



**NBIS**  
Norfolk **Biodiversity**  
Information Service

# NBIS Annual Report 2015-16



## *Introduction and NBIS objectives*

Thanks to its position and diverse range of habitats, over 16,000 different species have been recorded in Norfolk since 1670. 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.

2367 of these species are classified as 'Species of Conservation Concern'. This means they are rare, threatened or protected by law. NBIS also holds 18,371 records of 54 invasive non-native species.

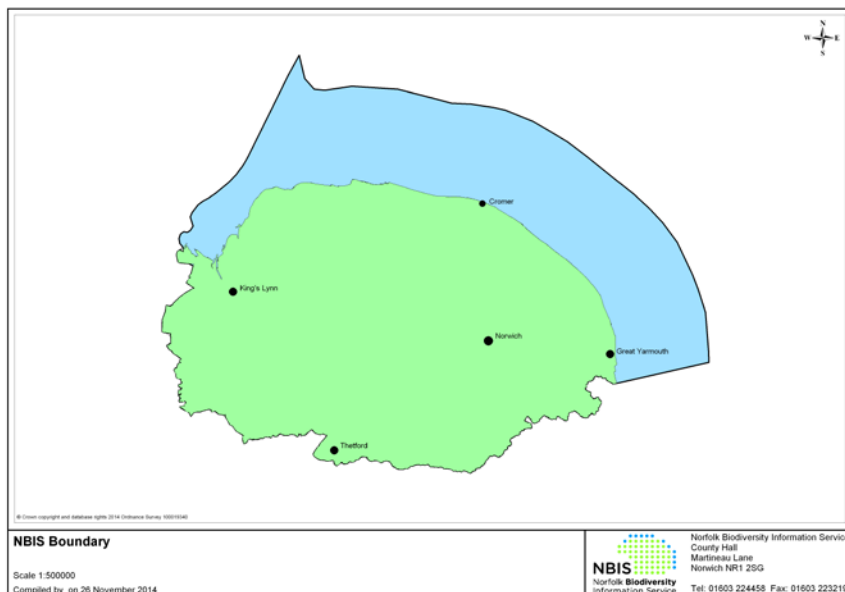
The Norfolk Biodiversity Information Service (NBIS) is a Local Environmental Records Centre covering the county of Norfolk. NBIS is a member of the Association of Local Environmental Records Centres and operates within the framework of the National Biodiversity Network.

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.



## *Staff and Volunteers*

NBIS currently has **2.33fte paid staff, plus 0.6fte Year in Industry Student from UEA** – details below.

During 2015/16 NBIS had three 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) (1ft) – Manages the day-to-day running of NBIS and GIS and project work.
- Lizzy Oddy – Assistant Biodiversity Officer (Information) (1ft) – Data enquiries, data management & project work.

### Volunteers (in-house):

- Rachel Harold
- Lucy Hatcher
- Sophie Hart

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) partners for 2015/16 are:

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

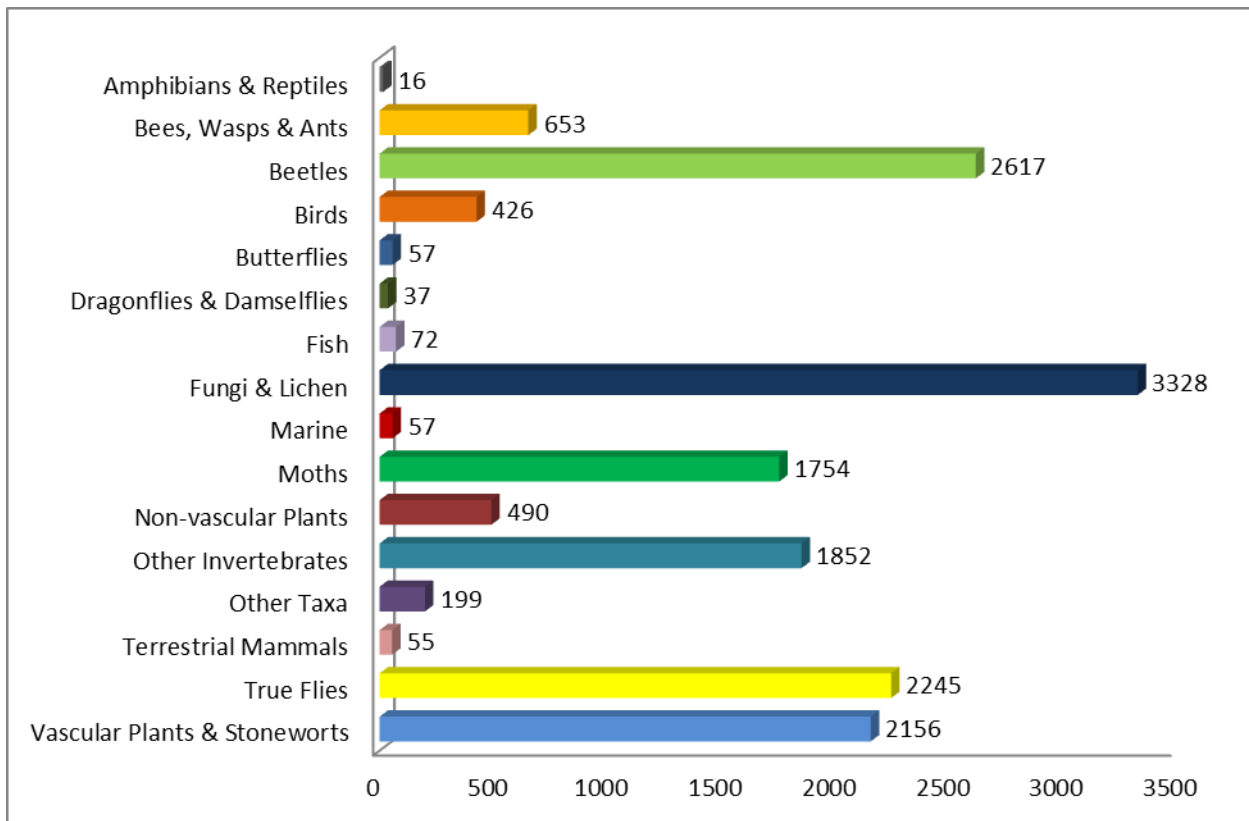
We are currently in negotiation with several Local authorities and IDBs about continuing funding or establishing new SLAs.

Wild Frontier, Ecology Consultancy, Norfolk Wildlife Services, TLP and Torc Ecology; Enims (March 2016) are 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 2016; includes all Norfolk records on the NBIS database from 1670-present)

The NBIS database currently contains **2,612,119 species records** (as of 15<sup>th</sup> March 2016, including a number from our neighbouring counties of Suffolk and Cambridgeshire, collated as part of cross-county biodiversity audits). **In 2015-16 60,694 records were imported.**

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.

Year	No. Records
2001	96693
2002	18484
2003	6269
2004	3627
2005	5708
2006	4449
2007	741146
2008	153770
2009	202071
2010	721929
2011	23505
2012	307875
2013	188847
2014	108287
2015 (to end July)	24680

*Number of records imported to Recorder 6 database by year*

### *Upload of data to the NBN gateway*

Year	No. Records Uploaded to the NBN Gateway
2010	91043
2011	91043
2012	619017
2013	621535
2014	752806
2015	1655388

*Records uploaded to the NBN Gateway*

NBIS loads species data onto the National Biodiversity Network (NBN) 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 found in the table below:

<b>Provider</b>	<a href="#">Norfolk Biodiversity Information Service</a>
<b>Title</b>	NBIS Records to March 2016
<b>Permanent key</b>	GA001543
<b>Description</b>	Species records for the county of Norfolk.
<b>Date uploaded</b>	15-Apr-2016
<b>Purpose of data capture</b>	To record the species of Norfolk
<b>Methods of data capture</b>	Records are a mixture of casual records and site surveys provided by members of the public, professional ecologists and members of the Norfolk and Norwich Naturalists Society. Records are verified by the network of Norfolk County Recorders unless they come from another expert source.
<b>Geographical coverage</b>	The dataset covers the administrative boundary of Norfolk including the marine environment. There is uneven coverage of the county due to casual recording and surveying effort being localised. Grid references are at all levels of accuracy.
<b>View in interactive map</b>	<a href="#">Map link</a>
<b>Temporal coverage</b>	The records cover the period 1670 to the present day.
<b>Data quality</b>	Records have been collated and validated by the county recorders or come from expert sources but some inaccuracies may be present.
<b>Additional information</b>	Further details and higher resolution access to this dataset can be obtained from the Norfolk Biodiversity Information Service
<b>Number of records</b>	1,679,878
<b>Number of species</b>	15,307
<b>Licensed Under</b>	<a href="#">CC-BY-NC</a>

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

Current Data Agreements Type of Agreement	Organisation
Hosting Agreement	Norfolk County Council
Licence/MOA (negotiated annually)	Environment Agency
Service Level Agreement (negotiated annually)	South Norfolk District Council
Data exchange agreement	Woodland Trust
We are working towards Data Exchange Agreements with our County Recorders individually or in small groups.	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 with and over SLAs for 2016/17 and 2017/18	North Norfolk District Council
We are in discussions with and over SLAs for 2016/17 and 2017/18	Broads Authority

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 10 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:

	2011/12	2012/13	2013/14	2014/15
<b>Commercial Searches</b>	146	154	217	198*
<b>Non-commercial Searches</b>	26	39	60	63
<b>Partner Searches (Including Districts)</b>	210	171	142	57
<b>Consultant Bulk Buy Searches</b>	22	33	30	87
<b>TOTAL</b>	<b>404</b>	<b>397</b>	<b>449</b>	<b>405</b>

\* This drop off can be accounted for by the increase in consultants signing up to our bulk-buy option and the increase in the number of those enquiries.

In 2015-16 NBIS responded to 480 enquiries. These can be broken down as follows:

TYPE OF ENQUIRY	NUMBER
Commercial (e.g. ecological consultants)	386
Local Authority Enquiries	15
Funding Partner Enquires (e.g. NE, EA etc)	5
Non-Commercial Enquiries (e.g. students, members of the public, community groups)	74



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

<b>Stat</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>
<b>LRC size</b>	3.38fte (2.58fte paid)	2.58fte, plus 2.2fte project staff (plus volunteers)	2.33fte, plus volunteers)
<b>Total number of species observations</b>	2519571	2588374	2612119
<b>Habitat data % cover?</b>	100	100	100
<b>Estimated % data on NBNG</b>	10	~75	~75
<b>Number of local authorities with SLAs / partnership agreements</b>	4	4	2
<b>Number of data exchange agreements with voluntary groups or county recorders</b>	0, but in discussions	0, but in discussions	0, but in discussions
<b>Number of data enquiries</b>	444	400	480
<b>Total amount of time spent on these enquiries (hours)</b>	375	200	260
<b>Proportion of data enquiries that are non-chargeable (%)</b>	20	25.50	15.41
<b>Total amount of time spent on these enquiries (hours)</b>	75	51	36
<b>Average number of hours per week contributed by vols (office based)</b>	26	68	7
<b>Number of externally funded projects worked on</b>	Estimate - 7	Estimate - 5	Estimate - 8

## *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 September 2015.

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.

The data submitted to Defra in September 2015 presented a 8% gain in Local Sites in PCM, in Norfolk, for the year 2014/15. A total of 75% of Local Sites are therefore in PCM. Norfolk’s result is still above the England average of 50%.

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 2014/15 figures (for the period of 5 years up to March 31st 2015) can be viewed for Norfolk and by district in the PDF download ‘**SDL-160 2014-15 district summary**’. A map of sites in and NOT in PCM for the whole of Norfolk can be downloaded here: ‘**SDL-160 2014-15 Results Map**’. A PDF showing the changes in PCM over time compared to the England average is available to download here: ‘**PCM Trends 2015**’.

NBIS has provided Annual Monitoring Report data to a number of local councils in 2015/16, 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 2016 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 2016 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 2015 and the NBN Conference at the Royal Society in London in November 2015.

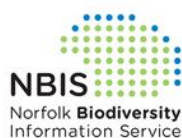
NBIS has continued to maintain a presence on all Norfolk BAP topic groups.

The Senior Biodiversity Officer was a member of steering groups or equivalent for the East of England Biodiversity Forum (EofE LERC Forum representative), Norfolk Geodiversity partnership, Norfolk Biodiversity Partnership and has been chair of the Association of Local Environmental Records Centres (ALERC) since October 2015.

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 Local Site Partnership steering groups, Norfolk Geodiversity partnership, Norfolk Ponds Group and the Breck 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 is now 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 2015/16 we attended the following:

- Wild about the Wensum (25<sup>th</sup> April)
- South Norfolk show (5th July)
- Wild about the Brecks (30<sup>th</sup> August)
- Open day – Charles Burrell Centre (6<sup>th</sup> September)
- NWT community event, Swaffham (26<sup>th</sup> September)
- Wild about Norfolk (10th October)
- Brecks Fest (27-29<sup>th</sup> March)
- Spring Fling (5<sup>th</sup> April 2016)

In 2015/16 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 2015-16 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 2015-16 the following projects were funded:

### **Contributing to the print run of 250 A5 East coast seaweed pressings books**

To help SeaSearch volunteers and interested members of the public identify seaweeds found on our local coast and gain an appreciation of the diversity present.

### **Workshop for identification of marine sponges**

Funding a two day, non-residential, tutor-led workshop for the identification of marine sponges including field work along the north Norfolk coast.

Six students took part in the workshop, learning through lectures and practical sessions. The course left the whole group “much more confident about using spicule preparation to identify local species at home”. It is hoped that the course will result in at least double the number of sponge species recorded for Norfolk by SeaSearch East. One new *Hymedesmia* species was discovered during the course.

### **Update from one of last years' projects...**

NBIS provided funding to purchase refugia for a **grass snake monitoring project** at Cranwich. Project manager Dave Leech reports that “preliminary results have been very interesting and are starting to garner quite a lot of interest amongst the national herpetological recording community.”

Several notable results arising from the pilot year were:

- The densities of snakes on site are much higher than previously published estimates.
- There is a very strong seasonal pattern in abundance, with numbers increasing slowly through spring, building to a peak in early August and then declining subsequently.

Experts think the Cranwich project could usefully inform the upcoming review of the National Amphibian and Reptile recording Scheme (NARRS). The survey will be repeated this year and Dave is in discussions about a possible PhD project around demographic monitoring of the Cranwich population, which would also include work on the toads there.

### **Determining the effect of pond terrestrialisation on pollinators**

Little is known about how pond management (e.g. terrestrialisation or marginal vegetation clearance) might affect pollinator communities. As part of a UCL PhD, the student will sample pollinating insect groups and their activity around the margins of 8 open canopy and 8 overgrown ponds. The resulting data will be fed into NBIS and will also inform UK pond conservation strategies.

### ***NBIS – NatSoc Recorders' Meeting***

The 2016 NBIS Recorders' Meeting, held jointly with the Norfolk and Norwich Naturalists' Society, took place on the 17th March 2015 at the Abbey Conference Centre. Attendees enjoyed food and networking before the meeting began, with the theme of '[Borderlands](#)'.

Unlike the previous year's event where there were keynote speakers, the 2016 event focussed on 10 equally-timed presentations of 10 minutes. All speakers were local

experts and discussed the recording challenges, species distributions and patterns and recording activities across Norfolk's borders.

## *Projects*

### **EODIP 5 – Earth Observation Data Integration Pilot**

EODIP5 is a short project, led by British Trust for Ornithology (BTO), to appraise the potential for volunteers and communities to become habitat validators and to look at the open source technology to support this. This project neatly follows on from the results of MEOW Phase 2 (Making Earth Observation Work: <http://jncc.defra.gov.uk/page-6279>), an initiative to develop new land cover maps or “Living Maps”, with a special focus on priority semi-natural habitats which have been identified as most threatened and requiring conservation action.

The first such “Living Map” was developed for Norfolk (the remotely sensed habitat map described in the 2014-15 Biodiversity Team Report), and because it has involved complex analyses of large data sets it is necessary to identify where errors and uncertainties are most likely to arise, and to consider methods for validating the map.

Possible methods for validation could include a desk-based approach where volunteers are able to check the Living Map against other data sources, such as earth observation imagery or photographs, or a field-based approach, where observers visit certain points, grid squares or habitat patches to validate the habitat in the field.

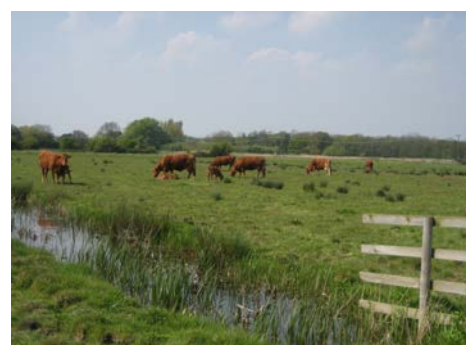
Stakeholder interviews undertaken by NBIS are ongoing to determine how a volunteer community of habitat validators might best be set up and promoted to. NBIS is also acting in an advisory role to the steering group on this project. Survey methods and techniques, communications and a technological appraisal for a possible smartphone app and/or website platforms are being undertaken by BTO. A report will be available soon.



Woodland © Scott Perkin



Arable margin © Martin Horlock



Grazing Marsh © Scott Perkin

## 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

The project operates at 3 levels:

Beginner – providing training and encouragement to those new to recording wildlife.

Species Surveillance – helping people take the next step into more serious recording of sites. Data collected will feed into the Norfolk Species Surveillance Network.

River Corridor Survey – a non-native survey of the Little Ouse River from its headwaters at Redgrave and Lopham Fen to Brandon.

As of December 2015, 121 people had signed up to take part in the project in some way.

Workshops held so far have covered recording dragonflies, lichens, birds, general invertebrates and lunar yellow underwing moths.

A bioblitz at Brandon Country Park in October saw 260 species recorded by volunteers on the day.

In January, the project organised an Invertebrate Sorting Marathon. Volunteers sorted invertebrates from pitfall traps into six different groups, aided by experienced mentors. As well as learning new taxonomic ID skills, the volunteers were contributing to research into the effect of different management types on invertebrate assemblages in the Brecks. Once sorted, the samples were sent off to local experts to be identified to species level. 28 volunteers attended the event over two days (with 9 volunteers doing both days) with many Saturday attendees returning on the Sunday. All of the samples were successfully sorted!



The Brecks Invertebrate Sorting Marathon © Breaking New Ground

## 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 NNSI a monthly e-news bulletin. This is distributed via email to a wide contacts list



## Finance

The table below shows the budget for 2015-16 and the previous two years. 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, this covers staff salaries and overheads (estimate) for 1.33 staff equating to: £54,902.60 (2013-14); £57,849.00 (2014/15); £57,853.90 (2015/16).

<b>Expenditure (in £)</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>
Staff salaries/training/travel	64996.71	139052.36	94,778.42
IT hardware/software & general equipment purchase	238.14	413.15	600.28
Subscriptions (e.g. ALERC)		596.67	300.00
Contractor costs	21612.15	4103.29	40246.24
Venue hire		773.5	535.00
Printing/marketing/design	700	767.88	187.97
other/misc	29.3	78	102.32
Publications/NBIS recorders fund		18.06	556.86
Budget adjustments/financials	75500		
Match Funding			50525.00
<b>Total expenditure</b>	<b>163076.3</b>	<b>145802.91</b>	<b>187832.09</b>

<b>Income (in £)</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>
Data Searches	-22550	-22095	-39,115
Project work/other charges	-24540.96	-82592.75	-2222.46
Service Level Agreements with Local Authorities/IDBs	-28000	-34000	-11000
Service Level Agreements with utilities			- 1125
Service Level Agreements with Defra bodies	-22600	-22600	-17600
Recharge (other departments)	100	-4.93	-31296
Match Funding			-30500
<b>Total income</b>	<b>-97590.96</b>	<b>-161292.68</b>	<b>-132858.46</b>

<b>Balance (in £)</b>	<b>65485.34</b>	<b>-15489.77</b>	<b>54973.63</b>
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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 in 2015/16 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.