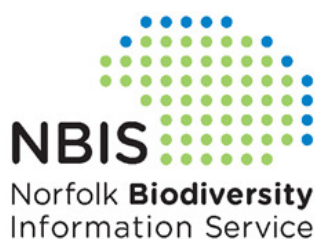


Norfolk County Council Biodiversity Team

Highlights and achievements 2014-15



Norfolk County Council

Lizzy Oddy
Norfolk Biodiversity Information Service
May 2015

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This Report

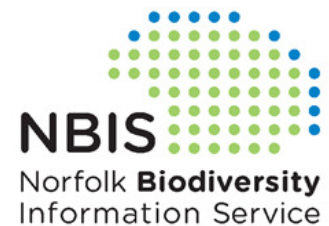
Norfolk County Council Biodiversity Team is part of the Environment Team, hosted within the Community and Environmental Services Department.

Working in partnership with NCC and other organisations, the Biodiversity Team provides high quality information, co-ordinates resources and expertise across the county, works with local communities and provides practical action on the ground to help protect and enhance the natural environment of Norfolk.

This report highlights the activities and achievements of the Norfolk County Council Biodiversity Team over the past year.

Norfolk Biodiversity Information Service (NBIS)

Norfolk Biodiversity Information Service is a Local Environmental Records Centre holding information about species, geodiversity, habitats and protected sites for Norfolk. NBIS provides quick and easy access to high quality information for all.



Norfolk Biodiversity Partnership (NBP)

Established in 1996, the Norfolk Biodiversity Partnership brings together the resources and expertise of local authorities, statutory agencies and voluntary groups in pursuit of a shared goal – to conserve, enhance and restore Norfolk's biological diversity.



Norfolk Non-native Species Initiative (NNSI)

Launched in 2008, the Norfolk Non-native Species Initiative promotes the prevention, control and eradication of invasive alien species, working through a stakeholder's forum.



Species Records

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.

The NBIS database currently contains **2587666 species records** (including a number from our neighbouring counties of Suffolk and Cambridgeshire, collated as part of cross-county biodiversity audits). In 2014-15 **124541 records** were imported.

Data Enquiries

Responding to **data enquiries** is one of the core tasks of NBIS. 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**.

In 2014/15 **NBIS responded to 405 enquiries**. These can be broken down as follows:

| TYPE OF ENQUIRY | NUMBER |
|---|--------|
| Commercial (e.g. ecological consultants) | 283 |
| Local Authority Enquiries | 40 |
| Funding Partner Enquires (e.g. NE, EA etc) | 25 |
| Non-Commercial Enquiries (e.g. students, members of the public, community groups) | 57 |

NBIS – NatSoc Recorders' Meeting

The 2015 NBIS Recorders' Meeting, held jointly with the Norfolk and Norwich Naturalists' Society, took place on the 26th March 2015 at the Abbey Conference Centre. Attendees enjoyed food and networking before the meeting began, with the theme of '**Data Flow and Verification – Putting things in Context**'.

There were keynote speeches from Rachel Stroud (National Biodiversity Network) and Roger Morris (Hoverfly Recording Scheme), as well as a call for data for a North Norfolk biodiversity audit and the introduction of a species new to science recently discovered in Norfolk.

There were also talks on data flow and verification, and a brief discussion on how NBIS could take this matter forward with the County Recorders and others. Rather than a stand-alone event, this evening was intended as a starting point for discussions and meetings to determine the best way to make progress on data flow and record verification in Norfolk.



Training in recording methodologies has been provided, and volunteers are supplied with equipment where needed.

There are currently 33 volunteers involved

Species Surveillance

Started as part of a Defra pilot project in 2013, the **Norfolk Species Surveillance Network** supports structured, repeated recording of multiple taxonomic groups on a site in order to monitor change over time.



Structured species surveillance © Andrew Thompson

NBIS – Recording project fund

Each year, money received from commercial enquiries is made available to support projects which result in more records for the NBIS database via the [NBIS Recording Project Fund](#). In the past this fund has been used to support projects ranging from training for SeaSearch volunteer surveys to invertebrate sampling in Thetford Forest, from a geodiversity publication to purchasing equipment for the Norfolk Bat Survey. In 2014-15 the following projects were funded:

- *Myotis* Bat Surveying - Woodland *Myotis* Study Group

The current distribution of *Myotis brandtii* (Brandts bat) and *Myotis mystacinus* (Whiskered bat) in Norfolk is very poorly defined. Although *Myotis* species can be recorded by automated detectors, identifying each species from their call proves problematic – particularly for *M. brandtii* and *M. mystacinus*. In-hand analysis is currently believed to be the only accurate means of separating the species. The recording fund application was made for the purchase of mist nets to make this possible. The survey focussed primarily on sites with a combination of high quality woodland and water. The project aimed to:

- ◆ Locate and confirm, with morphological evidence, occurrences of *M. brandtii* and *M. mystacinus* in Norfolk.
- ◆ Investigate the potential for rare species occurrence within optimum Norfolk habitats e.g. *Myotis alcathoe*.
- ◆ Record the calls of *Myotis* species on release for use as call reference samples.



It is hoped the project can go on to help with the county-wide Norfolk Bat Survey, run by Stuart Newson (British Trust for Ornithology) by providing follow-up netting/trapping surveys at sites where automated recording has suggested *M. brandtii* and *M. mystacinus* to be present.

Myotis brandtii © Magnus Manske. Licensed for reuse under CC-BY-2.0

- Grass Snake survey

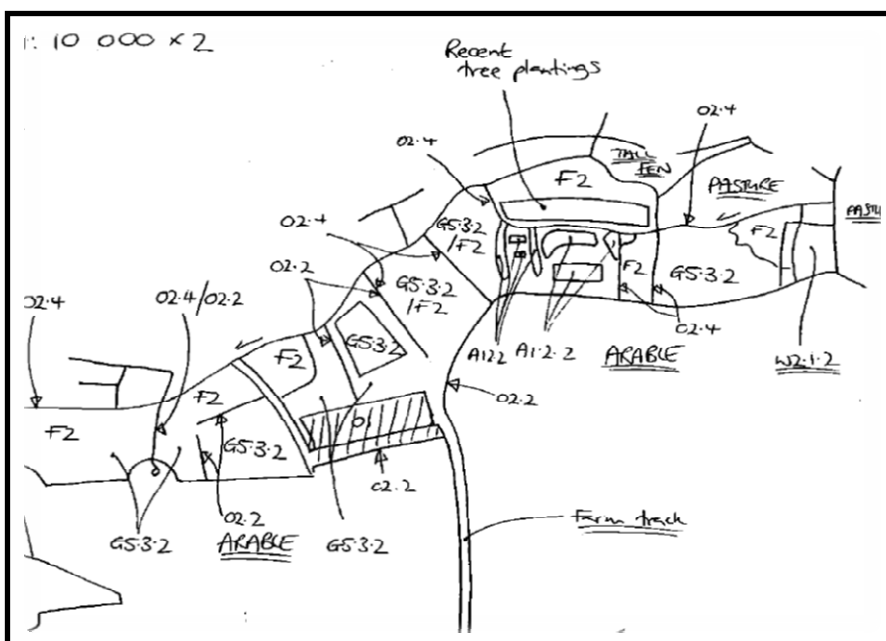
The grass snake is a Species of Principle Importance under Section 41 of the NERC Act (formally a Biodiversity Action Plan Priority Species). This project was a pilot survey conducted at Watermill Broad County Wildlife Site using refugia, initially to look at abundance, population estimates and movement/survival rates of grass snakes. The primary output from the pilot study would be an assessment of temporal and spatial variation in the use of refugia, which will inform design of future survey protocols. In the future, faecal samples will be collected to determine diet, and common toad population will be monitored in parallel to determine food availability. It is hoped that the project will become a long term study of the species on the site.



Data digitisation

NBIS recently acquired funding (£29,924) from the Government's Release of Data Fund via the National Biodiversity Network in order to [digitise the paper habitat maps](#) drawn as part of the surveys of County Wildlife Sites in Norfolk from 1985 - present, as well as digitising the species records from those initial surveys.

In total, approximately [5210 habitat polygons](#) have been mapped on GIS and [79908 species records digitised](#) (including 2560 notable species).

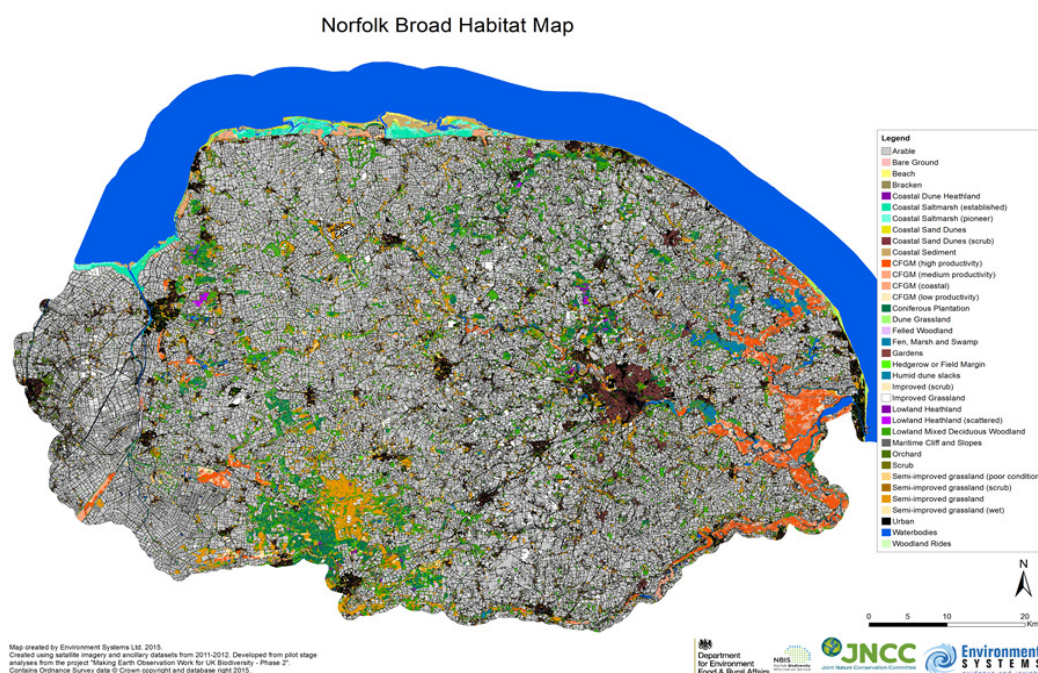


In a second part of the project, an extra £34,164 was secured to [digitise the paper Phase 1 habitat map for Norfolk from 1983-85](#).

Once complete, this can then be compared with the new remote sensing habitat map (see page 8). So far over [8,245 habitat polygons](#) have been mapped.

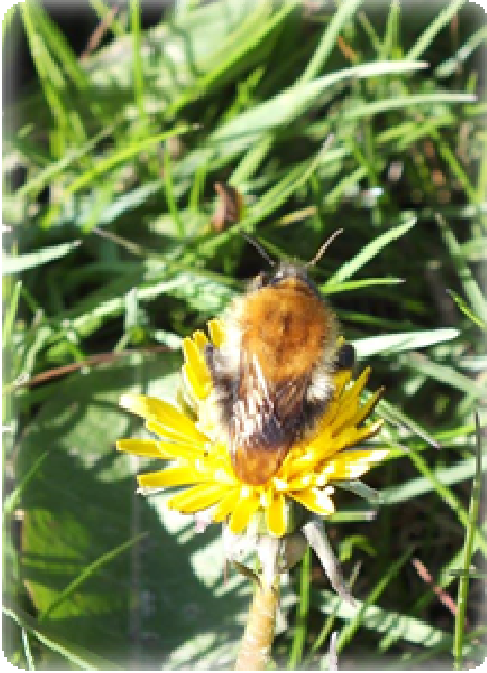
New ways of habitat mapping in Norfolk

NBIS have made some changes to how they map habitats. In the past, aerial photographs were looked at manually and combined with national datasets such as the Priority Habitat Inventory datasets held by Natural England. While this method worked well, it was very time consuming, open to subjectivity and the boundaries of the habitats were often approximated.



In 2011 NBIS took part in a Defra-funded pilot project run by Environment Systems called '[Making Earth Observation Work for UK Biodiversity Conservation](#)'. This project aimed to assess the feasibility of mapping habitats in two trial areas of Norfolk using object-based analysis of [remote sensing imagery](#). The resulting draft habitat classification rules were then adapted and applied to the entire county of Norfolk. The habitat types mapped were a mixture of Biodiversity Action Plan (BAP) habitats and Annex I habitats.

The resulting map was used to calculate the area of some key habitat types in Norfolk. This is the first time NBIS have had access to a [full habitat map](#) of the county, and is the most accurate habitat mapping used to date. The map is currently still undergoing checking and ground-truthing to ascertain accuracy.

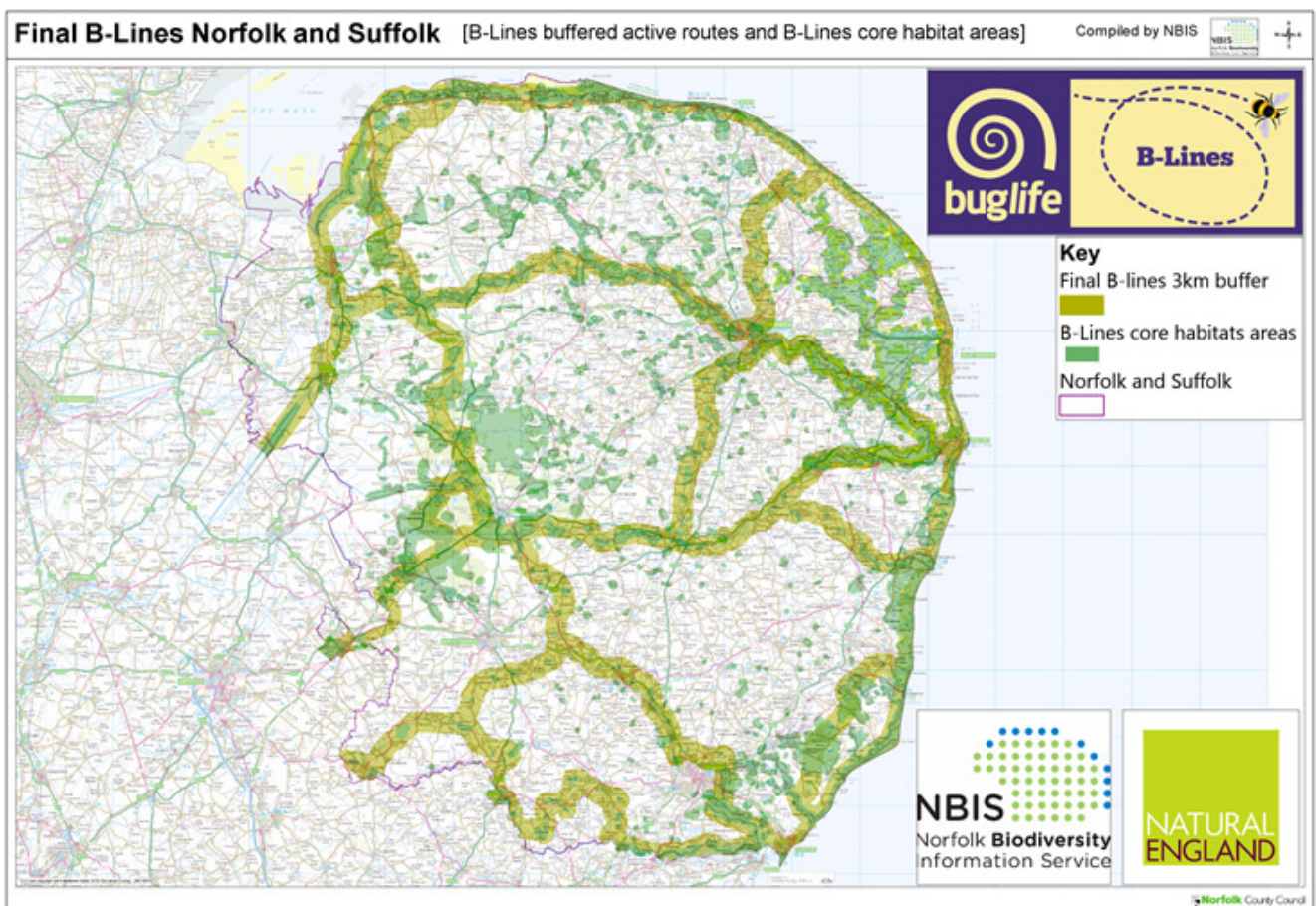


**This project brought in
£3, 008 to Norfolk**

B-lines

B-Lines is a project run by the charity Buglife which aims to map key insect pollinator dispersal pathways (B-Lines) at a county or regional level, then link these with B-Lines mapped in adjacent counties or regions.

The mapping uses basic connectivity modelling to identify the pathways. It is designed to be both simple and pragmatic, using existing Green Infrastructure and biodiversity mapping alongside local stakeholder and partnership knowledge to refine and confirm priorities. NBIS were contracted by Buglife to draft the B-Lines for Norfolk and Suffolk, to prepare the final maps, present them to the stakeholders and to map the revised corridors following a workshop.



Norfolk Biodiversity Forum

The **2015 Norfolk Biodiversity Forum**, held at the Abbey Conference Centre on the 11th March focussed on the topic of 'Landscapes and Species – Managing for Both in Norfolk'. Over 90 delegates enjoyed talks about little terns, ponds, killer shrimp, national character areas and more. There was plenty of time for networking and discussions during lunch and tea breaks and the feedback from the event was excellent

NBP biodiversity project fund

Since 2004 the Norfolk Biodiversity Partnership has run a **Biodiversity Project Fund** to support projects which contribute to the implementation of high priority actions from the species and habitat action plans. In 2014-15, two projects received Biodiversity Project Fund money to study pond restoration and the creation of lowland meadow habitats. These are summarised below.

- **Ghost Pond Beetle Survey – ENSIS, University College London**

Ghost ponds are ponds that used to exist but were filled in for land reclamation. They are sometimes still visible in the landscape as crop marks, damp areas or depressions in the ground. These former ponds still contain pond sediments and potentially viable eggs and seeds of the species which once lived there.

The project involves surveying water beetle diversity and colonisation of restored and resurrected ponds ghost ponds, as well as at existing ponds on Brisley Green County Wildlife Site. This is as an extension of the existing 'Ghost Ponds Project'.



Wild flowers, Burlingham © Graeme Cresswell

- Roadside Nature Reserve seed collection: farm conservation

The proposed project will utilise Roadside Nature Reserves (RNRs) as a source of wild flower seed to restore lowland meadow habitat to suitable sites on land with public or permissive access.

RNRs in Norfolk contain some of the last remaining fragments of species-rich grassland which was once widespread in South Norfolk. This project will establish a seed bank of species specific to Norfolk lowland meadow, which are not currently available from seed suppliers. It will also re-establish or restore lowland meadow and pasture of high wildlife value on arable land, semi-improved or neglected grassland.

The seed of early flowering species will be collected by hand in May and June. This seed will be dried and stored for later spreading onto receptor sites or for propagation, and will include species important in providing pollen and nectar to early emerging butterflies and queen bumblebees. Later in the year, 'green hay' (where the seed has ripened in the flower head but has yet to drop), will be cut and transported to specially selected receptor sites within a couple of hours to maintain viability. Receptor sites are chosen as they have a very similar soil type to the donor site and seeds are therefore more likely to germinate.



Recreational pressures project



Development site © Scott Perkin

For the first time **all eight local planning authorities** in Norfolk comprising Breckland District Council, Kings Lynn West Norfolk Borough Council, North Norfolk District Council, Broadland District Council, Norwich City Council, South Norfolk District Council, Great Yarmouth Borough Council and the Broads Authority have come together to work on a project under the National Planning Policy Framework's 'Duty to Cooperate'.

Norfolk Biodiversity Partnership is managing the project on behalf of all the partners. The project is focussed on **better understanding current visitor levels across Natura 2000** (European designated nature conservation) sites in Norfolk, the factors underlying the visitor patterns observed, how these **link to current and future housing across the county** and any impact on the nature conservation interests of the sites.

The location of population growth, in particular the location of housing through the planning process, influences the potential recreational impacts on internationally designated sites.

NBP's Coordinator, Anne Casey said 'undertaking this work as one project across the whole of Norfolk will give local planning authorities an improved understanding of the relationships between Norfolk's population growth, planning for new housing and associated green space and recreation areas, recreational activity, increasing visitor numbers and impacts on Natura 2000 sites in Norfolk.'



Theford Forest © Stephen McKay, licensed for reuse under CC-BY-2.0

Visitor surveys and counts will be undertaken across Norfolk's Natura 2000 sites in the Brecks, the Broads and the North Norfolk coast over the next year. The results will be combined with currently available information to provide a baseline of visitor patterns across Norfolk. This will **assist in planning of new housing growth in local plans**, along with determining **where additional recreation areas and green space may be needed**, and the **management and protection of nature conservation areas**

NBP Community Biodiversity Awards - celebrating environmental work in Norfolk

Each year the Norfolk Biodiversity Partnership hosts the **NBP Community Biodiversity Awards** to celebrate work done by volunteers, projects and community groups throughout the county for the benefit of biodiversity. **In 2014 the awards were kindly sponsored by the East of England Co-op.** There is a themed award each year – in 2014 it was for 'commons, greens and churchyards'. The winners and highly commended runners-up for each award are summarised on the following pages:

GROUP AWARD WINNER: Friends of Earlham Cemetery

For working to record, conserve and promote the biodiversity of the Cemetery as a place of freedom, recreation and enjoyment for all.

The Friends of Earlham Cemetery was created in 2011 by a group of local residents. They work closely with Norwich City Council and Norfolk Wildlife Trust. The group organise informal monthly walks, providing an opportunity to explore Earlham Cemetery and discover a surprising variety of plants, fungi, birds and insects. Find out more at www.friendsofearlhamcemetery.co.uk

Highly Commended: Scarning Conservation Volunteers

For conservation and access management of Scarning Water Meadows CWS.

Highly Commended: Toadwatch Patrollers Cranwich, Oxborough & Cockley Cley

For helping over 9000 toads to cross the A134 to get to their spawning ground.

SITE AWARD WINNER:
**Queens Jubilee Biodiversity
Project, Great Massingham**

For an area of one of the village greens enhanced for biodiversity and better access by volunteers on behalf of the parish council.

Highly Commended: Henry le Strange Community Orchard, Hunstanton

For an area of community field transformed into an orchard which is also a wildlife haven and community asset.

**THEMED AWARD FOR COMMONS, GREENS & CHURCHYARDS
WINNER: Southrepps Commons Trust**

For the conservation and improvement of five important commons.

Southrepps Common Trust is wholly responsible for looking after all the Southrepps Common Local Nature Reserve, including the SSSI. All of the work is done by volunteers and without them the wonderful mixture of habitats, plants and accessibility that comprises Southrepps Common would not exist.

Highly Commended: Hethel Churchyard

For management with wildlife in mind and promoting conservation.

Highly Commended: West Runton Nature Society

For action to improve the biodiversity and community involvement in seven commons.

INSPIRING OTHERS WINNER: Norfolk Bat Survey

For inspiring 350 people to take part in the largest ever county level bat survey.

The Norfolk Bat Survey was launched in April 2013 by Dr Stuart Newson at the British Trust for Ornithology, to improve our understanding of bats and support their conservation. Since this time, the project has analysed over half a million bat records from across the county. Find out more at www.batsurvey.org



2014 NBP Community Biodiversity Award Winners

© Keiron Tovell

INDIVIDUAL AWARD WINNER: Richard Waddingham

For his passion for conservation and farming over 40 years on his farm in Briston.

Highly Commended: Sean Locke

For his enthusiasm and passion for recording wildlife at Mousehold Heath and Strumpshaw Fen.

SPECIAL ACHIEVEMENT AWARD WINNER: Dr Martin George OBE

For his enormous contribution to our understanding of the Broads and playing a significant role over 50 years in safeguarding them for posterity.

RINSE - Reducing the Impact of Invasive Non-native Species in Europe

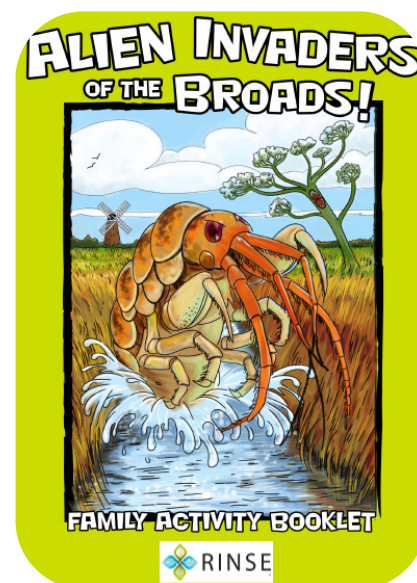
This successful European project (led by Norfolk County Council), closed in September 2014 after three years of activities. Highlights included:



- ◆ Development and release of **That's Invasive!** - a **free smartphone app** containing all the information needed to ID and report over 35 invasive native species, in terrestrial, freshwater and marine habitats. The app contains extensive photo galleries and uses GPS technology to accurate map data.
- ◆ Production of a 20 page **Family Activity Booklet**, describing key invasive species in the Broads National Park and the problems they can cause. Interactive games and activities encouraged readers to look more closely at the environment around them.

- ◆ **Eradication of floating pennywort on the River Waveney.** The infestation was significantly reduced during the first two years of the project (2010-2012), with no pennywort found in 2013. However, the need to schedule follow-up surveys was highlighted in 2014 when isolated pockets of the plant were rediscovered. The NNNSI and the River Waveney Trust remain committed to completing the project.

- ◆ Exchange visits and best practise workshops promoting **knowledge transfer** between the UK and the Netherlands, France and Belgium.



RINSE had a total budget of € 2.5 million, with € 252,175 brought to Norfolk

SEFINS - Safeguarding the Environment From Invasive Non-native Species

SEFINS is an 18 month cluster project, bringing together key partners from the successful European projects RINSE, MEMO and INVEXO, in order to exchange knowledge and capitalise on the ground-breaking work already carried out.

The SEFINS partnership is led by Norfolk County Council and works towards **'Bridging the Gap' in invasive non-native species monitoring, management and research within estuaries**. Cutting-edge scientific techniques are being trialled in pilot studies along the coastline of North Norfolk and estuaries across France, Belgium and the Netherlands whilst promoting the exchange of data and expertise between countries. Project aims include:

- ◆ Compiling baseline data of alien species currently present in estuaries and making additions through short-term monitoring schemes
- ◆ Trialling molecular early-warning tools (eDNA techniques)
- ◆ Detailed assessments of the risks of invasive plant species
- ◆ Communicating the risks of invasive species to stakeholders and raising awareness in the general public.



**SEFINS brings € 170, 557 to
Norfolk**



International Non-native Species Forum

RINSE closing conference © Lottie Hill



Last September, Norwich hosted a **two-day international forum** on invasive species, attended by **over 200 delegates from five European countries**. The first day celebrated the achievements of the **RINSE** project, after three years of European collaboration. The second day focussed on the beginning of **SEFINS**, a new project building on the conclusions of RINSE to target

future priorities for action on invasive non-native species. Both RINSE and SEFINS are part funded by the **European Regional Development Fund** via the **Interreg Two Seas Programme**, and are led by Norfolk County Council. The Forum included presentations from leading experts on a range of hot topics in invasive non-native species research, management, control and policy.

Catchment Biosecurity Plans

The NNNSI is currently working with the Environment Agency to put together **Biosecurity Plans** for the eastern catchments of Norfolk and Suffolk, including all of the Broads catchments, North Norfolk, the Deben and the Stour. **These plans will be for the use all of the stakeholders in the catchments.**

The Biosecurity Plan vision is to develop a sustainable management framework that will **detect, control and/or eradicate** where present, specified invasive non-native species throughout Norfolk and Suffolk. This will be achieved through the coordination of data collection, education and local action. The actions outlined in the plan will also **prevent the introduction** of new invasive non-native species into the area.

The Biosecurity Plan will be subdivided to a catchment level, making it easy to link clearly with achieving **Water Framework Directive (WFD) targets**. It should help to achieve and maintain 'good ecological status' in WFD waterbodies, particularly helping to meet biological indicators such as fish and macrophytes. The Plan will also outline how the NNNSI can contribute towards objectives of the GB Invasive Non Native Species Framework strategy.

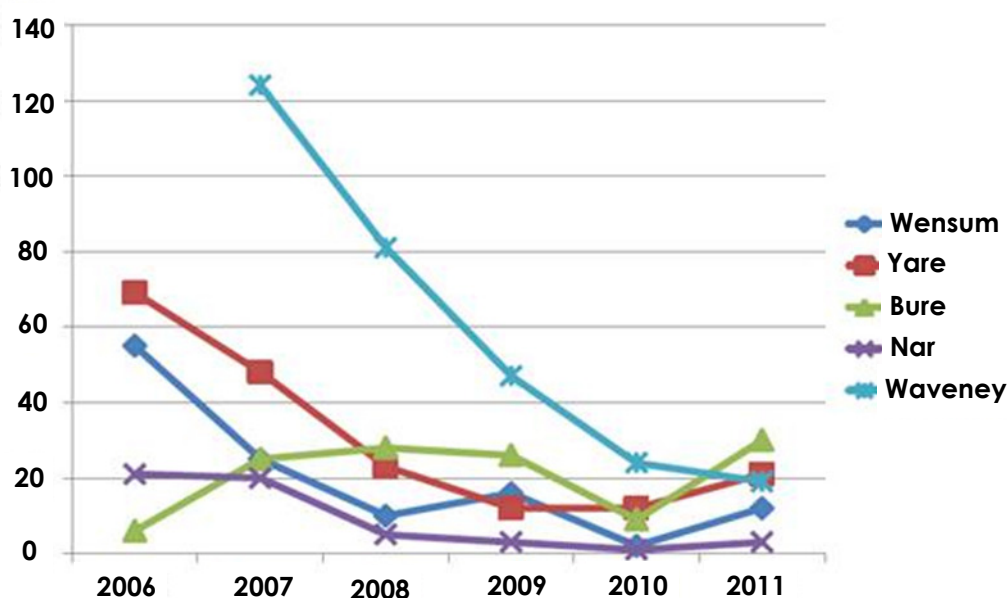
Norfolk Mink Project

The **Norfolk Mink Project** was established in **2006**, when American mink (*Neovison vison*) were identified as a key priority to halt the decline of water vole populations in Norfolk.



Managed by the Norfolk Non-Native Species Initiative, the project aimed to establish a **self-sustaining network of volunteers** to monitor the mink population and trap them as required, with an overall aim of reducing mink density to very low levels with localised eradication where possible.

Number of mink trapped annually by catchment



The project initially focused on the area along the River Wensum, but was expanded to cover catchments across Norfolk and Suffolk. A new 'cloud' database was developed and rolled out in 2014, allowing records and information to be viewed online, reducing management time and increasing data accessibility.

In 2014, there were:

268 active volunteers

99 mink trapped

384 mink rafts deployed

513 mink traps out on loan

**800 mink trapped in
Norfolk since 2006**

A total of **800 mink have been trapped since 2006**, with significant reductions in populations across all catchments.

Himalayan Balsam 'bashing'

2014 saw the final year of Defra funding for the **eradication of Himalayan Balsam along the River Wensum**.

Efforts this year centred on revisiting previous sites and clearing small areas of balsam which had regenerated after clearance in 2012/13. This is vital, as it often takes up to 18 months to completely wipe out the seed bank in an area. Eradication work was also carried out on some new, previously inaccessible areas of infestation.

The combined effort of contractors and enthusiastic volunteers resulted in **34,650m² of balsam being cleared**.



Total Himalayan balsam cleared from Norfolk in 2012-14 was 63,300 m²



