk, maximising the benefits it brings to the communities of Norfolk
- Identify deficiencies in GI provision
- Identify opportunities for enhancements



Mapping was undertaken by NBIS and consultants Environment Systems. Maps produced included GI Access Asset Mapping (including Norfolk Trails, public rights of way, open access land and accessible nature reserves), GI Network Mapping (assessing the potential links between existing semi-natural habitats and protected sites, and producing a series of proposed GI corridors) and

Ecological Network and Opportunity Mapping (for grassland/ heathland, woodland and wetland habitats, and combined).

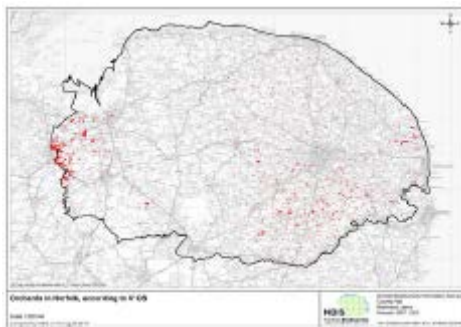
The GI Access Asset map was used as the basis for assessing potential GI deficiency in the County, using the Natural England Accessible Natural Greenspace Standards (ANGSt) guidelines and the Woodland Trust Woodland Access Standard. Additionally, two maps were produced relating to natural flood management in the county.



Orchards East - Mapping Norfolk's Traditional Orchards

Orchard's East is a **three year project** covering six counties in the East of England, including Norfolk. Funded by the Heritage Lottery Fund and based at UEA it is devoted to **discovering and understanding the past, present and future of orchards in Eastern England**.

Working with hundreds of new volunteers, the project will survey and record old orchard sites across the region.



NBIS has been involved in **mapping historic orchards** in Norfolk, as they provide the best evidence of Traditional Orchard habitat locations before large scale losses and land use change occurred, especially post WWII. These maps help **target areas for detailed survey** to determine if the orchards still exist, their current extent and condition and whether or not they are currently being

managed appropriately.

OS 6 and 25 inch maps (1879 - 1943) were used for digitising the historic orchards in Norfolk. Orchard polygons were either copied, pasted and edited from OS MasterMap or digitised by hand using the OS 6 inch or other OS base mapping.



252 5km grid squares were scanned through to identify orchards, with over 1387 orchards digitised. Commercial and private orchards were mapped.

Parish maps were then produced to be included in **survey packs for volunteer surveyors** to refer to on the ground. This work continues into 2018-19.

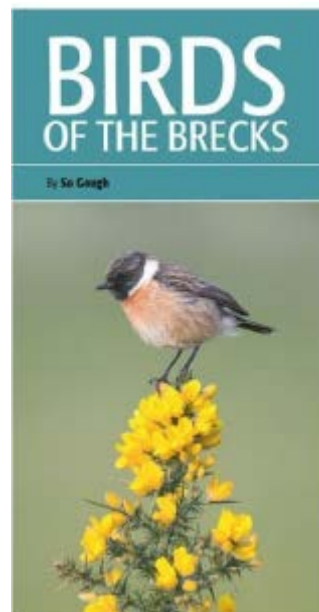
Find out more about the Orchards East Project at <https://www.uea.ac.uk/orchards-east>

Brecks ID Guides

NBIS, along with several other local organisations, including The Breckland Society (www.brecsoc.org.uk), British Trust for Ornithology (BTO) (www.bto.org), Suffolk Naturalists' Society (www.sns.org.uk) and the Norfolk and Norwich Naturalists' Society (www.nnns.org.uk), have come together to deliver a **new series of Brecks Wildlife Guides**, the first two of which were published in early 2018.

It is hoped that these **affordable and informative** books will introduce new audiences to the area's rich wildlife.

Birds of the Brecks was authored by Su Gough, whose experience in teaching people how to identify birds has helped to deliver a highly accessible book.



Flowers of the Brecks: Part One – Heath & Grassland was authored by Mike Crewe, a keen botanist with an expert knowledge of the region's flora.

NBIS has put considerable effort in the last few years into helping to improve the wildlife identification (ID) skills in the Brecks. This work has helped us recognise how vital it is for beginners, visitors to the area and families learning together with their children, to have access to an **affordable easy-to-use ID guide that helps you make that identification and tells you how to record that wildlife sighting properly** - this is the gap that these Brecks guides fill.

The guides are available to buy now.

Communications

NBIS have continued to develop our online recording facility.

NBIS now has a presence on Facebook, Twitter and Flickr.

NBIS produces jointly with NBP and NNNSI a monthly e-news bulletin. This is distributed via email to a wide contacts list

Finance

The table below shows the budget for 2016-17, 2017-18 and the previous year. The future forecast is uncertain at the moment as Defra body and local authority budgets are being cut. It is therefore essential that NBIS continues to secure external project funding to ensure the centre can continue to run as effectively when income is shorter. The below table does not include the contributing costs of Norfolk County Council to the hosting of NBIS.

| Expenditure (in £) | 2015-16 | 2016-17 | 2016-17 |
|---|-------------------|------------------|------------------|
| Staff salaries/training/travel | 94,778.42 | 66,110.6 | 26,548.86 |
| IT hardware/software & general equipment purchase | 600.28 | 1812.04 | 333.75 |
| Subscriptions (e.g.ALERC) & conferences | 300.00 | 400.00 | 2103.79 |
| Contractor costs | 40246.24 | 1591.15 | 6986.44 |
| Venue hire | 535.00 | 4.17 | 1085.02 |
| Printing/marketing/design | 187.97 | 250.00 | 32.49 |
| other/misc | 102.32 | 86.80 | 6 |
| Publications/NBIS recorders fund/Recorder support | 556.86 | 2920.00 | 61.5 |
| Budget adjustments/financials | | 15,180.99 | 25,000 |
| Match Funding | 50525.00 | | |
| Total expenditure | 187,832.09 | 88,355.75 | 62,157.85 |

| Income (in £) | 2015-16 | 2016-17 | 2016-17 |
|--|--------------------|-------------------|-------------------|
| Data Searches | -39,115.00 | -47,615.00 | -41,550 |
| Project work/other charges | -2222.46 | -5852.00 | -8502.29 |
| Service Level Agreements with Local Authorities/IDBs | -11,000.00 | | -10,000 |
| Service Level Agreements with utilities | -1125.00 | 2700.00 | -2700.00 |
| Service Level Agreements with Defra bodies | -17,600.00 | -12,600.00 | -12600.00 |
| Recharge (other departments) | -31,296.00 | | |
| Match Funding | -30,500.00 | | |
| Total income | -132,858.46 | -68,767.00 | -75,352.29 |

| Transactions balance (in £) | 54,973.63 | 19,588.75 | 13,194.44 |
|------------------------------------|------------------|------------------|------------------|
|------------------------------------|------------------|------------------|------------------|

Please note the minus figure numbers in **red** show **credit** and **black** show **debit**; i.e. 2014-15 is the only one of the three years where an overall "surplus" was made at the end of the year. The balance figures for each year do not represent profit – the red figures are surplus already assigned to projects or staff costs and the black figures mainly show debit due to project or staff cost spend or matching assigned, from monies received in previous financial years. Some SLA monies have been received in different financial years to which they should have been received.