Citizen science and volunteer engagement in Norfolk

Mike Sutton-Croft

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Recording Apps – The Concept

Lat/Long obtained via phone's GPS in the field
Normal accuracy between 2 and 12m

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Metada
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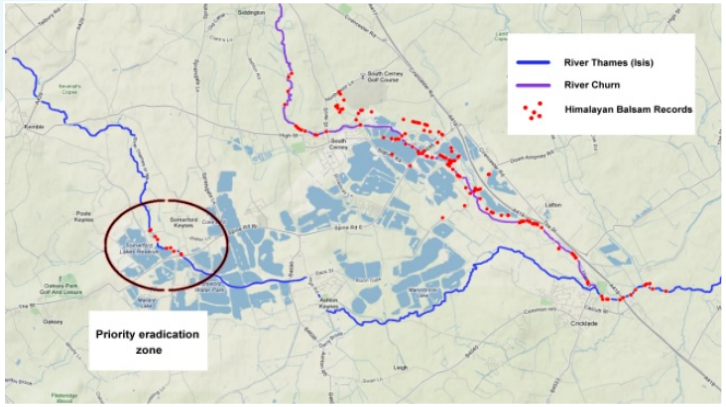

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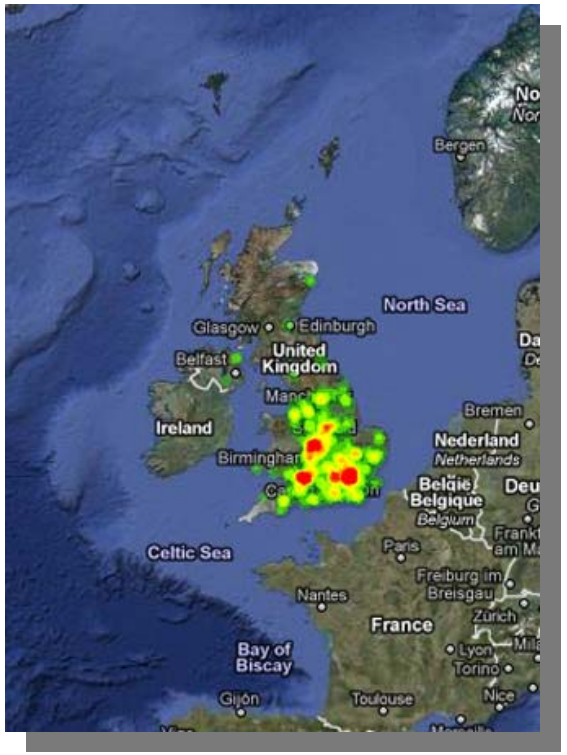
LeafWatch – Demonstrating the power of citizen science

Standard Pin Map: Shows distribution of records received



Heat Map: Shows density of records received

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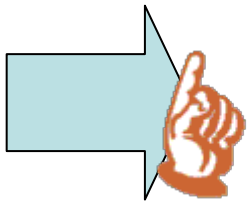

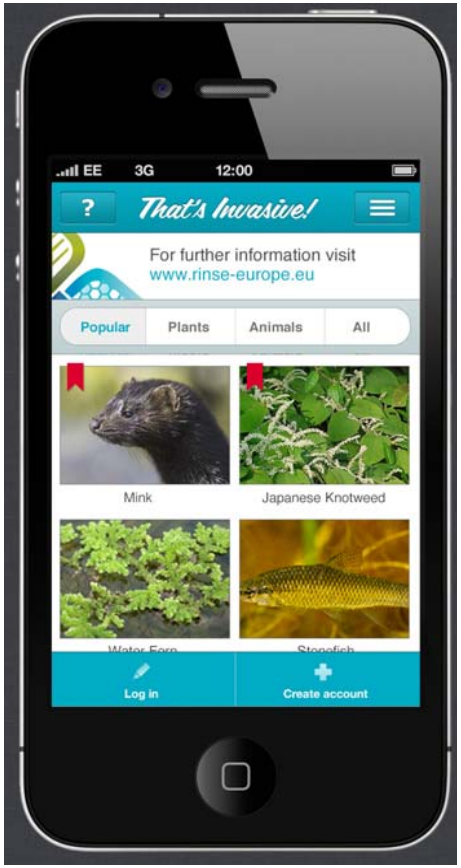

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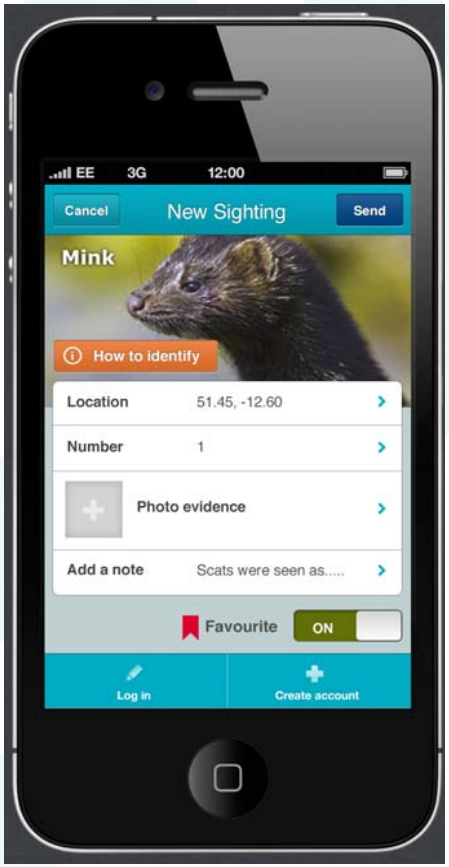

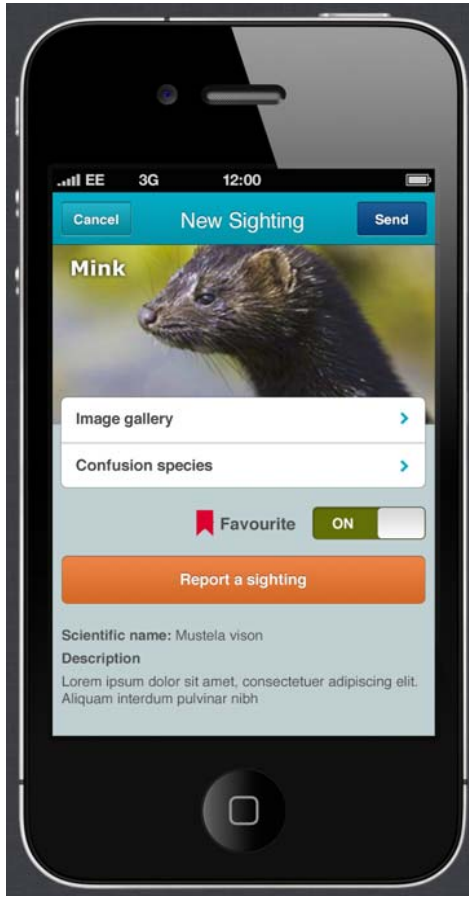

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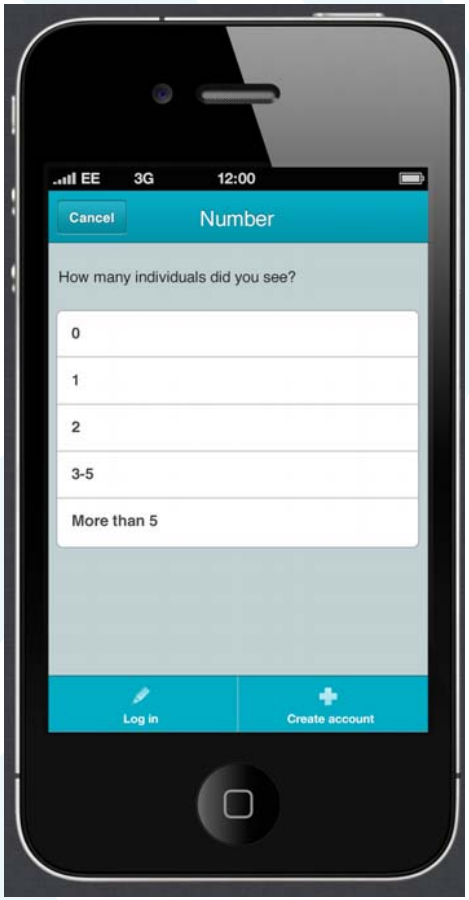

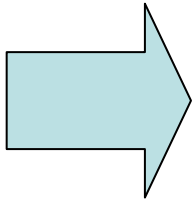

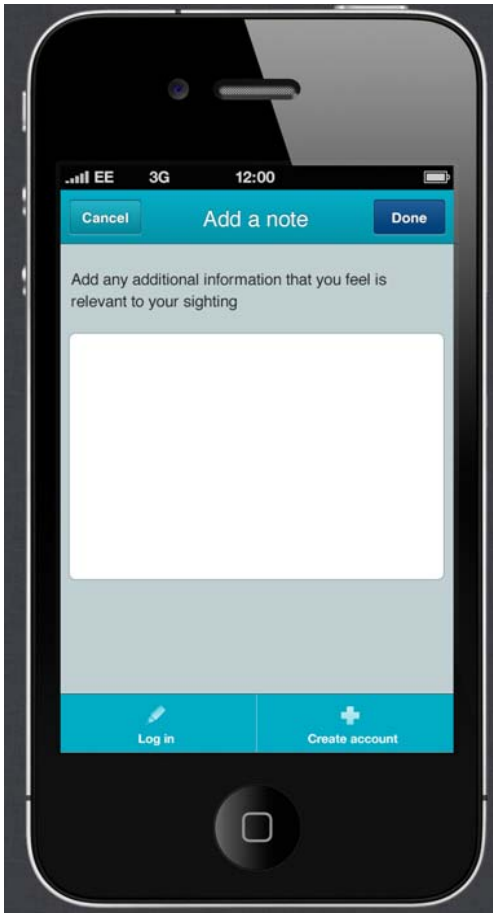

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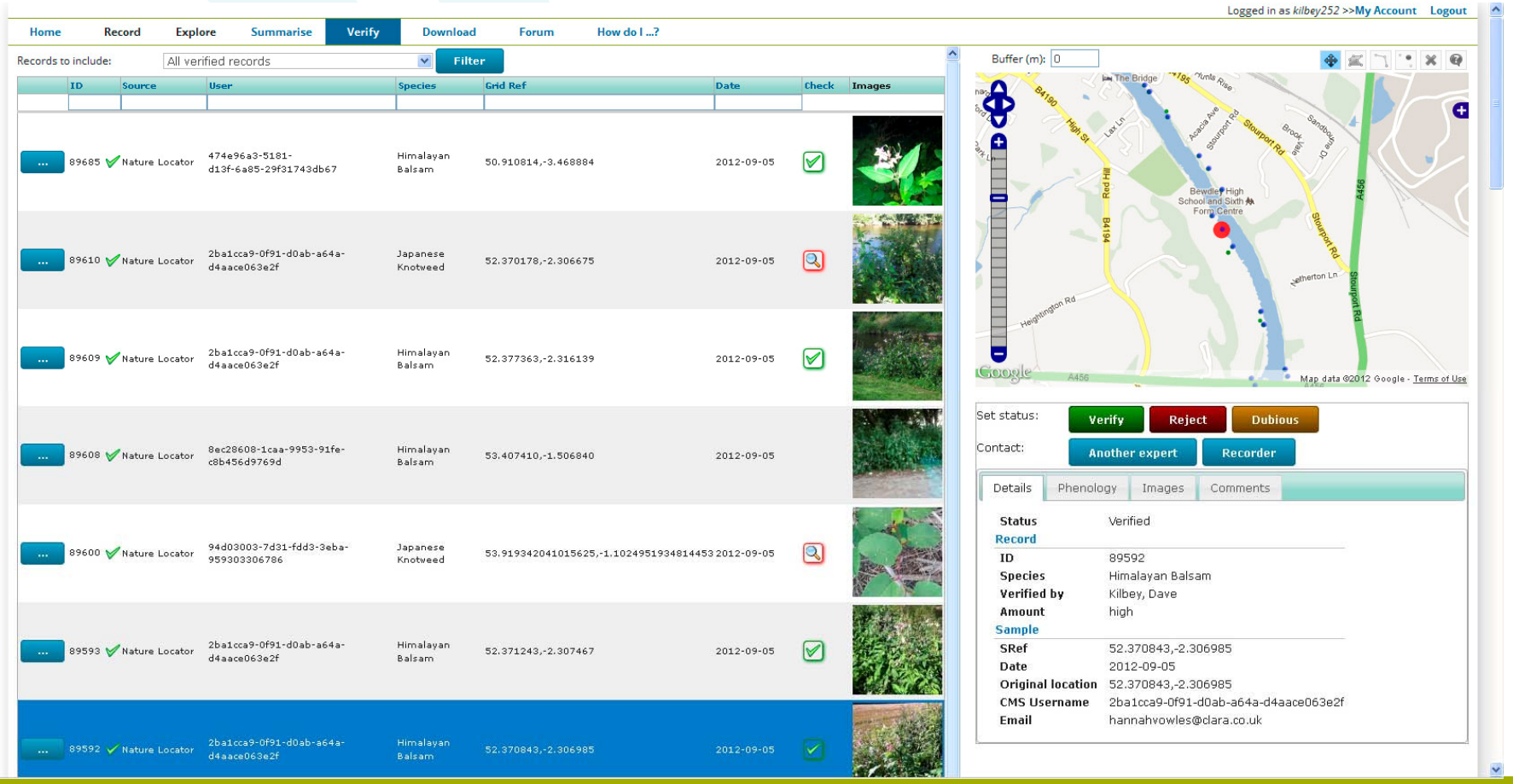

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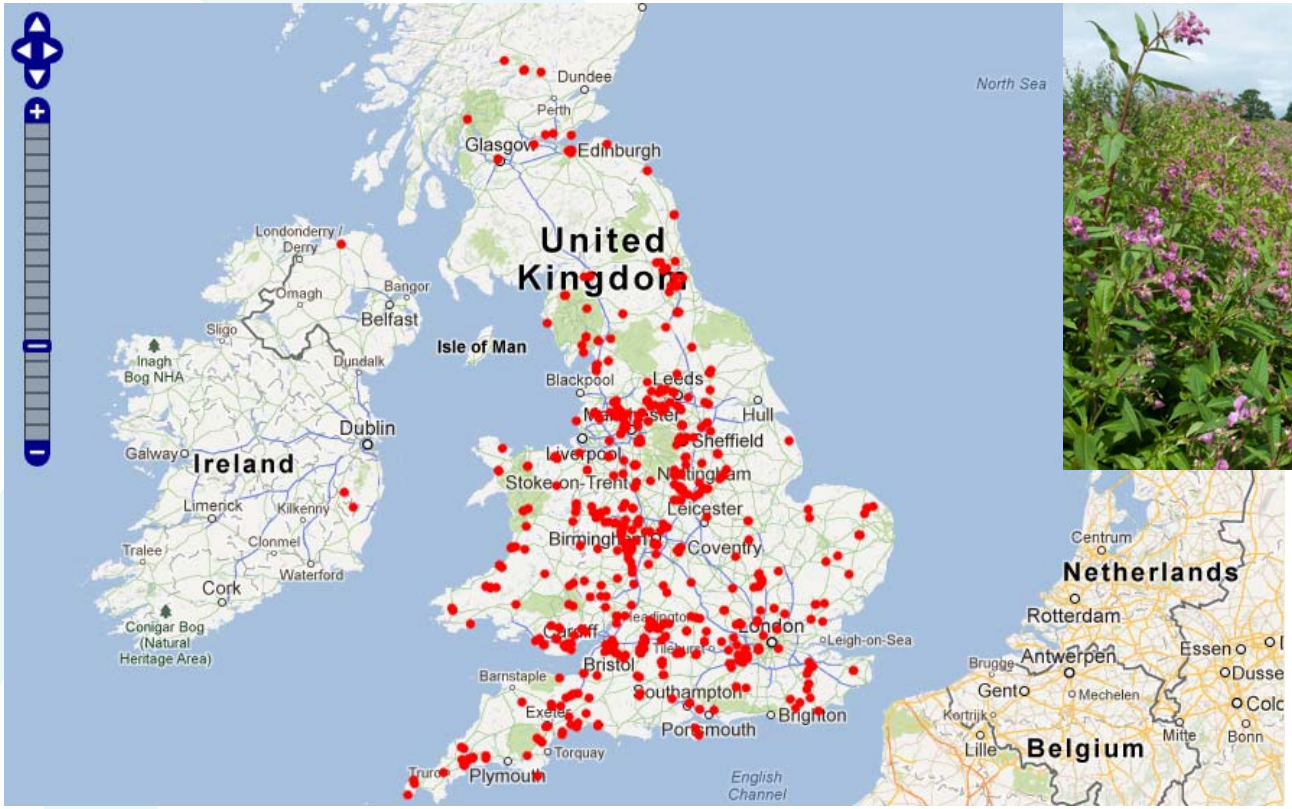
Expected results



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Himalayan Balsam

RINSE

Dispersal: seed

Favours riparian habitats, commonly found along river banks

Explosive seed pods propel seeds from plants into nearby water

Rivers can act as dispersal highways, carrying seeds downstream allowing the plant to establish in new areas

Methodology

RINSE

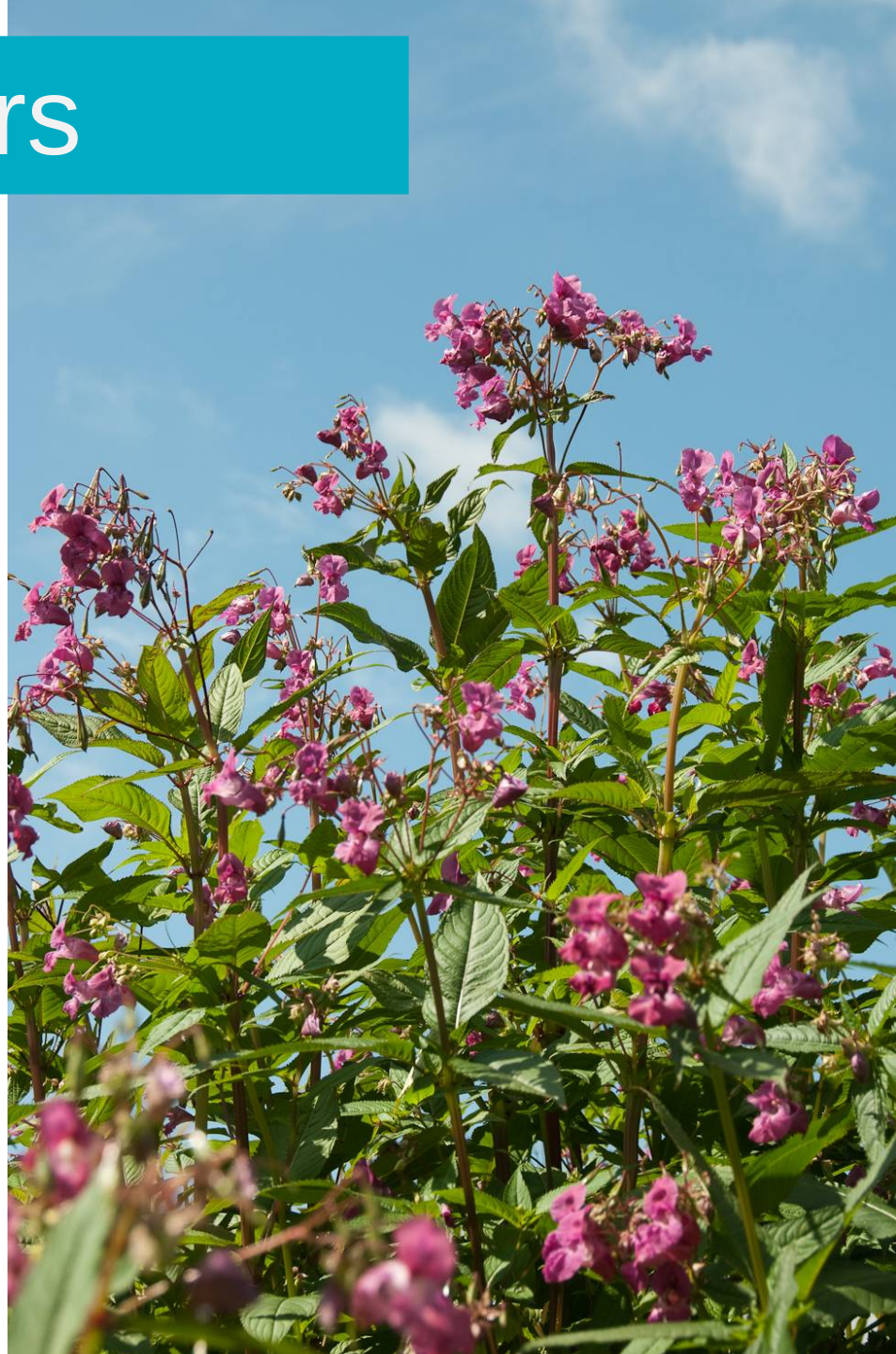
Landowners

Cooperation vital for survey

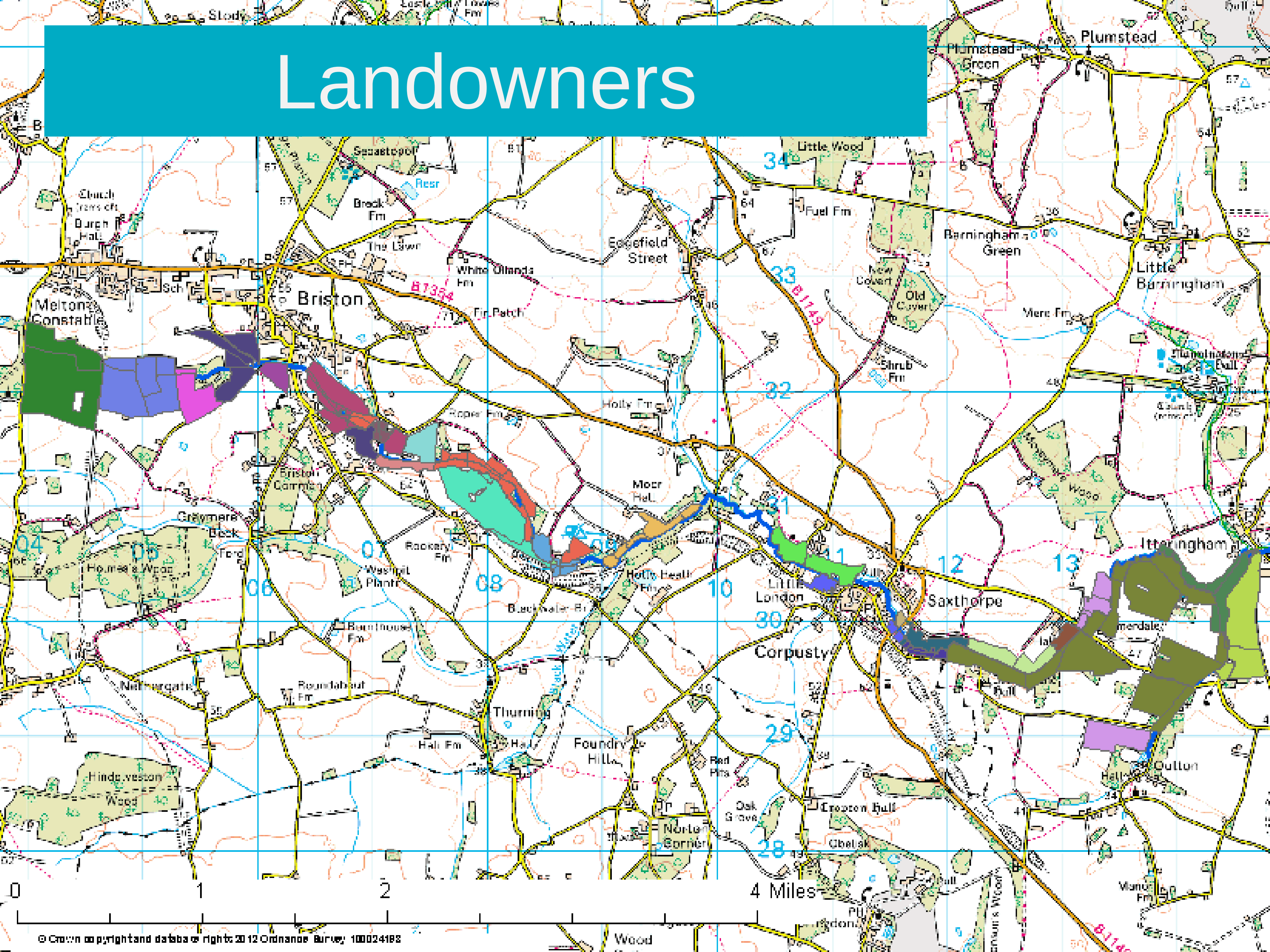
Large proportion of Bure along PROW

Obtaining contact details was problematic and slowed survey

Finally successful after approaching EA through Norfolk Wildlife Trust who had previously surveyed the area



Landowners



Plumstead
Plumstead Green
Little Wood
Sebastopol
Church (rems of)
Burgh Hall
Melton Constable
Briston
Breck Fm
The Lawn
White Ollands Fm
B1354
Fir Patch
Edgefield Street
Fuel Fm
New Covert
Old Covert
Barningham Green
Little Barningham
Mere Fm
B1149
Shrub Fm
Holly Fm
Roper Fm
Moor Hall
Briston Common
Grey Mare Beck
Ford
Houses Wood
Rookery Fm
Westfield Plantn
Holly Heath Fm
Little London
Saxthorpe
Corpusty
Itteringham
Burnthouse Fm
Nethergate
Roundabout Fm
Thurning
Hall Fm
Foundry Hills
Hindolveston Wood
Black Water
Red Pits
Oak Grove
Norton Corner
Obelisk
Oulton
0
1
2
4 Miles
Wood
© Crown copyright and database rights 2012 Ordnance Survey 100024198

Recruitment

A number of different methods were used to recruit volunteers for this survey

Volunteer websites such as Voluntary Norfolk

Local walking and wildlife groups such as Norfolk Ramblers

Recruitment

A number of c… were used to recruit v… survey

20

Volunteer websites such as Voluntary Norfolk

Local walking and wildlife groups such as Norfolk Ramblers

Training & Support

RINSE

Section Code: RB6
Start Grid Ref: TG146306
End Grid Ref: TG170304
Section Description: Iterringham Bridge to TG1730
Parking: Itteringham
Distance: 7.5 km

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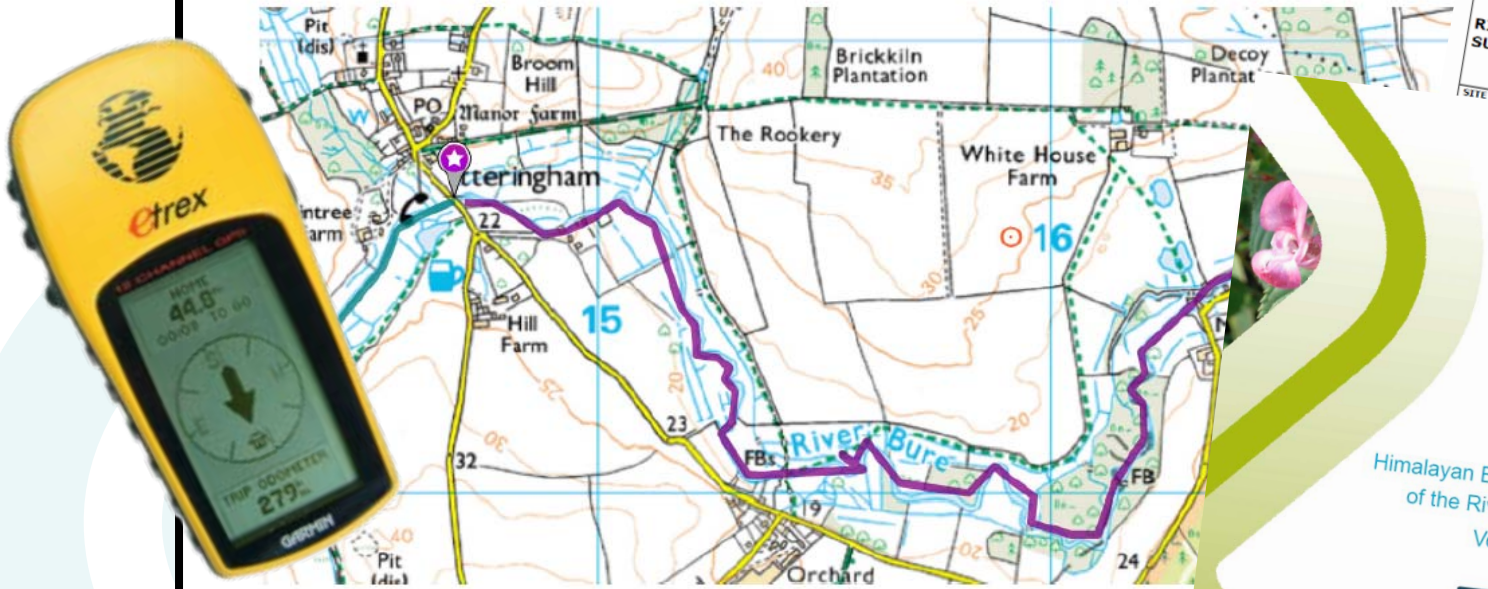
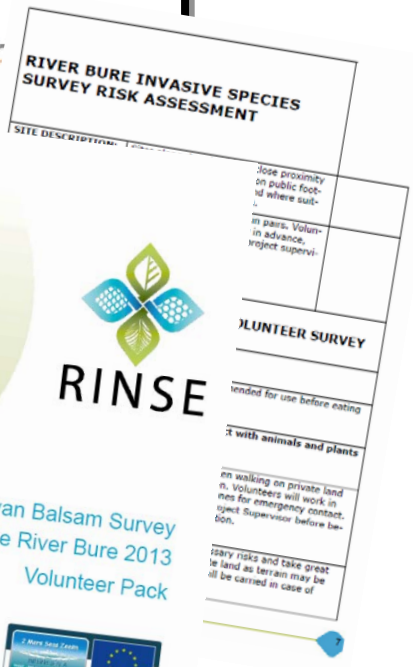
RINSE





Workshop

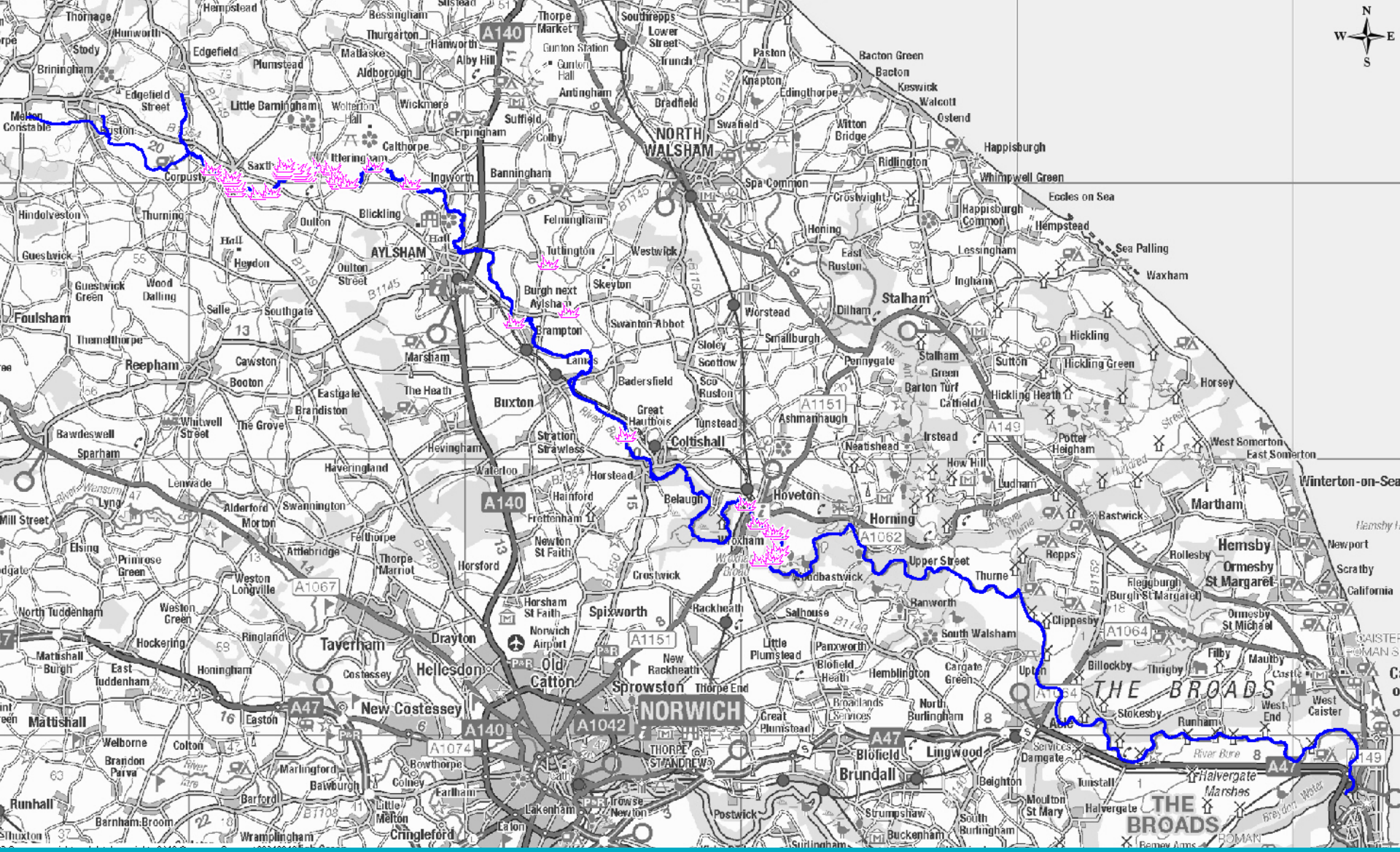
Workshop – Blickling Hall

Introduction to the RINSE Project

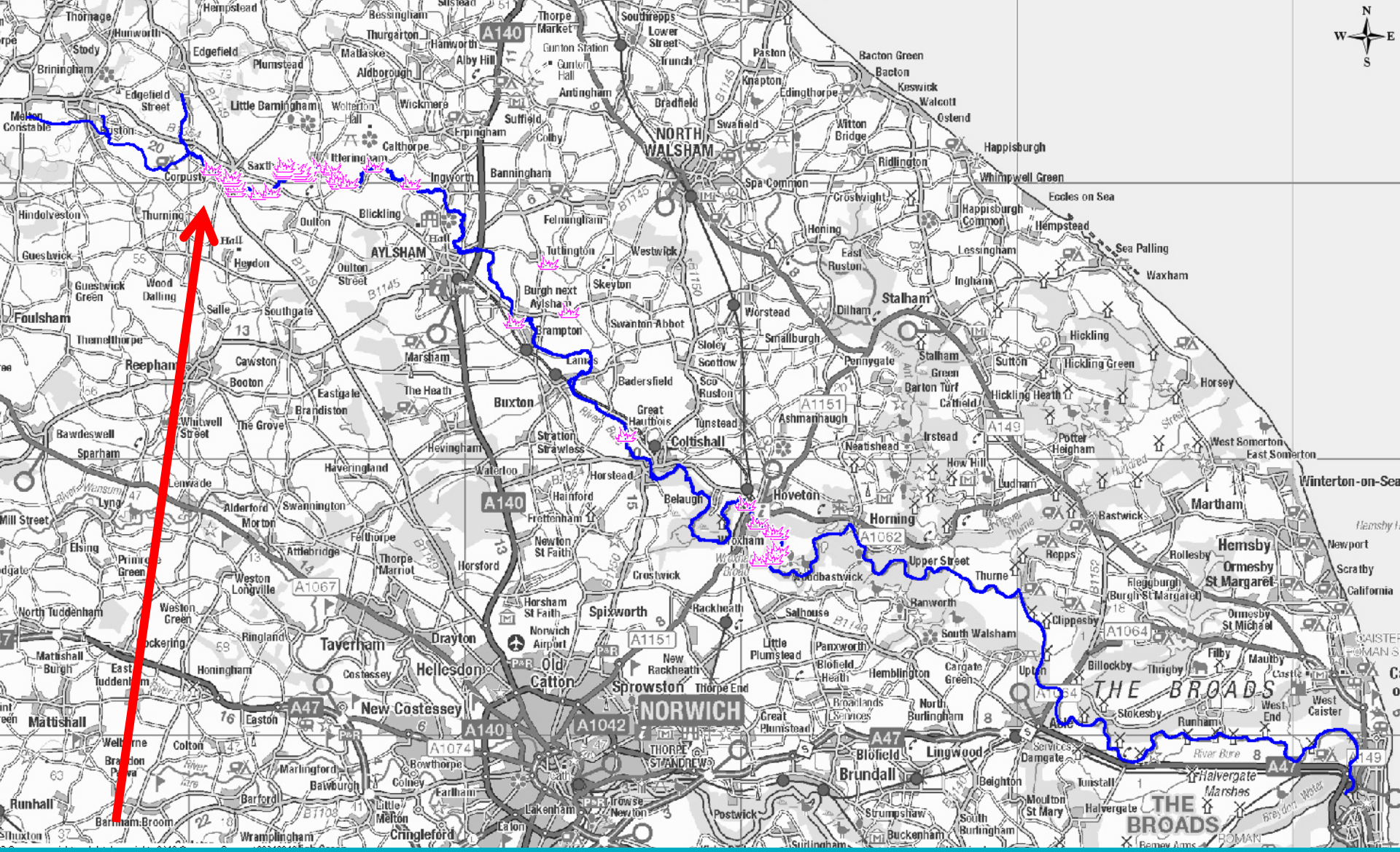
Survey methodology and aims

Identification of invasive plants, Himalayan balsam, Japanese knotweed and giant hogweed

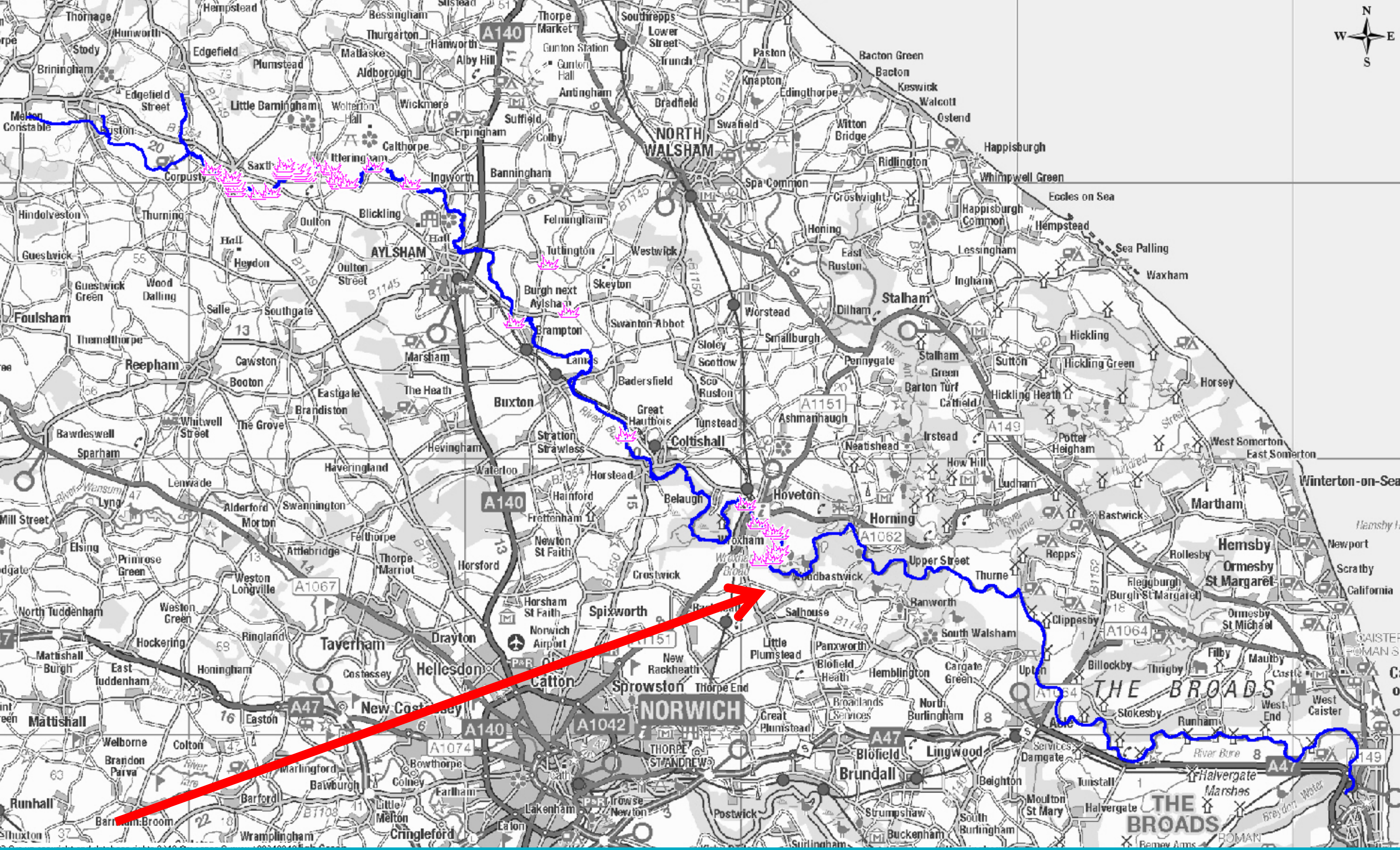
Bob Ellis – native plants



Three hotspots of Himalayan balsam were identified along the River Bure: Corpusty, Itteringham and Wroxham Broads.



The results of this study identified Corpusty to be the uppermost point of introduction and therefore the source of the plant for the whole river.



Below Wroxham Broads, Himalayan balsam was not found on either side of the River Bure and therefore it can be assumed the plant has yet to disperse this far downstream.

Feedback

RINSE

RINSE River Bure Survey 2013

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Bure Himalayan Balsam Survey

rom this survey has highlighted three significant
Himalayan Balsam: Corpusty, Itteringham and
Wroxham Broads.

ons

a river system, Himalayan Balsam's primary dispersal pathway is
refore it is vital to target infested areas in the upper catchment to
d (Dawson & Holland, 1999). The recommendations are as follows:

is study identify **Corpusty** to be the uppermost point of introduction.
gy of Himalayan Balsam and the potential dispersal of its seeds
ure eradication efforts should be focused at the source of the plant.

Broads, Himalayan Balsam was not found on either side of the River
therefore it can be assumed the plant has yet to disperse this far
erefore a priority for future work should be to halt the infestation at
ds preventing future colonisation. However the possibility of
oductions in this area should not be ignored, increasing the need for an
ing network within the catchment.

local community at **Corpusty** suggests that the Himalayan Balsam
shed there within the last year. The implication of this would be a
bank making control efforts more effective in the short term.

ons of Himalayan Balsam, and the current knowledge of its dispersal
ught the **source** came from within **Corpusty**; likely spreading from a
ch lies adjacent to the Bure. Therefore it is recommended that future
n effort to engage the local community in Corpusty, raising awareness
lsam and its impacts on the local environment.

Feedback

RINSE

Norfolk Non-native Species Initiative

Feedback

RINSE

Invasive Species in the Broads

Tuesday 25th March, 6.30pm—8.30 pm

Erpingham Arms, NR11 7QA

The evening will begin with 3 brief presentations highlighting some the most common invasive species encountered in the farmed environment of the Broads, and how these can be managed to reduce their impacts. This will be followed by a light buffet and an opportunity to speak to invited experts about particular issues in more detail. There will also be a number of displays about invasive non-native species, including live examples of some of the worst species.

Guest speakers include:

David Hooton (Deer Initiative)

An update on the status of non-native deer in the Broads and options for their management

Simon Baker (formerly of the Coypu Research Laboratory)

Lessons learnt from the coypu eradication programme, and how these influence the new Norfolk Mink Control Strategy

Mike Sutton-Croft (Norfolk Non-native Species Initiative)

Invasive plants in the Broads

Booking is essential.

To book your place please call 01603 222765 or e-mail NNNSI@norfolk.gov.uk

Workshop in association with:

Broads Authority
The Broads - a member of the National Park family

Broadland Catchment Partnership

Norfolk Non-native Species Initiative

"Investing in your future"

RINSE

Japanese knotweed

Fallopia japonica

Species Profile:

Origin: Asia

UK Distribution: Widespread

Habitat: Damp environments, along watercourses

Pathway: Introduced as ornamental plant in 19th century

Reproduction: Solely v from fragments of rhizor

Legislation:

Wildlife and Countryside Act 1981
Schedule 9

Environmental Protection Act 1990

PHYSICAL

NOTE: DUE TO ITS VEGETATIVE REPRODUCTION STRATEGY, A CUTTING METHOD WHICH PRODUCES MINIMUM FRAGMENTATION IS RECOMMENDED.

TAKE CARE TO ENSURE EQUIPMENT

Japanese knotwe

Eradication of this s

There is no obligation if this spec

Cutting the plant will **reduce root growth** and **increase leaf production**. **Digging** the infested soil will bring the **root** system to the **surface** and stimulate the plant to grow a **high density** of **canes**. Both of these leave the plant more **vulnerable** to **herbicide** treatment.

The plant should be **cut cleanly** at the **base of the stem**.

The **cut canes** should be **left to dry** out **on-site** on a **hard surface**.

This **cutting** and **digging** combination should take place **four times a year:**

1st cut and dig – when the **first shoots appear**

3rd cut and dig – **spaced** out between 1st and 4th

nd dig – **before** the **dies back** in the **autumn**

hod will be **required** **ly** for **three years.**

Japanese knotweed

Fallopia japonica

Shield-shaped leaves with a flat base

Zig-zag stem

Photo Credit: Snowdonia National Park Authority

Large thick roots

Photo Credit: ivm

Photo Credit: GBNNSS

Purple-speckled bamboo-like stems

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American mink

Mustela Vison

Species Profile:

Origin: North America

UK Distribution: Widespread, except Northern Scotland

Habitat: Aquatic environments, along watercourses

Reproduction: Breeding takes place between late February and early April producing an average of 5.8 young per litter.

Photo Credit: Peter Trimming

Introduced into Europe as part of the fur trade with over 3500 farms across Europe.

The species is now widely naturalised present in over 28 European countries.

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American mink and the European water vole

In 1990, populations had been lost from 75 % of sites occupied in 1939.

In 1998, populations had been lost from a further 67.5 % of occupied sites.

A total population decline of 88 % in Great Britain alone


Photo Credit: Peter Trimming

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American mink and Norfolk

The distribution of European water vole across Norfolk from 1997-2005.

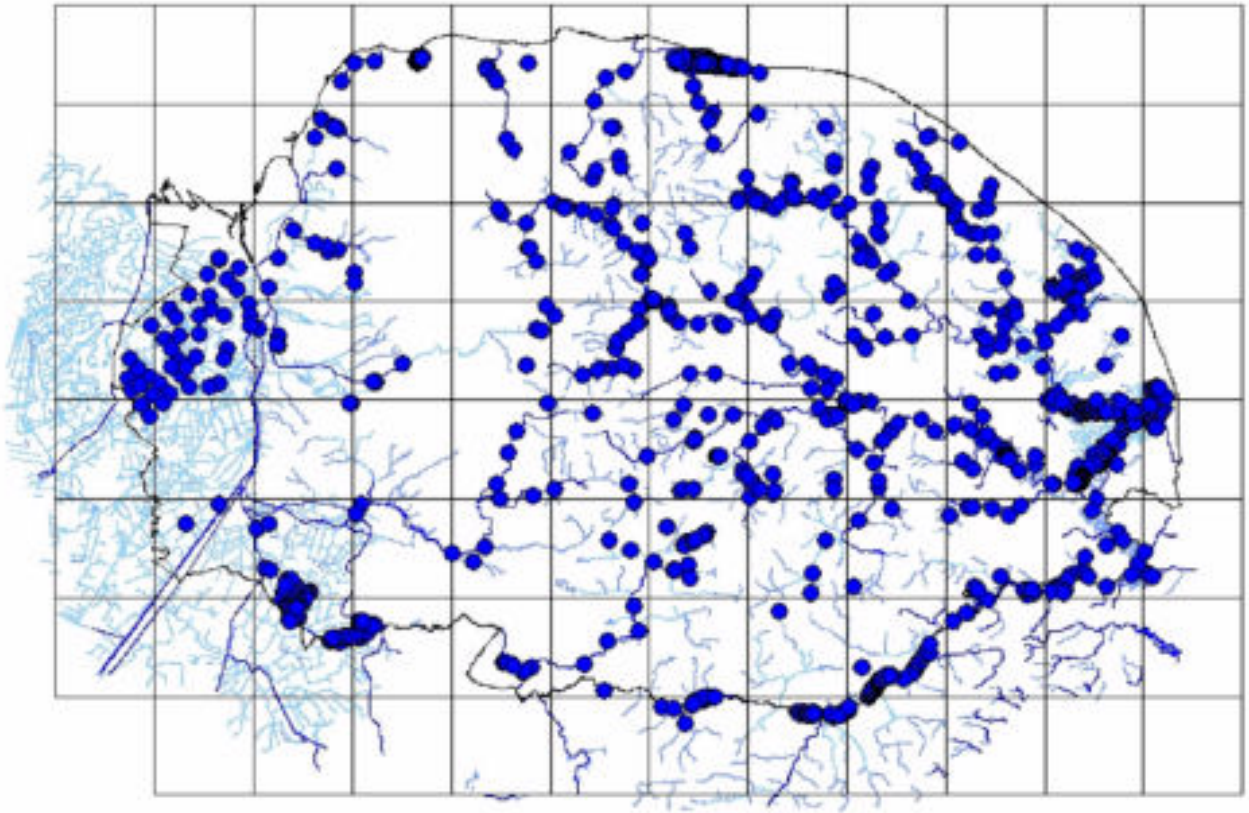

Photo Credit: Norfolk Biodiversity Partnership

The Norfolk Mink Project

RINSE

- Began 10 years ago, with control focussed on the River Wensum SAC.
- Emphasis was put on ‘water vole conservation’ rather than ‘mink control’.

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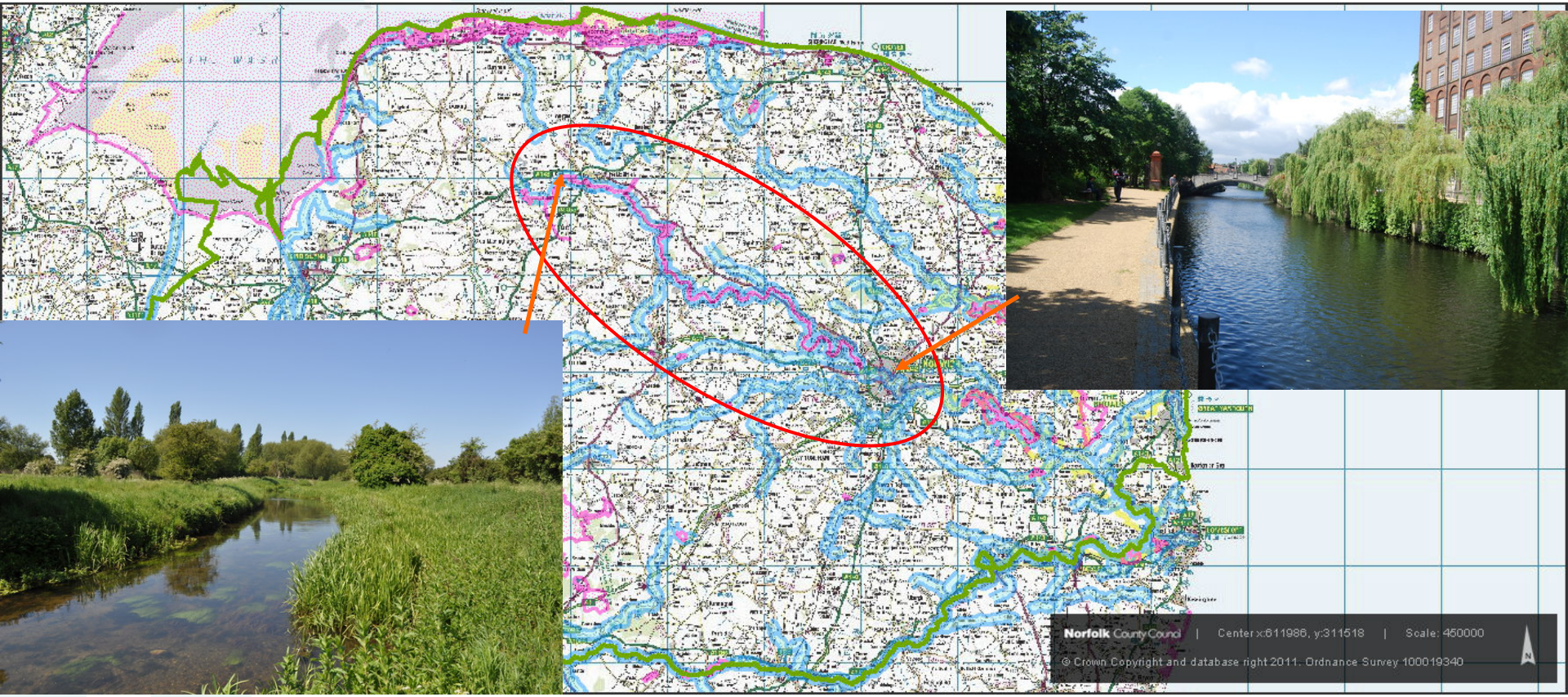
River Wensum SAC



The Norfolk Mink Project

- The project aimed to establish a self sustaining network of volunteers, who would monitor the mink population and trap them as required.
- Many large Estates on the river were already trapping mink, due to their impact on wildlife and **game bird numbers**.

Mink Trapping

Mink Trapping

Photo Credit: GWCT

Mink Trapping

This method of mink control has a number of benefits

- **Scaled-down Trapping**
- **Increased Efficiency**
- **Feedback and Motivation**
- **Reduced capture of non-target species**

Photo Credit: GBNNSS

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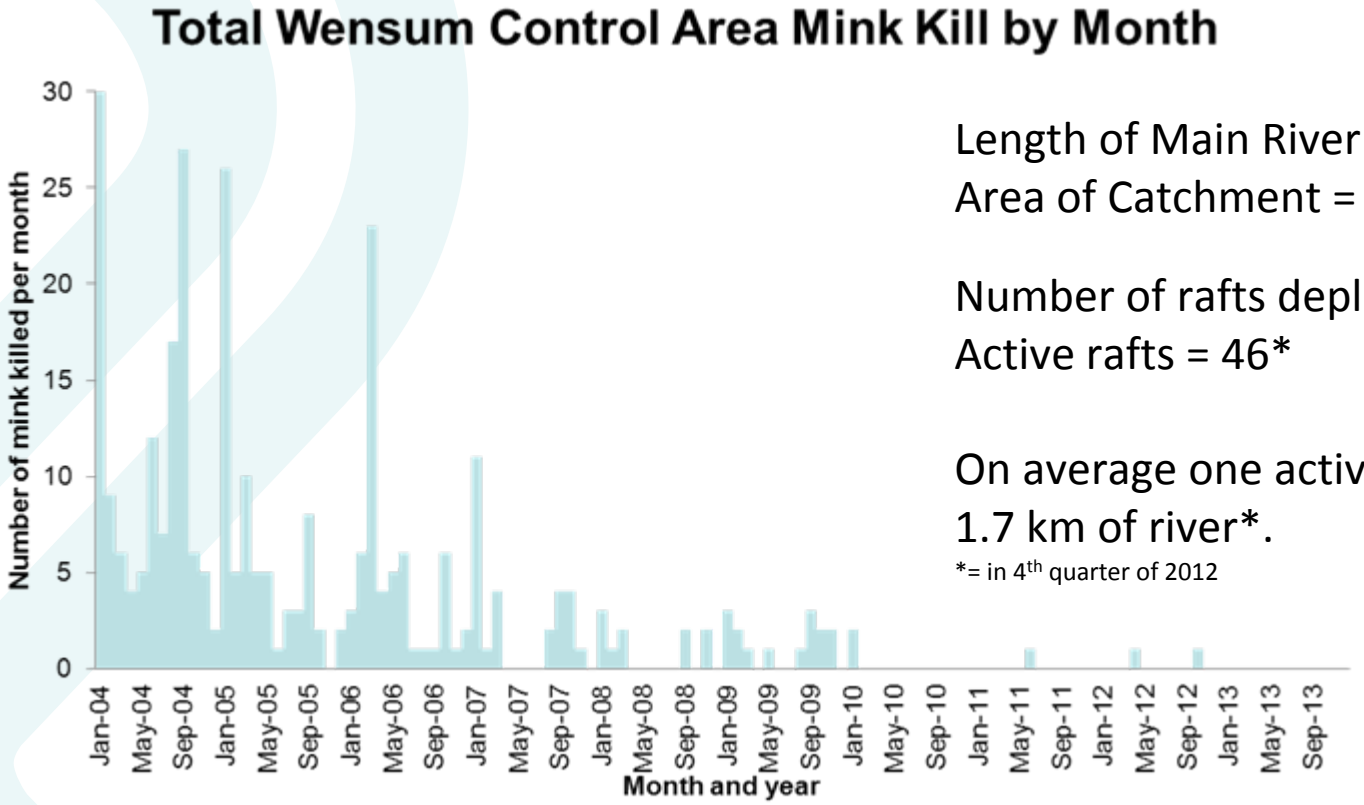
Recruitment

How effective has the project been?

How effective has the project been?



Length of Main River = 78 km
Area of Catchment = 650 km^2

Number of rafts deployed = 75*
Active rafts = 46*

On average one active raft per 1.7 km of river*.

*= in 4th quarter of 2012

The Norfolk Mink Control Strategy

- Between 2003 and 2010 the project was managed by three different organisations.
- No overarching strategy or aim for the project.
- Expansion was piecemeal as funding became available.

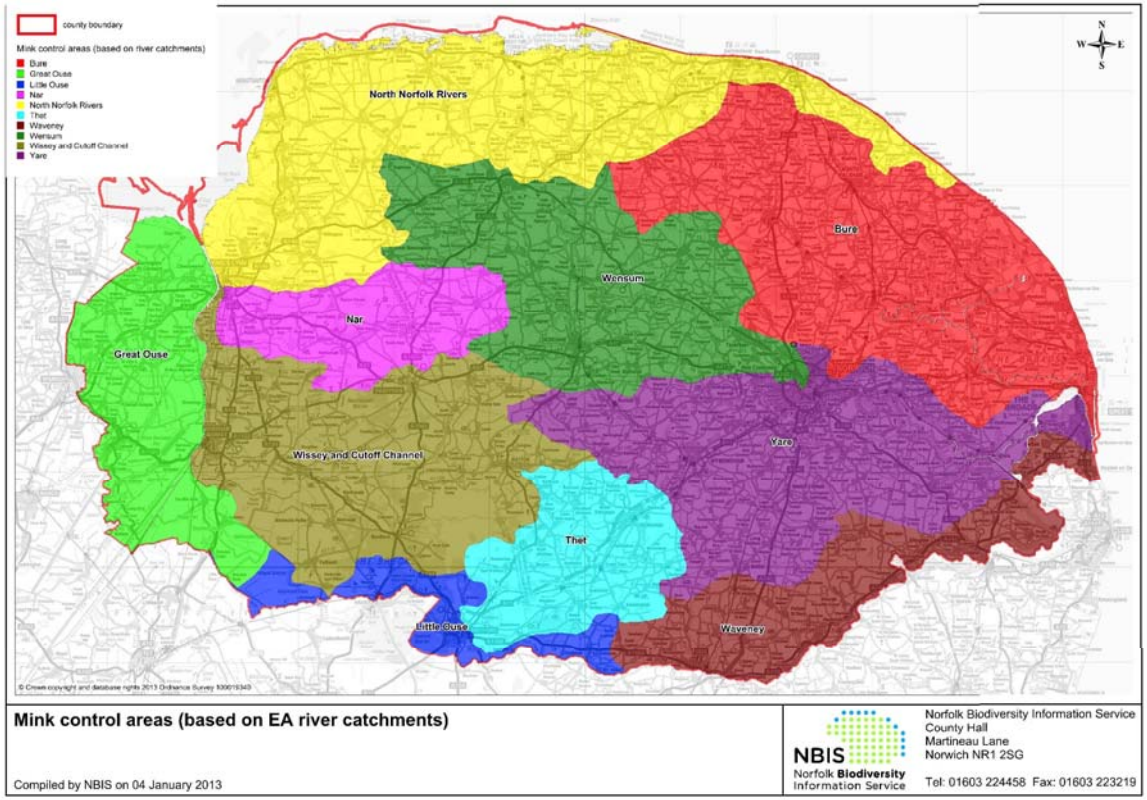
The Norfolk Mink Control Strategy

- The Norfolk Non-native Species Initiative (part of Norfolk County Council) took over management of the mink projects in 2011.
- Simon Baker was made Chair of the Mink Projects' Steering Group in 2011.

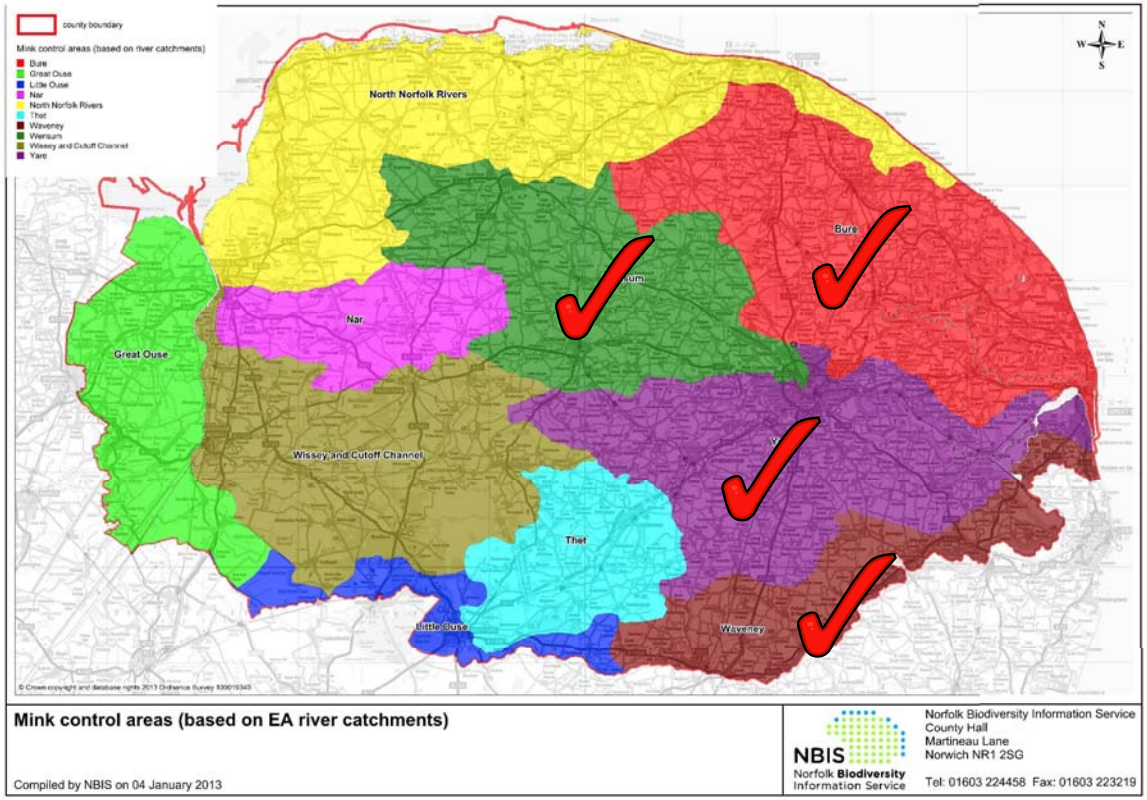
The Norfolk Mink Control Strategy

- Simon was commissioned by the NNNSI to produce a new Strategy for the control of American mink.
- A Strategy for the whole of Norfolk with a realistic aim:
  - Reduce mink density to extremely low levels throughout the county, with localised eradication where possible.

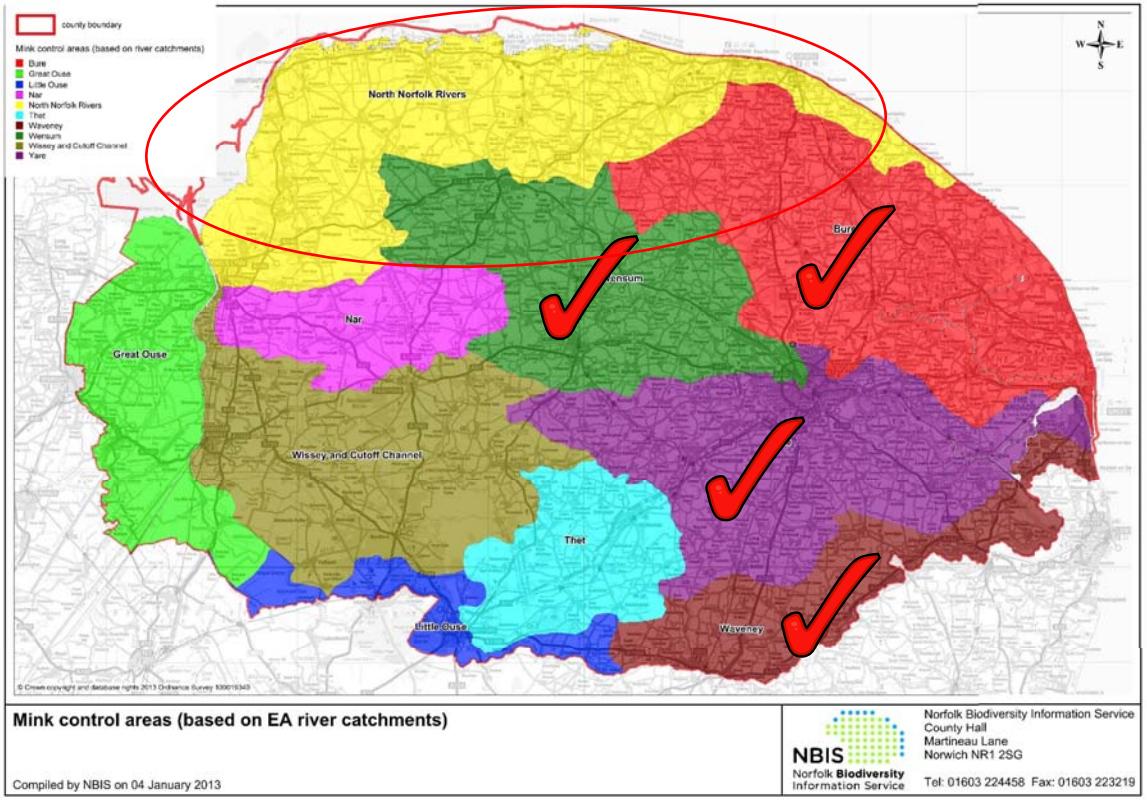
The Norfolk Mink Control Strategy



The Norfolk Mink Control Strategy



The Norfolk Mink Control Strategy



Progress to date

- 30-40 volunteers are involved with the project so far.
- The local community is supportive – no opposition at all!
- Although Game Keepers perceive the threat from mink to be low, they are still keen to participate.

Challenges

- All volunteers perceive the number of mink to be low – is this true or just because people haven't been looking?
- One major NGO are hesitant about becoming involved due to potential adverse publicity and conflict. Currently consulting Research Team.

Challenges

- Strong interest from fishermen – although in Norfolk otters are increasingly thought to be more problematic than mink (!?)

Lessons learnt…

- The volunteer trappers respond well to direct personal contact or phone. If you e-mail them forms asking for information you won't get anything back!
- The rafts don't work well in small rivers… perhaps use tunnels on the bank side, as has been done in the Scottish Highlands?
- Norfolk wide co-ordination is welcome.

Image Credits

- Himalayan balsam – GBNNSS
- Himalayan balsam - GBNNSS
- Balsam seed pods – Albert Bridge
- River Bure – Evelyn Simak
- River Bure – Ray Sullivan
- River Bure – Alexi Francis
- River Bure – Evelyn Simak
- Himalayan balsam – GBNNSS
- Himalayan balsam – Brian Clarke
- Balsam bashing - NNNSI

RINSE

For more information, please visit:

www.rinse-europe.eu

Contact the Lead Partner:

RINSE Project Co-ordinator – melanie.gillings@norfolk.gov.uk

RINSE Technical Co-ordinator – michael.sutton-croft@norfolk.gov.uk

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