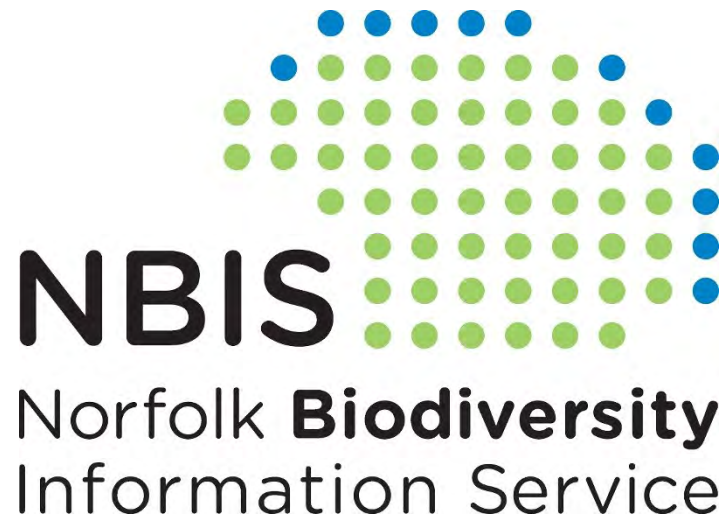


# SOUTH YARE WILDLIFE GROUP

## STATE OF THE NATURAL ENVIRONMENT REPORT



Norfolk Biodiversity Information Service (NBIS) is a Local Record Centre holding information on species, geodiversity, habitats and protected sites for the county of Norfolk. For more information see our website: [www.nbis.org.uk](http://www.nbis.org.uk)



This report is available for download from the NBIS website [www.nbis.org.uk](http://www.nbis.org.uk)

Report written by Danielle Engelbrecht, September 2017

#### Acknowledgements

The author would like to thank the following people for their help and input into this report: Tim Holt-Wilson (Norfolk Geodiversity Partnership), Reg Land (South Yare Wildlife Group), Peter Armitage (Hellington & Rockland St. Mary Community Reserve Committee Member) and Samuel Neal (Norfolk Biodiversity Information Service).





Common spotted orchid at Wheatfen  
© Lizzy Oddy

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## **FOREWORD—*Reg Land***

This report presents a snapshot of the state of the natural environment in the 24 parishes that make up the South Yare Wildlife Group's area. The report provides a valuable introduction to the area's land use, habitats and wildlife and the current attempts to protect and manage this valuable heritage.

The report will provide a baseline that will enable us to judge the success or otherwise of our future efforts to protect and enhance the area for wildlife and people given the many challenges and opportunities that lie ahead.

There are many threats to our wildlife ranging from water and air pollution to agricultural intensification and climate change. But there are opportunities. Support for landowners to manage their land sympathetically and numerous groups and individuals working to protect wildlife in their community can all make a difference in conserving our natural heritage.

There have been many changes in the area in just the last few years. Turtle doves and cuckoos have nearly disappeared but little egrets have colonised. Pollinating bees are in decline but new species of dragonfly and damselfly are colonising as the climate changes.

The members of the South Yare Wildlife Group are trying to do their bit to protect the area's wildlife. From managing important wildlife sites to enthusing young and old about the area's wildlife and the need to take action to protect it. Many other groups are also doing their bit and their efforts are highlighted in this report.

Doing your bit can be fun. The Group's Wild Patch initiative has a serious objective – to make more space for wildlife – but taking part can be fun and involve the whole family.

After reading this report we hope you will be inspired enough to help secure the future for wildlife in this area.

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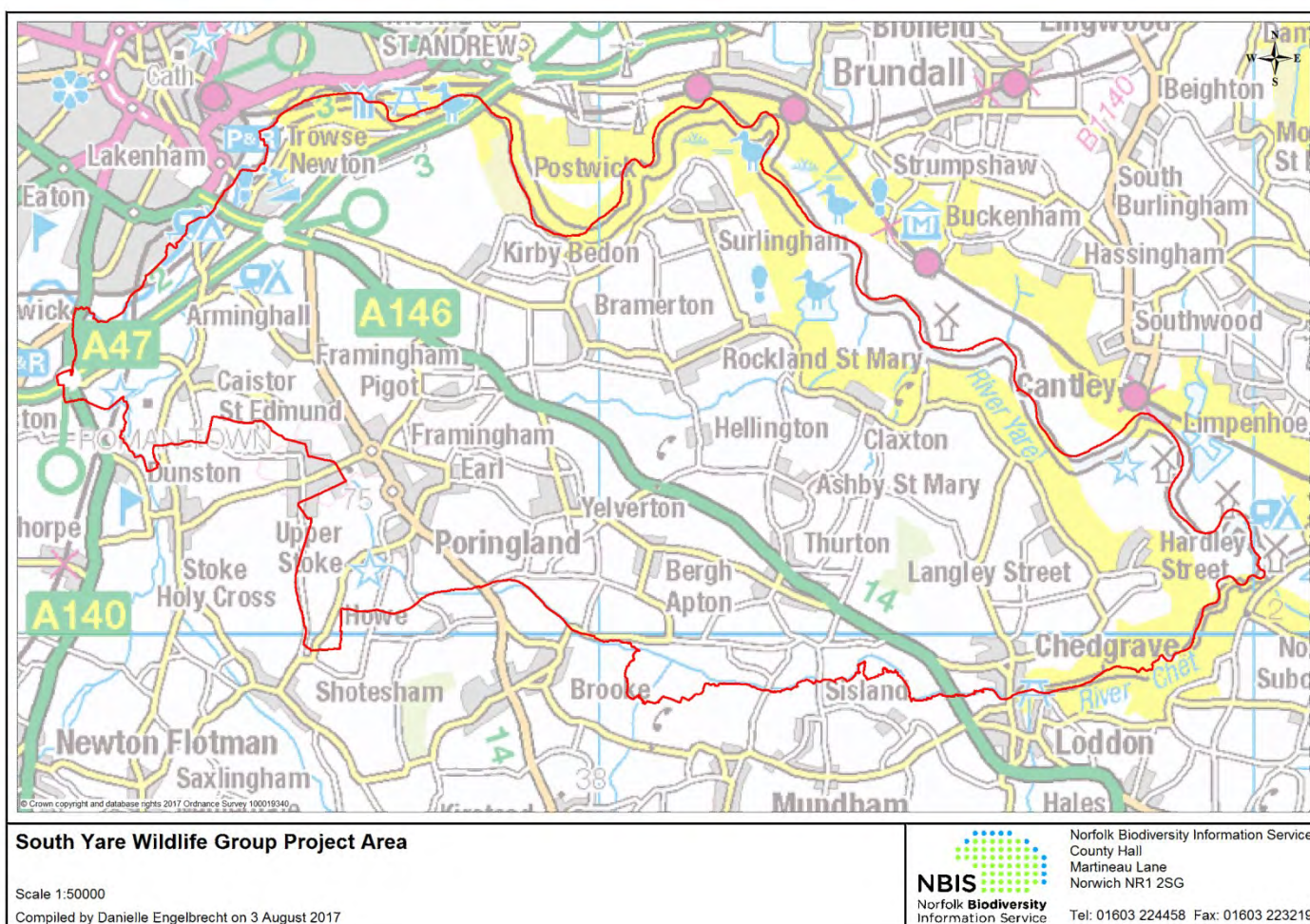


## WELCOME

The South Yare Wildlife Group covers the area of Norfolk immediately to the south east of Norwich bounded by the River Yare to the north and east, the River Chet to the south and River Tas to the west, covering **9864 hectares**. The boundary covered in this report can be seen on the map below.

This report is written by Norfolk Biodiversity Information Service (NBIS) with contributions from people involved in the South Yare Wildlife Group. It brings together key information about the environment of the South Yare Wildlife Group Area, showcasing the important sites, species, habitats, geology and historic features of the area. It aims to inform, inspire and enthuse local people like you to help protect and enjoy the area's wildlife. The data included provide an important baseline to be compared against in the future and show how the environment of the South Yare Valley Group Project Area is changing.

If, after reading this State of the Environment Report, you want to find out more about particular aspects of the South Yare Wildlife Group Area environment, useful web links are provided on page 47 for further information.





## GEODIVERSITY - *Tim Holt-Wilson*

An area's geodiversity is effectively a physical record of its environmental history as well as the setting for wildlife habitat. The Norfolk Geodiversity Audit has identified 19 sites and features of geodiversity interest within the South Yare area. They span 75 million years of Earth history, including the Cretaceous and Pleistocene epochs. Geodiversity is the non-biological aspect of nature – often overlooked – and comprises the rocks, sediments, fossils, soils, water, landforms and active geomorphological processes, such as erosion and deposition, which compose the landscape. Its historical depth provides inspiration and its physical presence underpins our sense of place.

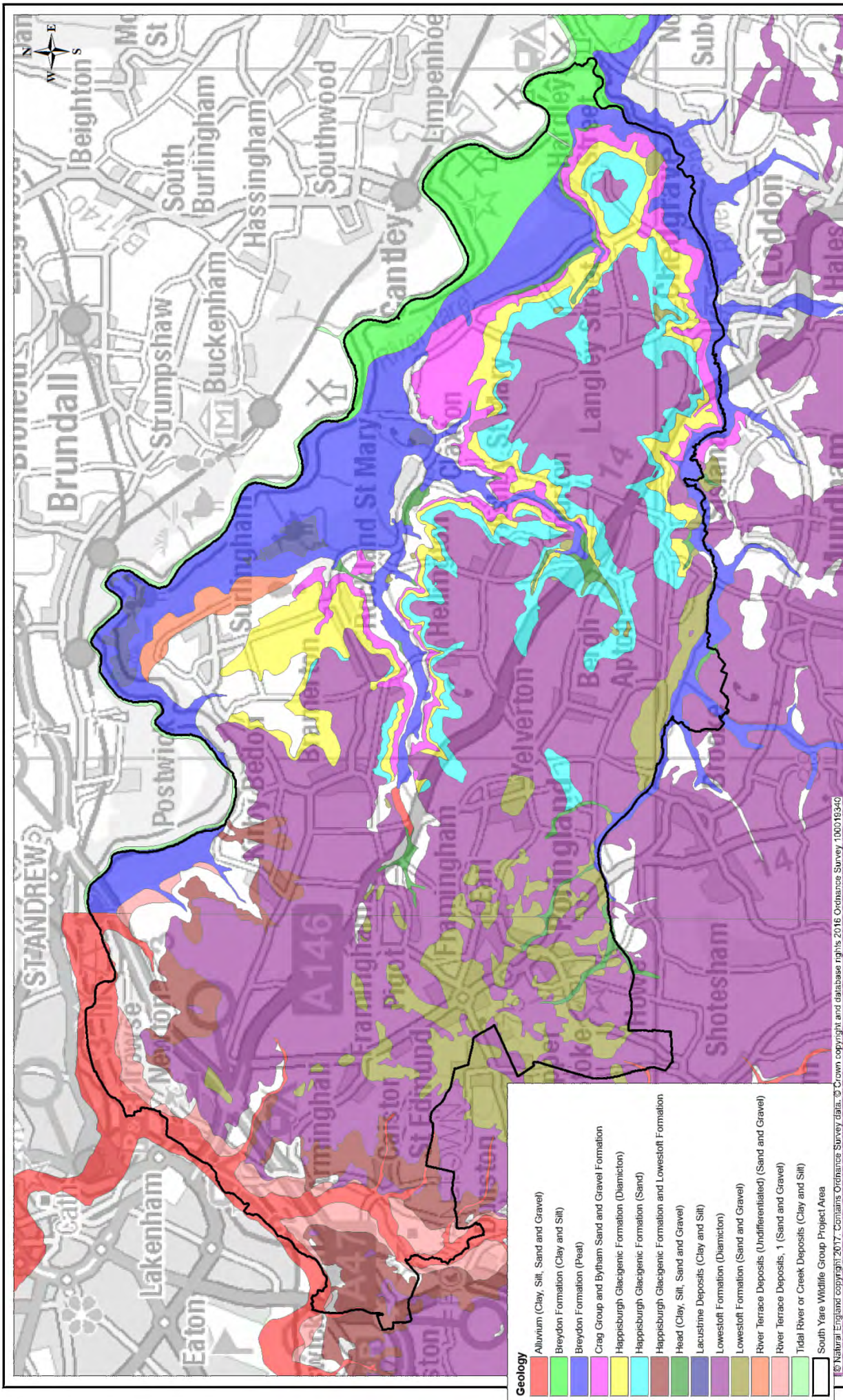
### Introduction

The South Yare area's gently undulating landscape is founded on a plateau of glacial deposits (till, silts, sands and gravels) mostly dating from the Anglian glaciation (c.440,000 years ago); some date from a slightly earlier 'Happisburgh' glaciation. These deposits were laid down over marine sands, gravels and clays of the Norwich Crag (c.2 million years ago) and Wroxham Crag (c.1 million years). They give the area its sandy and loamy soils. The Yare and other valleys are developed upon this sediment stack, and the Yare in particular has incised so deeply that it has reached the underlying Cretaceous chalk bedrock (about 75 million years old). Thus the Chalk, Crag and glacial deposits are the foundations of the area and the diversity of its Earth heritage. The Pleistocene deposits mark a shift from marine conditions, when the area was part of the western North Sea, followed by a period of land uplift and then the arrival of the Middle Pleistocene ice sheets. The northern side of this area is defined by the Yare valley; 2,000 years ago it was a branch of the former Great Estuary which extended upstream as far as Trowse. A sequence of marine and freshwater alluvial deposits of Holocene age (dating from the end of the last ice age, c.10,000 years ago) fill the floor of the Yare valley, and underlie the expanse of broads, fens and grazing marshes here today. The edge of the marshes effectively marks a former coastline about 2,000 years ago.



Carleton Beck flows into the marshes, once part of the Great Estuary





### Geology

For The South Yare Wildlife Group Project Area

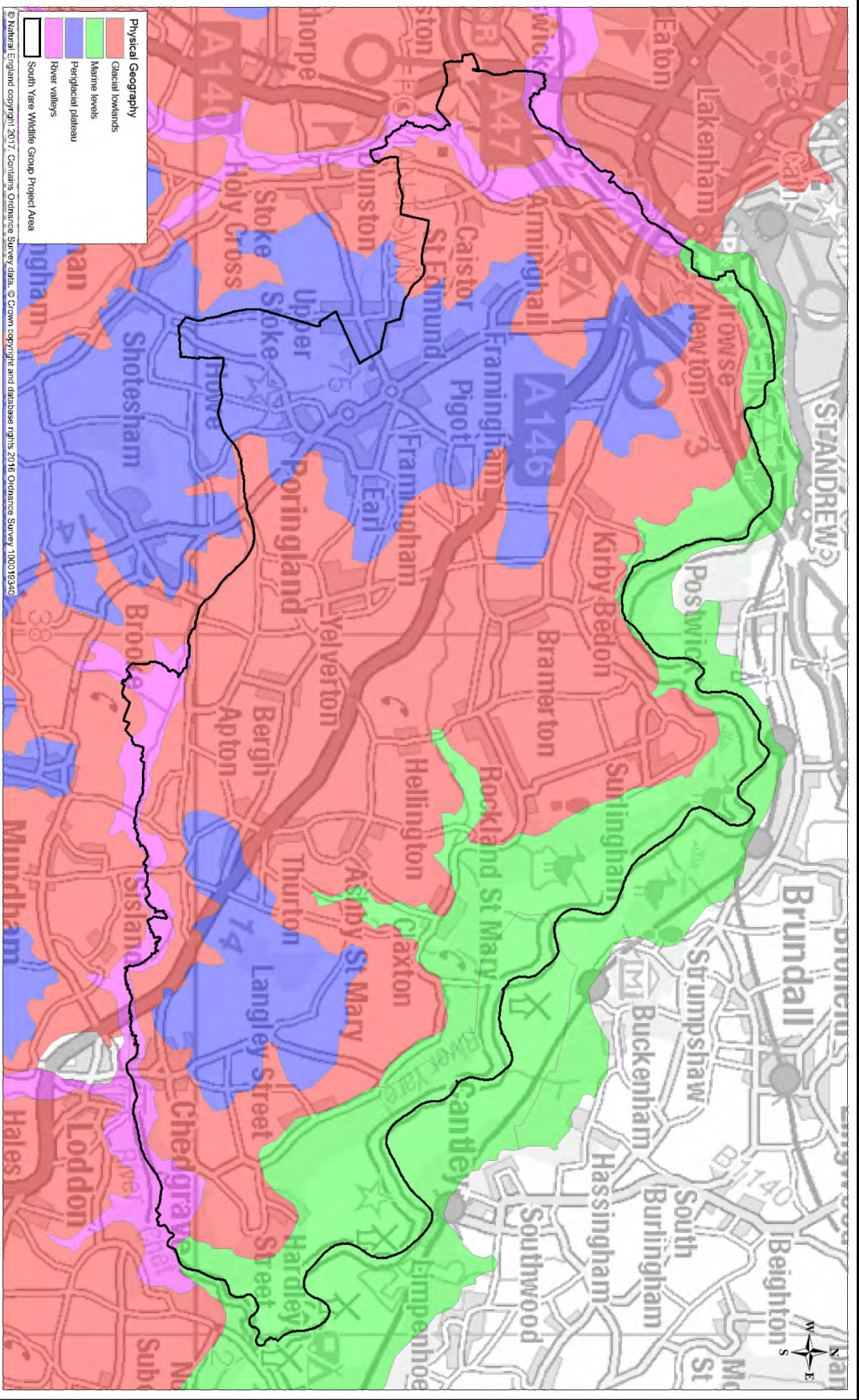
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Compiled by Danielle Engelbrecht on 9 August 2017

**NBIS**  
Norfolk Biodiversity  
Information Service

Norfolk Biodiversity Information Service  
County Hall  
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Norwich NR1 2SG  
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## Physical Geography

For The South Yare Wildlife Group Project Area

Scale 1:50000

Compiled by Danielle Engelbrecht on 9 August 2017

## GEODIVERSITY SITES

The Norfolk Geodiversity Audit has identified 19 sites of interest in the area which are important for explaining the area's environmental history; some of them are nationally significant, and some are Candidate County Geodiversity Sites.

Here is a selection, some of which are on publicly accessible land:

Name	Summary of Site and Geological Interest
Arminghall Pit	Disused Chalk Pit - Cretaceous Chalk
Blake's Pit (Bramerton Pits SSSI)	Disused Sand Pit - Norwich Crag
Bramerton Common Pit (Bramerton Pits SSSI)	Disused Sand Pit - Norwich Crag
Caistor St Edmund Chalk Pit SSSI	Working Quarry - Cretaceous Chalk & Pleistocene
Colman's Pit	Disused Chalk Pit - Cretaceous Chalk & Pleistocene
Crown Point Pit	Disused Chalk Pit - Cretaceous Chalk
Framingham Earl Gravel Pit	Disused Sand and Gravel Pit - Pleistocene
Lafarge Gravel Pit	Landscaped Former Gravel Pit - Pleistocene
Low Common Pit	Disused Sand Pit - Norwich Crag
Poringland Wood Pit	Disused Sand and Gravel Pit - Pleistocene
Raking Pit	Disused Sand, Gravel and Clay Pit - Pleistocene
St Andrew's Church Pit	Disused Chalk Pit - Cretaceous Chalk
Trowse Lime Pit	Disused Chalk Pit - Cretaceous Chalk
Whitlingham Lime Kiln Pit	Disused Chalk Pit - Cretaceous Chalk & Kiln
Whitlingham Sewage Works	Former Excavation Site - Cretaceous Chalk
Whitlingham Sewage Works Pit	Landscaped Former Gravel Pit - Pleistocene & Palaeolithic

## Chalk geology

### Caistor St Edmund Chalk Pit SSSI – NGR TG238048

An active lime quarry designated as a SSSI for its nationally important exposures of the Cretaceous Chalk of the Campanian Stage (Beeston Chalk sub-division), with fresh exposures showing large, cylindrical 'paramoudra' or potstone flints and abundant fossils. The chalk is overlain by about 19m of Norwich Crag sediments, including an upper layer of Wroxham Crag. The basement bed of the Crag rests directly on chalk bedrock, and so provides a fascinating section through an early Pleistocene seabed perhaps 2 million years old.



A flint paramoudra or potstone from Caistor Pit







### **Colman's Pit, Whitlingham – NGR TG267077**

A former chalk quarry excavated into the side of the Yare valley, with two disused lime kilns on site. Chalk was excavated and exported via a staithe beside the river. It is a former SSSI designated for its exposure of Cretaceous Chalk of the Campanian Stage (Paramoudra Chalk sub-division). The site is overgrown, but flint bands and a 'paramoudra' flint cylinder can still be seen, and some overlying beds of Norwich Crag and Wroxham Crag. The site would benefit from removal of talus and vegetation to allow more geology to be seen.

## **Crag geology**

### **Bramerton Pits SSSI – NGRs TG298061 and TG299061**

Blake's Pit and Bramerton Common Pit are a pair of old sand, gravel and clay pits developed in the north-facing slopes of the Yare valley. They are jointly designated as a SSSI for their value in explaining life and the environment in the early Pleistocene. Blake's Pit is the type site of the Bramertonian Stage (c.2 million years), and studies of fossil pollen, foraminifera and mollusca have provided evidence for changes from temperate (Bramertonian) to cold (Pre-Pastonian) climatic conditions. Common Pit is the type site of the Norwich Crag Formation, and its sequence of clays and shelly sands is important for demonstrating changes in the vertebrate fauna in this period. These sites are close to the Wherryman's Way trail.

### **Rockland Low Common Pit – NGR TG320036**

A small sand pit begun in the 19th century for local use, now occupied by bracken and oak trees. The site is interesting for its exposure of distinctively glittering micaceous clay of the Norwich Crag. Lying on top of this unit is glacial till (boulder clay) of the Happisburgh Formation, a deposit dating from a glaciation earlier than the Anglian and which underlies wide areas of eastern Norfolk.



Chalk strata with a flint band, overlain by Norwich Crag sands at Whitlingham



Marine sands and clays of the Norwich Crag at Blake's Pit, showing current bedding typical of seabed dune activity. © Dr Peter Riches.

## **Ice age geology**

### **Caistor St Edmund Raking Pit – NGR TG256035**

An example of a former parish clay pit or 'stone pit' used for extracting materials for making up local roads. Its management was vested in the Surveyor of Highways under an Enclosure Award of 1805. Its geology is attributed to the Lowestoft Formation, with sands, gravels and clays deposited by the ice sheets of the Anglian glaciation. The site is now a parish amenity and wildlife area with a deep pond.

### **Framingham Earl Gravel Pit – NGR TG265029**

A disused quarry with sediments dating back to the Anglian glaciation. Although overgrown, this is a good site to see coarse glacial cannon-shot' gravels deposited by torrential meltwaters. They overlie till (boulder clay) of the Lowestoft Formation, and so represent a retreat phase of the Anglian ice sheet. Interestingly, a Palaeolithic handaxe was found at this site in 1964. The site is now a public amenity area. Refreshing the gravel exposures would benefit wildlife as well as the geoconservation interest.





### **Whitlingham Sewage Works Pit – NGR TG281073**

An arable field south of the sewage works is the site of a gravel pit backfilled in the mid 20th century.

This was one of the most important findspots for Palaeolithic flint tools in East Anglia. Discovered in the 1920s, it yielded more than 200 Acheulian hand-axes, some in primary context, i.e. where they were made. The tools were found in river gravels resting on Norwich Crag sand. It is likely that our ancestors, probably *Homo*

*heidelbergensis*, were exploiting upstream sources of raw flint originally eroded by the river from the chalk of the valley sides. The Wherryman's Way trail passes nearby. An interpretation panel could help communicate the site's significance.

### **Poringland Wood Pit – NGR TG264034**

A small disused quarry with sediments dating back to the Anglian glaciation, excavated for sand, gravel and brickearth (silty clays). The surrounding woodland clearly shows the linkage between soil type and vegetation, with sandy soils marked by bracken and clayey soils by dog's mercury. The site is now a public amenity area.

### **Lafarge Gravel Pit, Whitlingham Lane – NGR TG256076**

A former gravel pit with a complicated geological sequence, now used as a camp site. The geology once showed a variety of sands and gravels, thought to be Norwich Crag and Wroxham Crag overlain by river gravels of the Yare valley laid down as a terrace in cold phases of the Pleistocene. A geological exposure has been conserved at its south-eastern corner as part of the site restoration plans. Ice age sands and gravels deposited by the Yare can be seen here, and are much favoured by rabbits for burrowing.



Tim Holt-Wilson,  
Norfolk Geodiversity Partnership  
<https://sites.google.com/site/norfolkgeodiversity/>

The geoconservation exposure at Whitlingham campsite



## LANDSCAPE CHARACTERISATION

The landscape of the project area has evolved as a result of several different factors that have, over vastly different time-scales, affected the structure of the land and determined how humans have managed it.

The physical geography of the area reflects closely the underlying geology. The two dominant landscapes are the river valleys and the gently undulating upland areas. The former comprise the wide valley of the River Yare with its fen and extensive areas of flat grazing marsh. There are two contrasting landscapes in the Yare valley. Firstly, the unreclaimed fenlands, with reeds and open water, where the peat was dug in the Middle Ages to create Surlingham and Wheatfen Broad. Secondly, the reclaimed marshes protected by floodwalls and now grazed by cattle, or even cultivated, downstream of Rockland St Mary. There are also smaller valleys like the Chet and Hellington Beck. These smaller river valleys are often characterised by small, cattle grazed fields surrounded by large hedgerows and occasional flower rich meadows. The western border of the area is marked by the north south River Tas which drains much of South Norfolk.

The higher ground is formed by the glacial till, commonly called boulder clay. The land use is primarily arable farming. This is a landscape of villages and scattered farms with small woodlands, copses and hedgerow, often with large oak trees. The higher ground around Poringland has a different character that again reflects its different geology. Here we have areas of birch woodland and pasture and the area has a heathy character. There are many springs in this area which give rise to the River Chet and Hellington Beck.

Information taken from: [https://www.south-norfolk.gov.uk/sites/default/files/](https://www.south-norfolk.gov.uk/sites/default/files/LUC_2001_Landscape_Assesment_Volume_4_Introduction.pdf)

[LUC\\_2001\\_Landscape Assesment Volume 4 Introduction.pdf](https://www.south-norfolk.gov.uk/sites/default/files/LUC_2001_Landscape_Assesment_Volume_4_Introduction.pdf), [https://www.south-norfolk.gov.uk/sites/default/files/LUC\\_2001\\_Landscape Character Assessment Introduction.pdf](https://www.south-norfolk.gov.uk/sites/default/files/LUC_2001_Landscape_Character_Assessment_Introduction.pdf)



Claxton Church and straw bale © Kaarin Wall

## IMPORTANT SITES

Did you know that there are sites within the South Yare Wildlife Group Area that are important for their wildlife or geology at a county, national or even international level? These sites are crucial for the conservation of rare plants, animals and geology, and many of them are open to the public allowing you to explore and experience nature for yourself.



### Site Designations

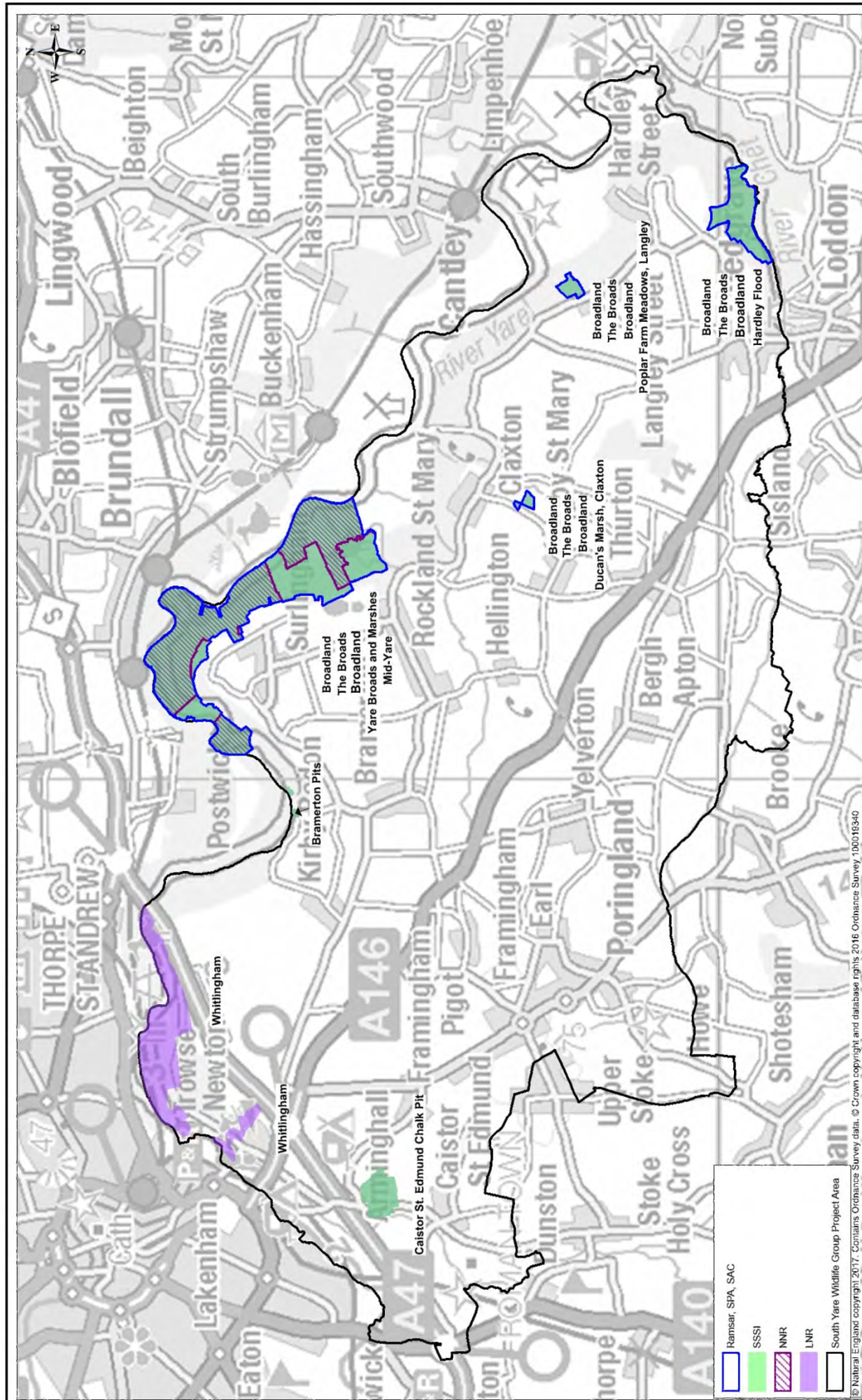
There are a number of designations that a site can be given in the UK, providing different levels of protection. For example, 'statutory sites' are protected by law in the planning process, while 'non-statutory' sites are not, although they are still recognised as important and taken into account in planning. The different levels of designation are summarised below:

Designation		Description
Ramsar Site	Statutory international	An internationally important wetland site, designated under the Ramsar Convention.
Special Protection Area (SPA)	Statutory international	European designation for sites of international importance for birds.
Special Area of Conservation (SAC)	Statutory international	European protected site designated by the UK government. Sites of international importance under the EU Habitats Directive.
Site of Special Scientific Interest (SSSI)	Statutory national	Designated and protected by Natural England as the best sites for wildlife or geology in the country.
National Nature Reserve (NNR)	Statutory national	A site of national importance for nature conservation. Allow scientific research and most have at least some public access.
Local Nature Reserve (LNR)	Statutory local	A site of special nature conservation interest locally, designated by local authorities.
County Wildlife Site (CWS)	Non-statutory county	Sites outside of statutory protected areas but of wildlife importance at a county level.



River Yare © Jeremy Halls and licensed for reuse under this [Creative Commons](#)





## Statutory Sites Within The South Yare Wildlife Group Project Area

Ramsar, SPA, SAC, SSSI, NNR and LNR

Scale 1:50000

Compiled by Danielle Engelbrecht on 18 August 2017



## Case Study: Yare Broads and Marshes

Site Type	Site Name
RAMSAR Site	Broadland
Special Protection Area	Broadland
Special Areas of Conservation	The Broads
Site of Special Scientific Interest	Yare Broads and Marshes
National Nature Reserve	Mid-Yare

The Yare Broads and Marshes SSSI lies on both sides of the River Yare. On the south side there are extensive areas of fen dominated by reed as well as areas of wet woodland at Surlingham Broad and Wheatfen and open water at Rockland Broad. Most of the area is flooded daily by the tidal River Yare which makes this a special area as most other stretches along the river are embanked by floodwalls. The area supports a wide variety of wildlife from breeding waterfowl such as gadwall and tufted duck to reedbed birds such as marsh harrier, grasshopper warbler and Cetti's warbler. Swallowtail butterflies occur along with a wide variety of dragonflies and damselflies such as the Norfolk hawker.

Information taken from <https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1001231&SiteName=Broads&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>



Wheatfen Broad © Reg Land

## SITES OF SPECIAL SCIENTIFIC INTEREST



### SSSI Condition

SSSIs are managed by Natural England who regularly assesses their condition under six categories. SSSIs are owned by private individuals as well as conservation bodies. Natural England is responsible for assessing their conservation condition. Sites may be divided in to smaller 'units' for the purposes of assessing their condition:

**Favourable:** This means the site is being adequately conserved and is meeting its conservation objectives.

**Unfavourable Recovering:** All the necessary management measures are in place on the site and provided that this is sustained, favourable condition will be reached in time.

**Unfavourable No Change:** The site is not being conserved and is in poor, but not worsening condition. The longer it remains in this state the more difficult it is likely to be to achieve recovery.

**Unfavourable Declining:** The site condition is becoming progressively worse and changes to site management or external pressures are needed to reverse this.

**Part Destroyed:** Part of the special interest feature of the site has suffered lasting damage and will never recover.

**Destroyed:** All of the special interest feature of the site has suffered lasting damage and will never recover.

SSSI (and interest)	Condition	Last Monitored
<b>Bramerton Pits</b> (Geological)	This site is split in to two units; both of these units are considered to be in <b>favourable</b> condition.	2008
<b>Caistor St. Edmund Chalk Pit</b> (Geological)	This site is considered to be in <b>favourable</b> condition.	2011
<b>Ducan's Marsh, Claxton</b> (Biological)	This site is split in to two units; both of these units are considered to be in <b>unfavourable recovering</b> condition.	2011
<b>Hardley Flood</b> (Biological)	This site is split in to two units; both of these units are considered to be in <b>favourable</b> condition.	2010
<b>Poplar Farm Meadows, Langley</b> (Biological)	This site is considered to be in <b>favourable</b> condition.	2010
<b>Yare Broads and Marshes</b> (Biological)	This SSSI covers a large area on both sides of the River Yare and is split in to 28 units, of these units: <b>12</b> are in <b>favourable</b> condition <b>8</b> are in <b>unfavourable recovering</b> condition <b>5</b> are in <b>unfavourable no change</b> condition * <b>3</b> are in <b>unfavourable declining</b> condition **	2012, 2013

\*All in the South Yare Wildlife Group Project Area, this includes Surlingham Broad.

\*\* All in the South Yare Wildlife Group Area.

## COUNTY WILDLIFE SITES

**County Wildlife Sites (CWS)** are particularly important sites for wildlife in Norfolk. While not protected by law, they are taken into account in the planning process. There are **32 CWS** in the South Yare Wildlife Group Area. A full list of site names can be found in Appendix 1, Page 49.



### County Wildlife Site Monitoring

County Wildlife Sites are monitored every year to determine what percentage are in Positive Conservation Management. The statistic for each district is reported to central government.

Being in Positive Conservation Management means that a site is actively being maintained or improved for the species for which it is designated as important. Management of sites is often achieved through Agri-environment schemes. Such schemes are run by Defra, and they encourage farmers and landowners to manage their land in a way that provides benefits to the environment alongside the traditional farming outputs such as crops and livestock (see page 29 for more information on Agri-environment schemes).

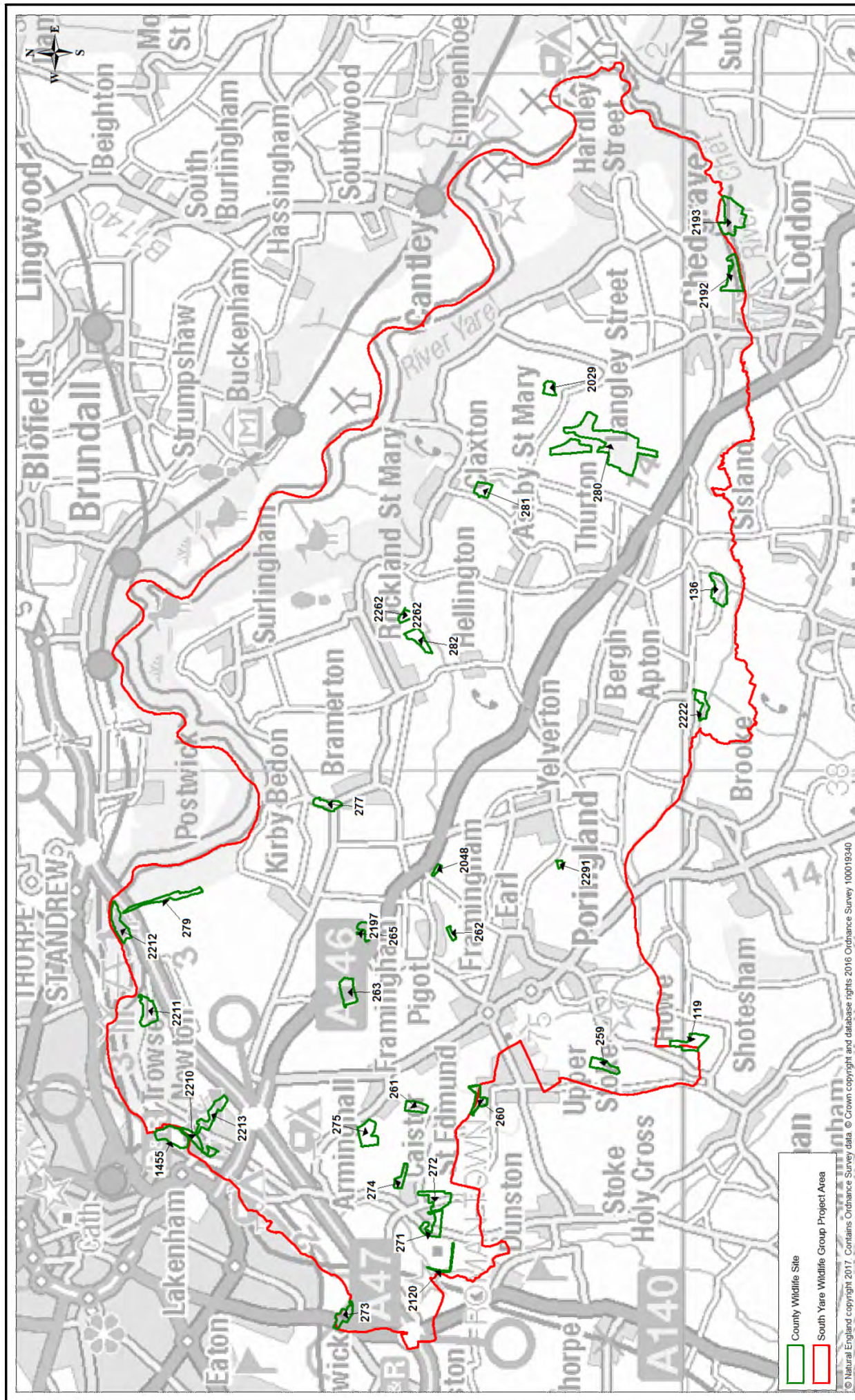
In the reporting year 2014/15, of the 32 County Wildlife Sites within or overlapping the South Yare Wildlife Group Area, 22 of them (68.8%) were in positive conservation management and 9 of them (28.1%) were not. (Figures based on 2014/15 reporting period due to 2015/16 results based on analysis of incomplete data. The next full reporting results will be available in October 2017 and will include the new CWS in the area, current figures are based on the 31 sites that were designated at the time).

### Accessible County Wildlife Sites

Below are some of the County wildlife sites that have a degree of public access, not all CWS are publicly accessible.

County Wildlife Site	Brief Description
<b>The Beck Meadow (CWS 282)</b>	Beck Meadow consists of 3 damp meadows north of the Hellington Beck, listed for their species-rich fen flora. The site forms a part of a chain of unimproved/semi-improved grassland and alder carr and features a public footpath.
<b>Hazelmere Hole (CWS 2029)</b>	Ancient, broad-leaved semi-natural woodland. Contains a small eutrophic mere surrounded by dense vegetation.
<b>Bergh Apton Marsh (CWS 2222)</b>	This site consists of an area of acidic broadleaved woodland, Church Plantation, and an area of recovering marshy grassland/fen on the north bank of the River Chet.
<b>Chedgrave Common &amp; Marshes (CWS 2192)</b>	This site consists of Chedgrave Common and the adjacent marshes.; both areas are bordered by the River Chet. The common slopes gently towards the river.
<b>Trowse Meadows (CWS 2210)</b>	This site consists of two separate areas of grassland on the outskirts of Whitlingham Country Park. The two sites are separated by a road and church buildings, but are connected by a channel which flows in to the River Yare. This site is included as part of Whitlingham LNR.
<b>Whitlingham Marsh (CWS 2212)</b>	This site is an area of inundated swamp, consisting mostly of sedgebeds in a spur of land between the River Yare and the A47. This site is included as part of Whitlingham LNR.





## SITE COVERAGE

The South Yare Wildlife Group Area is home to many statutory and non-statutory sites, the table below breaks down what percentage of the South Yare Wildlife Group area is covered by these sites.

Designation		Percentage Cover
Ramsar Site	Statutory international	4.25%
Special Protection Area (SPA)	Statutory international	4.25%
Special Area of Conservation (SAC)	Statutory international	4.25%
Site of Special Scientific Interest (SSSI)	Statutory national	4.50%
National Nature Reserve (NNR)	Statutory national	2.54%
Local Nature Reserve (LNR)	Statutory local	1.17%
County Wildlife Site (CWS)	Non-statutory county	2.09%

## THREATS AND VULNERABILITIES

The South Yare Wildlife Group Area covers a range of protected and unprotected sites. Often these sites have complex interactions with the surrounding environment, with a range of issues impacting whole sites or specific areas. Feedback loops between issues such as water pollution, siltation and pesticide use occur across the wider countryside as well as in the protected areas.

The following threats and vulnerabilities have been identified by government agencies; the report draws from site citations and Site Improvement Plans produced by Natural England.

The main threats to the area's wildlife and habitats may stem from agricultural land use. Agricultural intensification can lead to water pollution, affecting our rivers, broads and other wetlands. Pesticide treatments to crops has been shown by scientists to cause the decline of many species such as pollinating insects.

It is important that habitats continue to be managed to support wildlife (e.g. ensuring that marshes are grazed, woodland and hedgerows are managed sympathetically, non-native invasive species are managed).

Climate change will have an impact through changes in rainfall patterns, average temperature and even in the crops that farmers grow. This could have profound impacts on wildlife. In order to mitigate these impacts it is vital that there is continued support for landowners to manage their land sympathetically. Although housing and infrastructure development is occurring in the area and may be damaging some areas around villages and towns, there are currently no major developments posing a big threat.



## Water Pollution

Diffuse water pollution (DWP) and point source water pollution are key issues potentially affecting all Broads sites and are one of the priority issues to address in the Broads. DWP is caused when a range of pollutants, especially nutrients, enter the waterways through urban and agricultural run-off (particularly in storm events). Point source water pollution is caused when one source such as a pipe or ditch pollutes surrounding waterways (*Natural England, 2014*). Nutrient loading in our freshwater systems is of particular issue in the Broads, with eutrophication and toxic algae fish kills occurring as a result. Water pollution affects many of the wetland protected sites, such as the Yare Broads and Marshes, rivers and streams in the wider countryside.



## Siltation

“Many of the open water bodies in the Broads have been subjected to siltation over many decades; caused by the run-off from arable field and roads. Whilst many sites have been in receipt of a range of lake restoration measures, a number of sites require significant lake restoration to restore SAC quality open water features. There is a strong link to DWP to ensure that sediment and nutrient sources are largely removed in conjunction with lake restoration works” - *Natural England, 2014*

## Inappropriate Water Levels

“Water level management is key to the maintenance of features throughout the Broads. As such, it is essential that the correct water management infrastructure and operating protocols are in place to deliver the optimum hydrological regime for the features of interest at a site. Managing water levels appropriately may become more difficult in the context of a changing climate.” - *Natural England, 2014*



## Non-native Invasive Species

Non-native invasive species have the potential to threaten our wildlife through direct predation or by changing the habitats in which they live. Muntjac deer have been shown to damage woodlands, affecting some of our breeding birds; whilst North American mink have been implicated in the declines of water voles and other protected species. Aquatic plants such as Australian swamp stonecrop, parrot's feather, and a number of aquatic molluscs and other invertebrates are a serious threat to our fantastic freshwater ecosystems. This issue is worsened by water pollution, often providing favourable conditions for these species to flourish and outcompete native species. In some cases it may be necessary to control some of the invasive species in order to protect the native flora and fauna that are threatened.

## Undergrazing

“Undergrazing is an issue on a number of sites within the Broads that have been historically grazed or require grazing. Often the issues are associated with the difficult ground, the difficulty of implementing grazing infrastructure, and/ or the lack of suitable stock.” - *Natural England, 2014*

## Housing and Infrastructure

Housing and infrastructure development has the potential to damage wildlife, habitats and especially protected areas. Development leads to extra demands on water availability, sewage disposal and greenspace. These demands can affect our wetlands, rivers, woodlands and other important habitats.

Increasing population can result in increased recreational pressure on sensitive wildlife sites through dog walking impacting our breeding birds to invasive species being transported in to previously unaffected sites.

Where there is the potential for a development to have an adverse affect on a European protected site (ie SAC and SPA) the planning authority must carry out an Appropriate Assessment. The aim of this assessment is to ensure that there is no adverse affect on the integrity of the European site. In addition, local authorities have agreed that the recreational impact arising from housing development within 7.5km of a European site should be subjected to an appropriate assessment.

## Geodiversity Sites — *Tim Holt-Wilson*

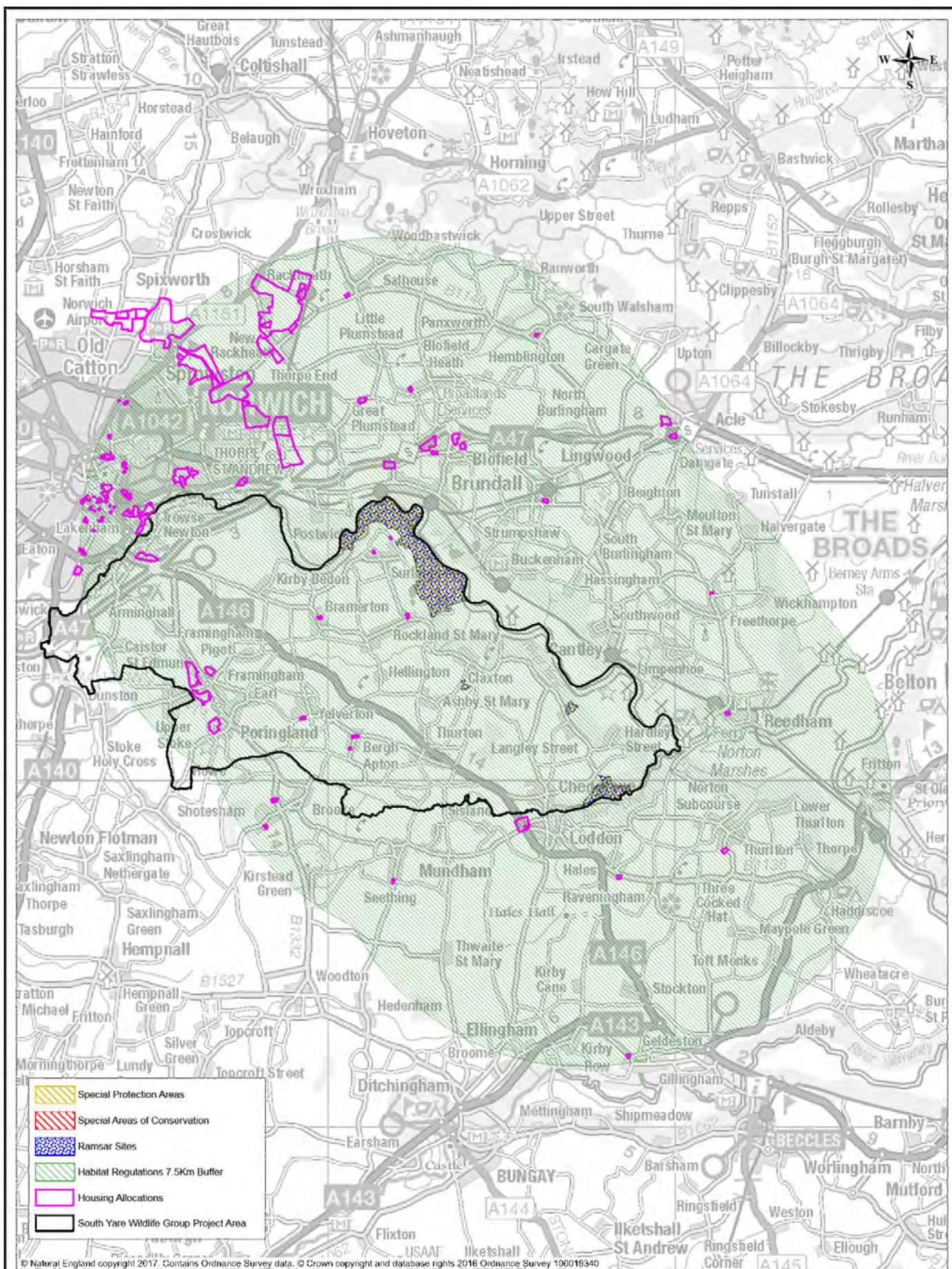
The Norfolk Geodiversity Partnership is working to conserve and promote Earth heritage through the Geodiversity Action Plan process, including the designation of County Geodiversity Sites.

Earth heritage may be threatened in various ways in the project area. Geosites are vulnerable to loss of access to rock exposures through vegetation overgrowth and sediment slumping, and also fly-tipping, backfilling and landscaping work. Geomorphological features are vulnerable in different ways: those formed in the past are finite and so their ‘fossil’ structure needs conserving, while those being formed today need protection of the active processes that maintain them. The crumbly nature of unconsolidated glacial deposits and Crag means that conserving such exposures is an ongoing task; chalk is a more resistant rock type so requires less long-term attention. Geocultural features such as old kilns are susceptible to vandalism and collapse.

Site management and interpretation plans should include a survey of geoheritage features within their scope and find interesting ways to communicate them to the wider public. Geoconservation work can often jointly benefit biodiversity and cultural heritage as well as Earth heritage, for example by promoting areas of open ground and steep slopes valuable for wildlife, and by keeping areas of archaeological and geocultural interest free of encroaching vegetation. On-site interpretation is enhanced by presenting an Earth heritage dimension to the storyline, showing aspects of environmental history over deep time and, where appropriate, relating it to the archaeological story of humankind.

Information taken from: <http://www.norfolkbiobiodiversity.org/nonnativespecies/>, <http://publications.naturalengland.org.uk/file/5757293882769408>, <http://jncc.defra.gov.uk/pdf/RIS/UK11010.pdf>, <https://designatedsites.naturalengland.org.uk/>, <http://www.nbis.org.uk/sites/default/files/documents/Norfolkreport130117.pdf>, <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0013577>, <http://jncc.defra.gov.uk/page-1400>



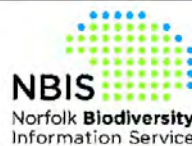


## Housing Allocation Plans and Statutory Sites

For South Yare Wildlife Group Project Area

Scale 1:100000

Compiled by Danielle Engelbrecht on 4 August 2017



Norfolk Biodiversity Information Service  
County Hall  
Martineau Lane  
Norwich NR1 2SG

Tel: 01603 224458 Fax: 01603 223219



## HABITATS AND LAND USE

A habitat is “an environment in which an organism or ecological community normally lives or occurs”. While some species are able to live in a variety of habitats, there are others that can only survive in a particular habitat type. Land use describes how the land is being utilised by people.

Different habitats also provide different ‘services’ to people. For example woodlands provide timber and help absorb CO<sub>2</sub>. Areas of grassland in built-up areas are important for flood prevention during heavy rain, as they allow the excess water to soak into the ground. Plus, getting out into nature helps people to unwind and relax from the stresses of daily life. This concept, known as ‘Ecosystem Services’ is explained further below.



### Ecosystem Services

As humans we gain many benefits from natural ecosystems. These are known as ecosystem services and they can be divided into four categories:

**Provisioning** – nature providing us with goods such as food, fuel, fresh water, natural medicines and biochemicals.

**Regulating** – nature providing services such as pollination, pest control, water purification and climate regulation.

**Cultural** – the non-material benefits of nature, such as spiritual enrichment, recreation and aesthetic experiences.

**Supporting** – nature providing services which underpin all the other ecosystem services, such as soil creation, nutrient cycling and photosynthesis.

Over the last few years, more and more people have realised the importance of the natural world to the health, wellbeing and even the survival of humans. Many ecosystem services are being assigned monetary values, often based on how much it would cost to replace the service with a human-made alternative. This helps decision makers by expressing the value of an ecosystem in a tangible way, but can be controversial. Some people argue that the ‘intrinsic value’ of nature should be reason enough to conserve it.

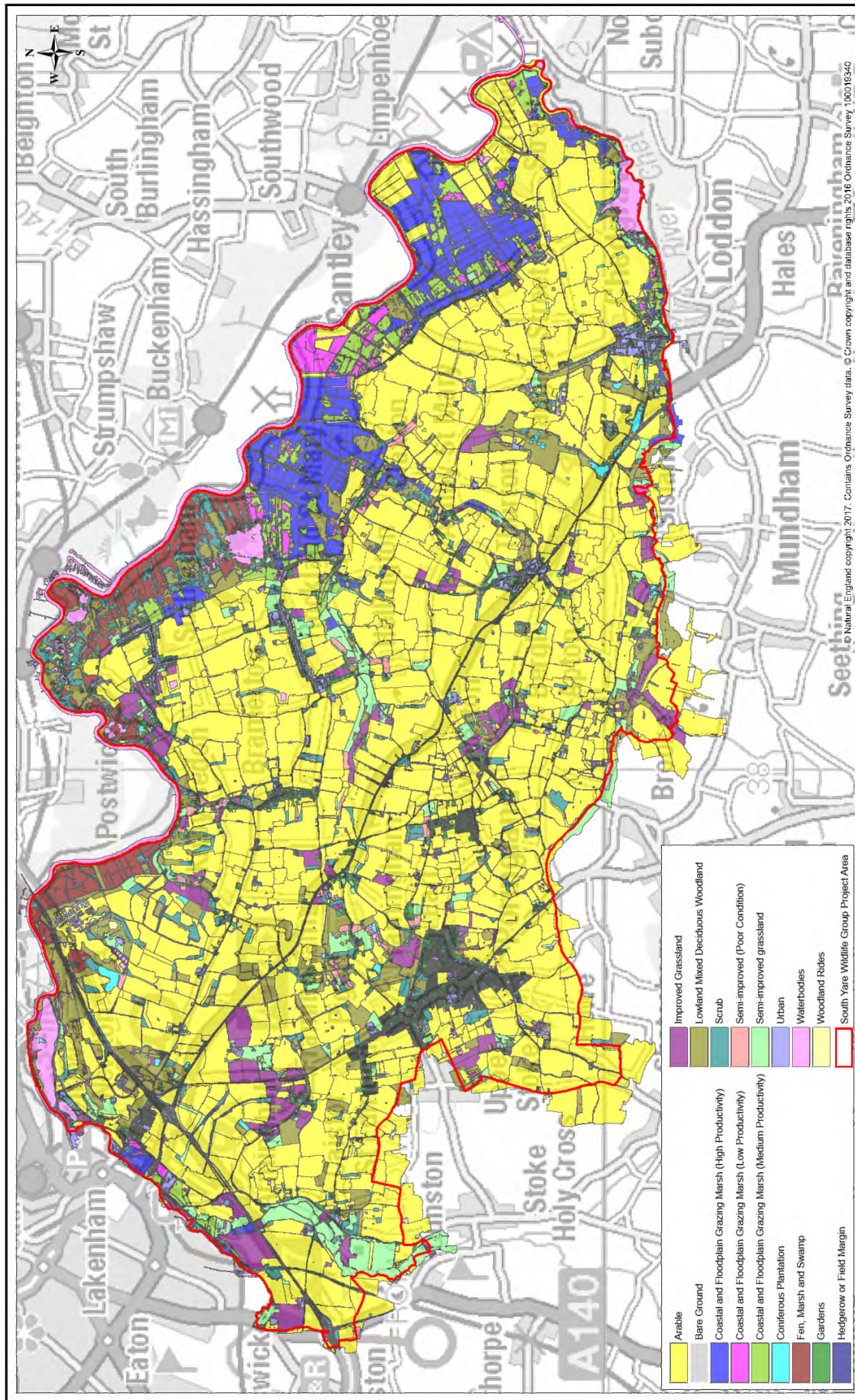
## Habitat and Land-Use Mapping

The map on the opposite page shows the different habitat types (e.g. saltmarsh, semi-improved grassland, deciduous woodland etc.) and land uses (e.g. arable land, parkland, churchyards etc.) within the boundary of the South Yare Wildlife Group Area.

These figures were determined from a habitat map of the county generated using remote sensing. The remaining area of the county is made up of improved grassland, scrub, bare ground and urban areas. Marine habitats were not included.

The final map was used to determine the overall area of each habitat and land-use type in the South Yare Wildlife Group Area. These areas can be compared over time to reveal losses or gains in particular habitats and land-uses.





## Habitat and Land Use Types

For The South Yare Wildlife Group Project Area

Scale 1:50000

Compiled by Danielle Engelbrecht on 10 August 2017



## Arable

Arable areas cover 63.23% of the South Yare Wildlife Group Area. These areas can sometimes seem boring and devoid of wildlife. However if they are well managed they support important species, some of which are found nowhere else. Vascular plants of arable land are some of the most threatened flora in the UK. A very large area of Norfolk is arable farmland so it is important that it is managed effectively for both food production and wildlife.

## Coastal and Floodplain Grazing Marsh

Coastal and floodplain grazing marshes make up 8.28% of the South Yare Wildlife Group Area, these marshes are a pasture or meadow that is periodically inundated. Ditches maintain water levels and these are generally rich in invertebrates. Almost all areas are grazed or cut for hay and silage. The habitat is important for both breeding and wintering birds.

## Lowland Mixed Deciduous Woodland

Deciduous woodland covers 6.74% of the South Yare Wildlife Group Area. Although deciduous woodlands vary in quality, the best examples are rich in biodiversity, both in tree species and ground flora, and also in associated invertebrate and bird diversity.

## Fen, Marsh and Swamp

Fen, marsh and swamp habitat covers 2.21% of the South Yare Wildlife Group Area. This includes fen (peatlands which receive water and nutrients from ground water and surface run-off as well as rain), marsh (areas of waterlogged soil, including fen meadows and rush pasture on mineral soils and shallow peat) and swamp (areas of tall emergent vegetation such as reed bed). UK fen habitats support a diversity of plant and animal communities – up to 550 species of higher plant, up to half of the UK's dragonfly species and several thousand other invertebrates. Reed beds are amongst the most important habitats for birds in the UK.



Arable field © Darren Oddy



Marshland © NCC



## AGRI- ENVIRONMENT SCHEMES

Many of the threats outlined earlier result from the way we manage our land. Nutrient and soil run-off affects water quality, water abstraction for drinking water and irrigation can reduce the supply to our wetlands; and pesticide use to protect our crops threatens our pollinators. Agri-environment Schemes reward farmers for managing parts of their land in a way that benefits the environment and addresses these issues. Environmental Stewardship was the previous scheme run by Natural England, with the new Countryside Stewardship scheme having started in 2015. These schemes are voluntary and landowners can enter agreements that last for up to 10 years.

There are **668 parcels** currently under Environmental Stewardship in the South Yare Wildlife Group Area. Environmental Stewardship has a number of different levels:

*Entry Level Stewardship (ELS)* – **258 parcels** of land in the South Yare Wildlife Group Area are covered by Entry Level Stewardship or the organic equivalent. Open to all farmers, ELS delivers simple and effective environmental management, including options such as hedgerow management, providing wild bird cover and creating buffer strips.

*Higher Level Stewardship (HLS)* – **18 parcels** of land in the Project Area are under Higher Level Stewardship. This is a competitive scheme that involves more complex management options and aims to provide more wide ranging environmental benefits.

*Combination of ELS and HLS*— **392 parcels** of land in the Project Area are under a combination of Entry Level Stewardship and Higher Level Stewardship.

Current Environmental Stewardship options in place within the South Yare Wildlife Group Area include:

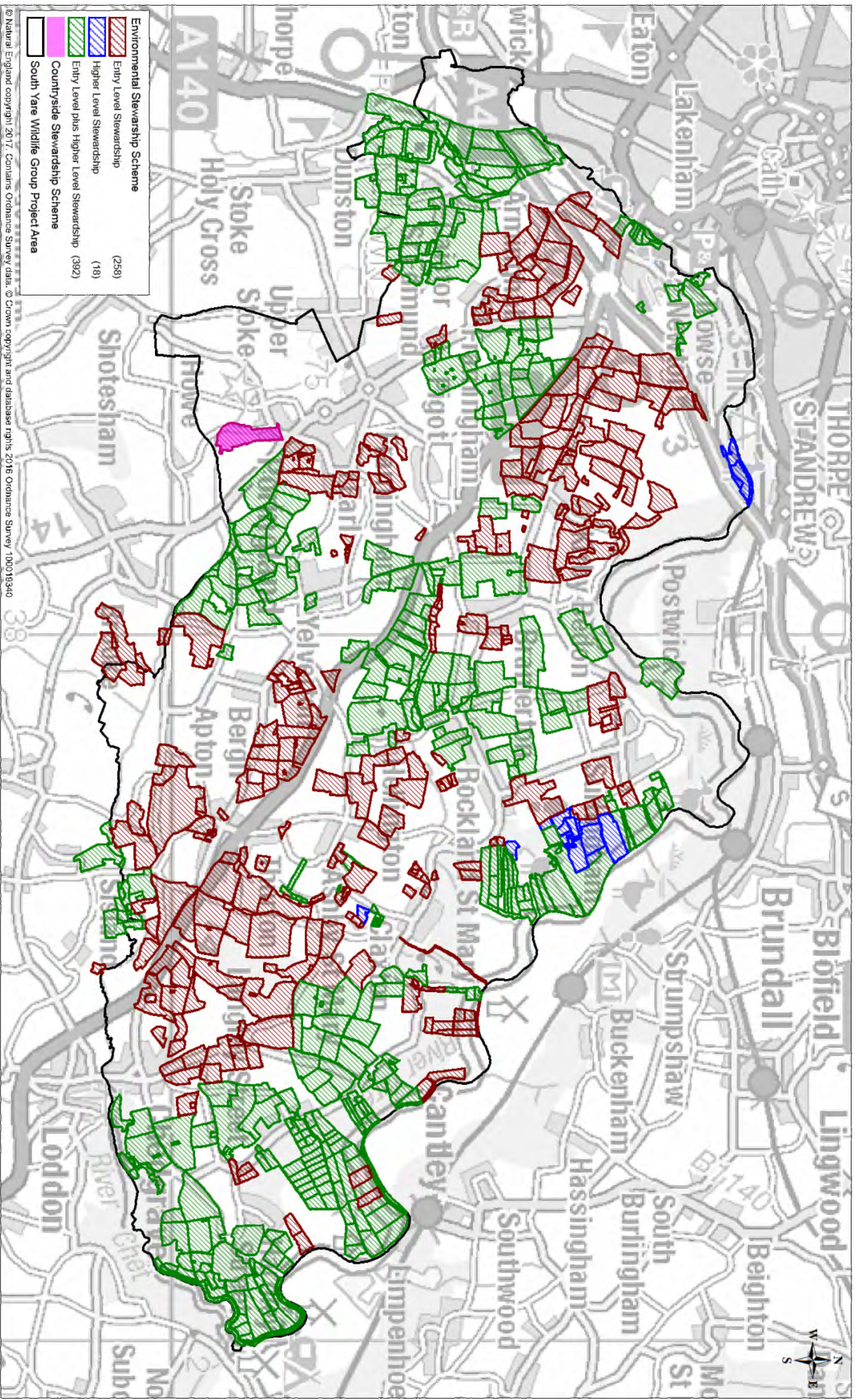
- Protection of in-field trees
- Buffer strips on cultivated land or intensive grassland
- Floristically enhanced grass margins
- Arable reversion by natural regeneration

The new scheme, Countryside Stewardship continues to reward farmers for managing their land; however, the scheme is now scored against local priority targets to maximise environmental benefit and it is a competitive scheme. Land managers are encouraged to work together, with management aiming to support wild pollinators and wildlife or to improve water quality and reduce flood risk more likely to receive a grant.

**1** parcel of land in the South Yare Wildlife Group Area is under the Countryside Stewardship Scheme, working to create woodland in the area.

Information taken from: <http://www.naturalengland.org.uk/ourwork/farming/funding/es/default.aspx> and <https://www.gov.uk/government/collections/countryside-stewardship-get-paid-for-environmental-land-management#capital-grants>





## Countryside Stewardship And Environmental Stewardship

For The South Yare Wildlife Group Project Area

Scale 1:50000

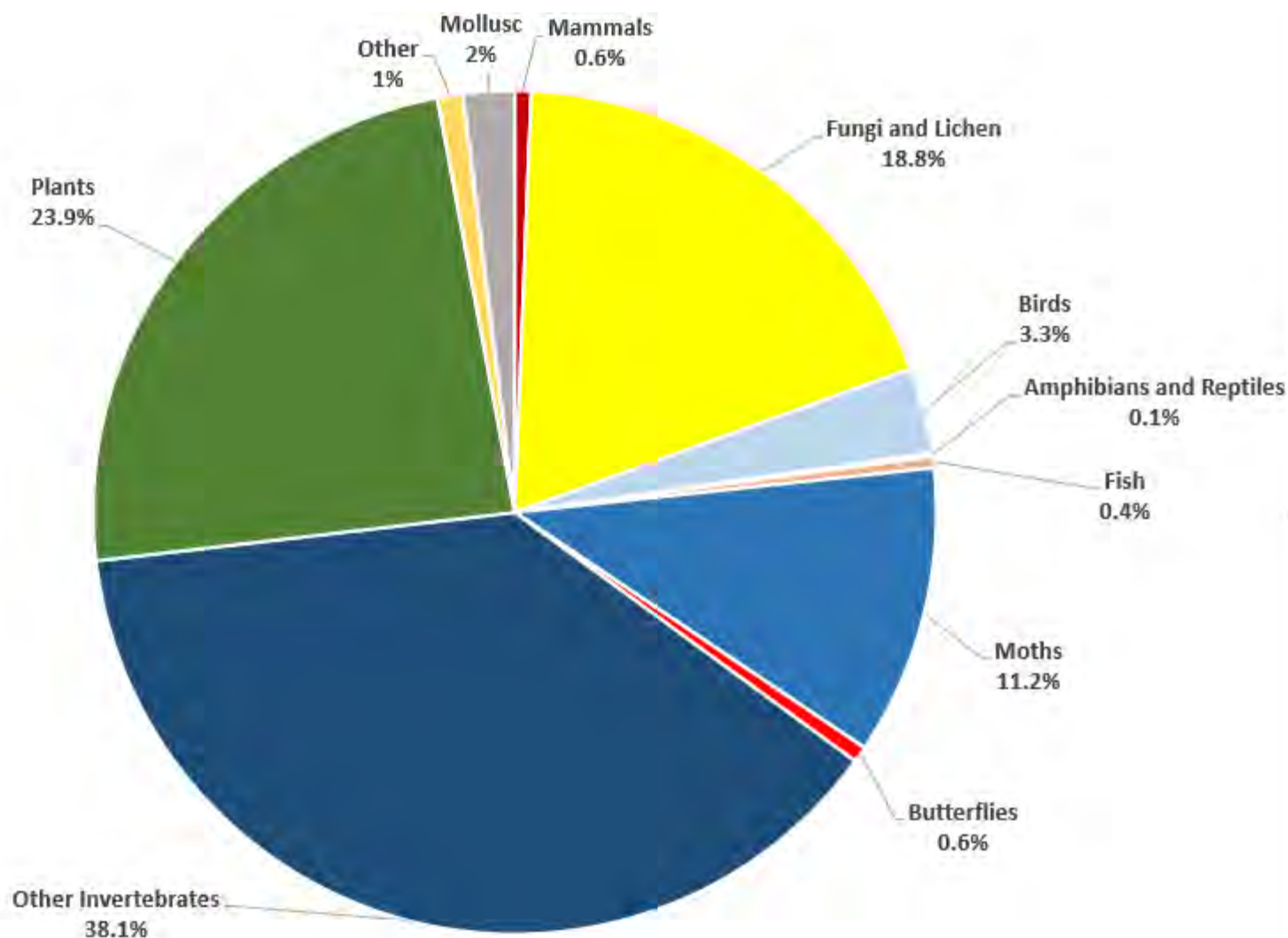
Compiled by Danielle Engelbrecht on 21 August 2017



## SPECIES

There are thousands of species which call the South Yare Wildlife Group Area home. From the stately ancient oak to the tiny gorse weevil, from the noisy flocks of rooks and jackdaws to the elusive adder, NBIS holds over 87,700 individual records of 8106 species from within the Project Area.

This chart shows the percentage of the total number of species records made up by each group of species (plants, mammals, birds etc.) recorded in the South Yare Wildlife Group Area. (Based on the data held by Norfolk Biodiversity Information Service, August 2017)



You can see from the chart that the data held by NBIS for the South Yare Wildlife Group Area is dominated by invertebrate records. The majority of other invertebrate data are made up of beetle and true fly records; with the earliest record dating back to 1936. More recently, the Biodiversity Audits have updated the records on spectacular sites such as Wheatfen and Rockland Broad.

We are lucky in Norfolk to have a dedicated group of County Recorders, allowing us to collect biological data that is representative of all species groups.\*

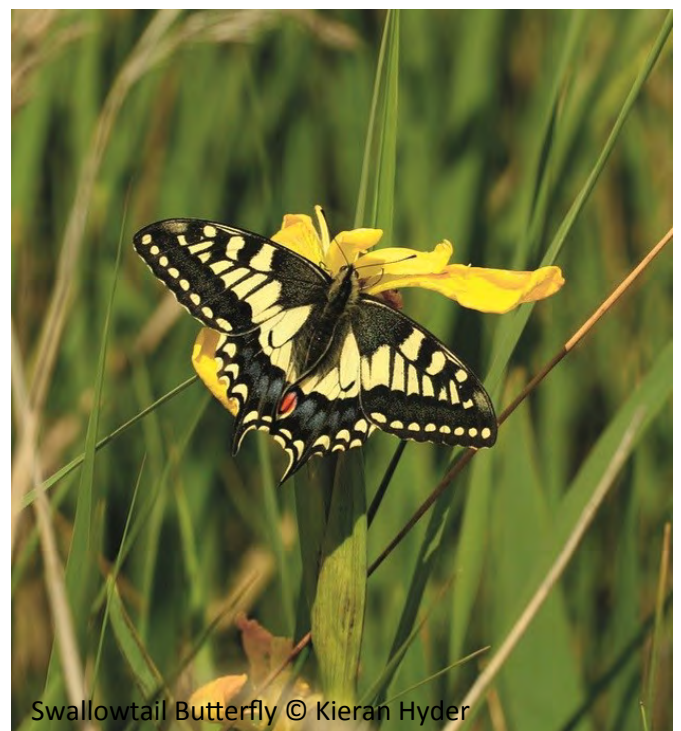
\*A lower proportion on the pie chart does not necessarily indicate low numbers present. This pie chart reflects total number of species present and not total records.

## Rare Species

436 of the species recorded in the South Yare Wildlife Group Area since 2000 are what would be classed as 'Species of Conservation Concern'. These are species that are rare or scarce, or that are protected at an international, European, national or local level. It is important to know where these species are found in order to protect them from further decline. For more information on how you can get involved in species recording see page 45. A selection of the species of Species of Conservation Concern in the area are:

Terrestrial Mammals		Flowering Plants	
Common Name	Latin Name	Common Name	Latin name
European Otter	<i>Lutra lutra</i>	Frogbit	<i>Hydrocharis morsus-ranae</i>
Eurasian Badger	<i>Meles meles</i>	Water-soldier	<i>Stratiotes aloides</i>
West European Hedgehog	<i>Erinaceus europaeus</i>	Common Butterwort	<i>Pinguicula vulgaris</i>
Western Barbastelle	<i>Barbastella barbastellus</i>	Few-flowered Spike-rush	<i>Eleocharis quinqueflora</i>
Serotine	<i>Eptesicus serotinus</i>	Fibrous Tussock-sedge	<i>Carex appropinquata</i>
Dabenton's Bat	<i>Myotis daubentonii</i>	Whorled Water-milfoil	<i>Myriophyllum verticillatum</i>
Natterer's Bat	<i>Myotis nattereri</i>	Butcher's-broom	<i>Ruscus aculeatus</i>
Lesser Noctule	<i>Nyctalus leisleri</i>	Large-leaved Lime	<i>Tilia platyphyllos</i>
Noctule Bat	<i>Nyctalus noctula</i>	Marsh Sow-thistle	<i>Sonchus palustris</i>
Pipistrelle	<i>Pipistrellus pipistrellus sensu lato</i>	Tubular Water-dropwort	<i>Oenanthe fistulosa</i>
Nathusius's Pipistrelle	<i>Pipistrellus nathusii</i>	Lesser Marshwort	<i>Apium inundatum</i>
Common Pipistrelle	<i>Pipistrellus pipistrellus sensu stricto</i>		
Soprano Pipistrelle	<i>Pipistrellus pygmaeus</i>		
Brown Long-eared Bat	<i>Plecotus auritus</i>		
European Water Vole	<i>Arvicola amphibious</i>		
Harvest Mouse	<i>Micromys minutus</i>		

Other Species	
Common Name	Latin Name
Great Crested Newt	<i>Triturus cristatus</i>
Swallowtail Butterfly	<i>Papilio machaon britannicus</i>
Marsh Harrier	<i>Circus aeruginosus</i>
Cuckoo	<i>Cuculus canorus</i>



Swallowtail Butterfly © Kieran Hyder



## Biodiversity Action Plan Priority Species

Biodiversity Action Plan (BAP) Priority species are a priority for conservation in the UK based on their international importance, rapid decline and high risk of further decline and extinction. The list was revised in 2007 and now includes 1150 species.

54 of the Species of Conservation Concern in the South Yare Wildlife Group Area are Biodiversity Action Plan Priority species; these include hedgehogs, the brown hare and the harvest mouse.

## Invasive Non-Native Species

15 of the species recorded in the South Yare Wildlife Group Area since 2000 are invasive non-native species. These have been introduced to the area by people and have a tendency to spread rapidly and cause problems for our native wildlife. Knowing where they are enables conservationists to keep a check on their distribution and intervene before they start causing a problem. The Norfolk Non-Native Species Initiative co-ordinates this work. Non-native species found in the area are:

Non-Native Invasive Species in the area	
Least Duckweed	Zebra Mussel
Canadian Waterweed	Canada Goose
Japanese Knotweed	Egyptian Goose
Orange Balsam	Ruddy Duck
Indian Balsam	American Mink
New Zealand Pigmyweed	Chinese Water Deer
Floating Pennywort	Chinese Muntjac
Giant Hogweed	



Norfolk Hawker © Kaarin Wall



Muntjac deer



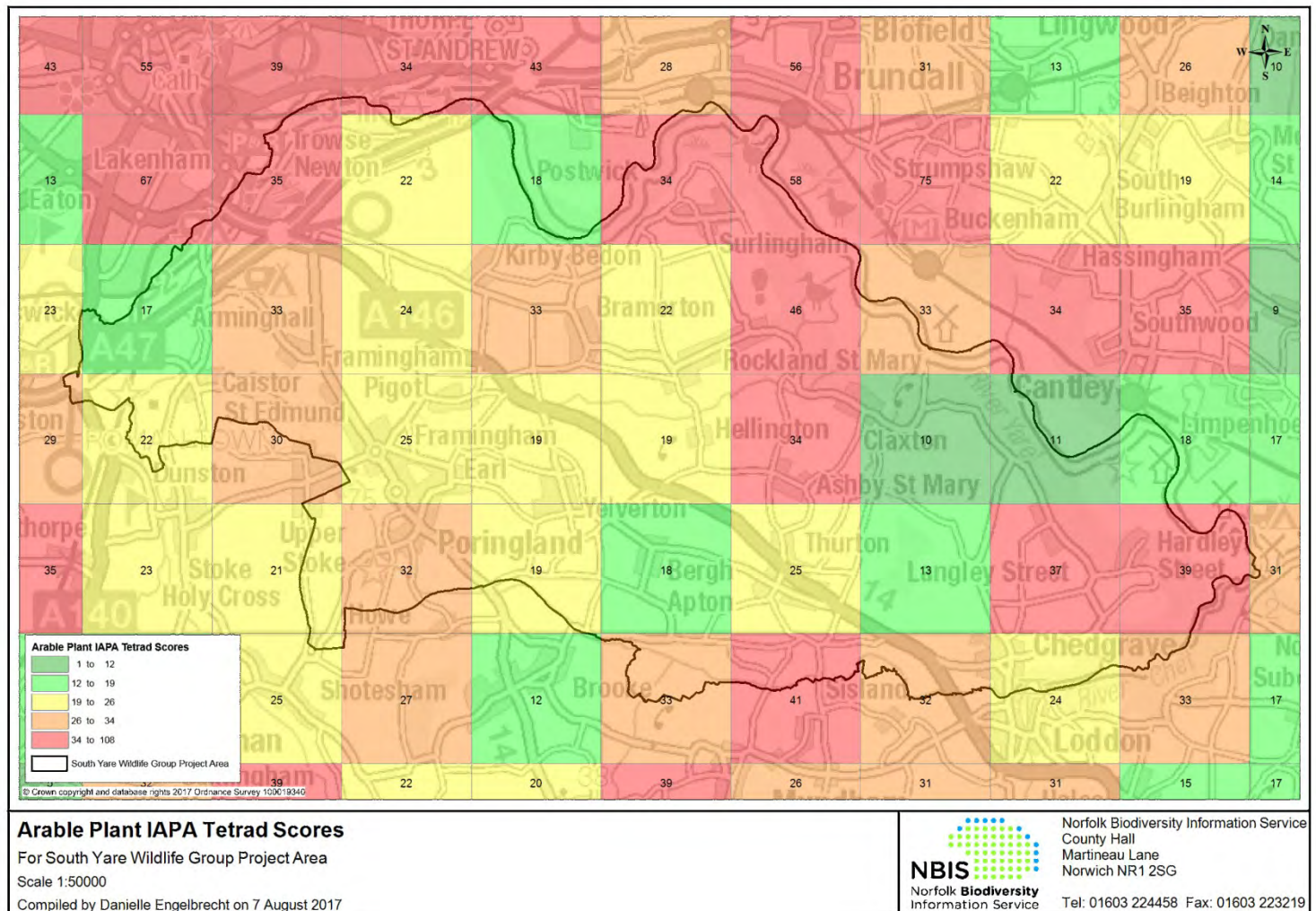
North American Mink



## ARABLE PLANTS

The Habitats and Land-use map shows that the largest land use in the South Yare Wildlife Group area is arable land. A number of species are found in this habitat where the management is sympathetic. These include farmland birds such as yellowhammer, but also arable plants and ancient trees.

Arable plants are also some of the least studied flora. A recent study has been undertaken to determine the Important Arable Plants areas in Norfolk. The map below shows the results of this analysis for the South Yare Wildlife Group Area (Walker *et al.* 2011).



The map shows the Project Area divided up into tetrad (2km) grid squares. Each square has a score based on the total cumulative scores of species present within it. Scores are assigned to the arable plants based on their current occurrence within 10km squares, their recent decline and their current species threat status. The squares are colour coded according to their score. The dark green squares have the lowest scores while the red squares show the 'hotspots' for important arable plants (Walker *et al.* 2011). It can be seen from the map that a number of 'hotspots' occur.





## ARABLE PLANTS IN THE SOUTH YARE WILDLIFE GROUP AREA

### ***Galeopsis angustifolia* (UK BAP Species)**

Red hemp-nettle is a species found mostly on calcareous soils but also on coastal sands and shingle in the southern counties of England and Wales. Its distribution is correlated with open vegetation on well-drained soils in sunny locations with low rainfall. It is a summer annual which tends to germinate in spring. Consequently, many plants are eradicated during harvest or by early autumn cultivation before they have set seed. It is therefore most frequently found in spring-sown crops. Red hemp-nettle has shown a severe decline since 1930.



*Galeopsis angustifolia* © Enrico Blasutto and licensed for reuse under this [Creative Commons Licence](#)

### ***Silene gallica* (UK BAP Species)**

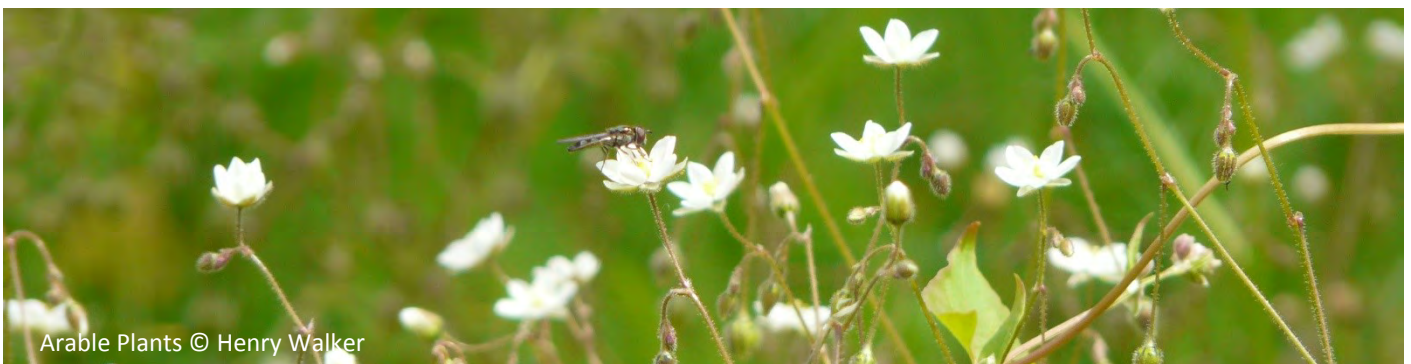
Small-flowered Catchfly is a species found mostly on Sandy soil, particularly in open places such as margins of arable fields, as well as sandy seashores. Once scattered throughout Britain, it has declined dramatically in recent decades and can now only be found in Wales and the south and west of England, mainly by the coast. The main reasons for its decline are modern agricultural practices, especially the use of herbicides and fertilisers, the development of highly productive crop varieties, and the loss of field margins.



*Silene gallica* © Hans Hillewaert and licensed for reuse under this [Creative Commons Licence](#)

Information taken from <http://www.norfolkbiodiversity.org/actionplans/speciesactionplans/redhemp-nettle.aspx>, <http://www.norfolkbiodiversity.org/actionplans/speciesactionplans/smallfloweredcatchfly.aspx>

An important mechanism for practically conserving important arable plant sites are Agri-environment schemes. Such schemes pay farmers to establish herbicide- and fertiliser- free cultivated arable margins and other options favouring arable plant communities, such as overwintered stubbles, fallows and conservation headlands (Byfield & Wilson 2005). However, across Norfolk the uptake of these options has been low, possibly as the payments offered are low compared to the management input required (Walker *et al.* 2011).

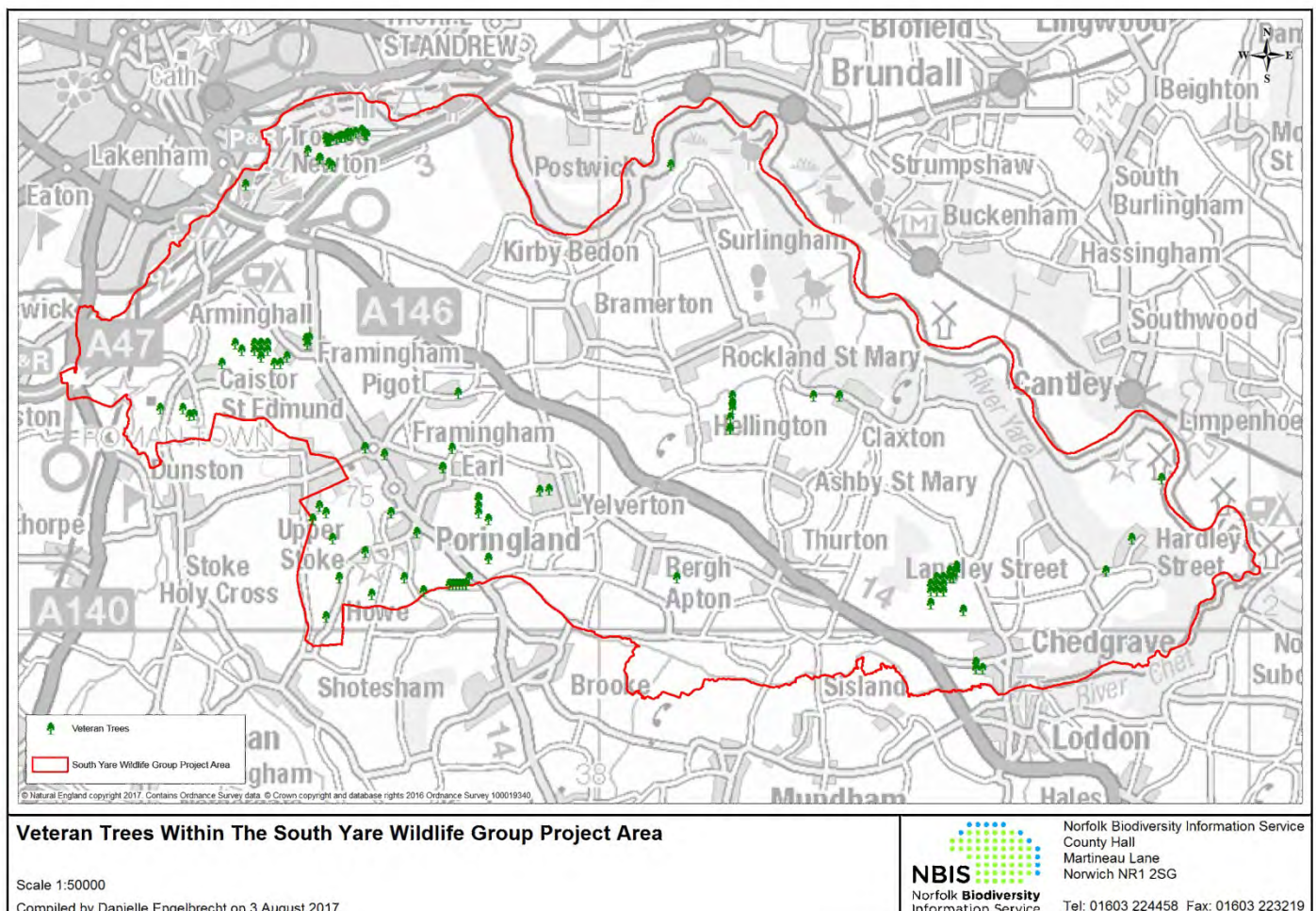


Arable Plants © Henry Walker



## VETERAN TREES

Veteran trees can be defined as trees that are of interest biologically, culturally or aesthetically because of their age, size or condition. Veteran trees may support a wide range of fauna and fugal bodies, many of which are only associated with long periods of continuity in their habitat (FC & NE, 2017).



\*Information taken from : <https://www.forestry.gov.uk/fr/infd-5w2g5b> and <http://publications.naturalengland.org.uk/file/113006>



## WATER QUALITY

Measuring the quality of the water in the rivers within the South Yare Wildlife Group Area gives an indication of how healthy the rivers are. It shows the effect of habitat restoration work on the rivers, and also means that where water quality levels are not as high as they should be, measures can be put in place to improve them.

### Environment Agency River Monitoring



The Environment Agency monitors the water quality of rivers in order to assess them against the standards set out in the EU Water Framework Directive. These standards allow the river to be classified as having :

**Chemistry and biology - A to F (very good to bad)**

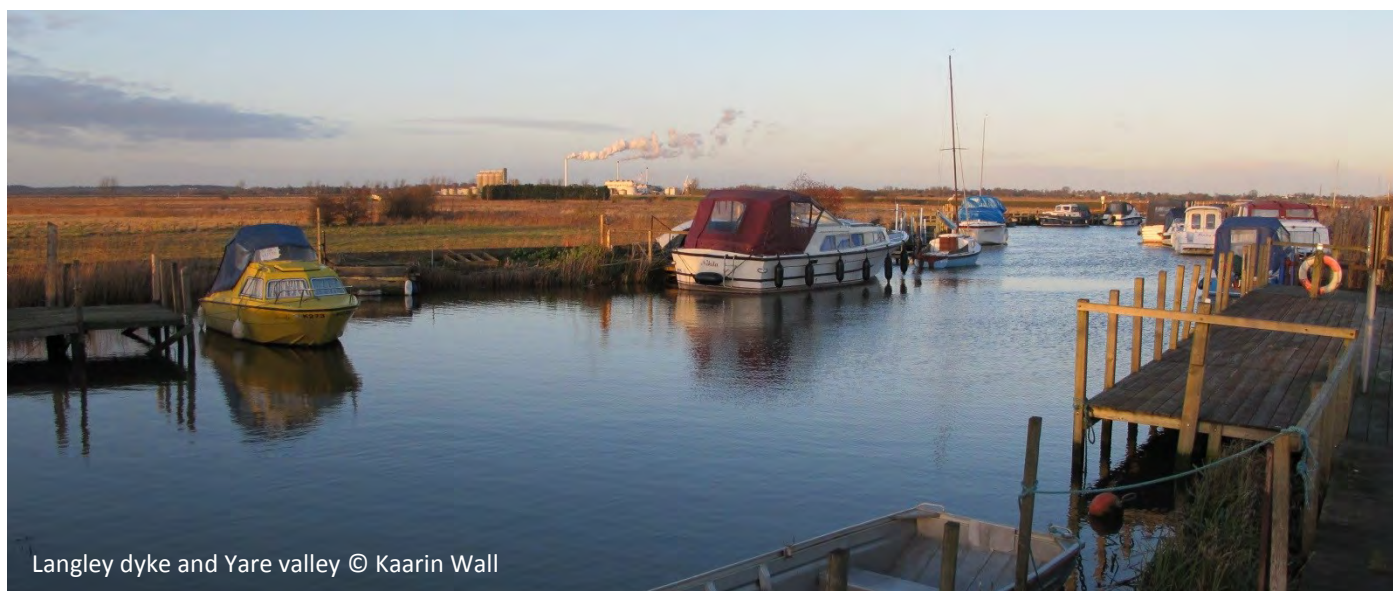
**Nitrates and phosphates - 1 to 6 (very low levels to very high levels\*)**

\*High levels of nutrients may occur naturally and are not necessarily bad for the environment.

Monitoring takes into account the populations of fish and invertebrates present, the levels of dissolved oxygen, phosphate and ammonia in the water amongst other measures.

River	Biology	Chemistry			
	Overall Grade	Ammonia	Dissolved Oxygen	Nitrate	Phosphate
Chet	B	C	D	5	5
Tas	A	A	B	4	5
Yare	A	B	C	4	4

The Broads Authority carries out annual surveys of the aquatic plants in the broads; these surveys help to assess the state of our lakes. Changes in the plants that are recorded over time can indicate increasing pollution or and improvement in water quality. Surveys have been carried out at Rockland Broad, almost annually since 1983, and Wheatfen Broad since 2005. In 2016 the most abundant plants were yellow water lily, spike water milfoil and rigid hornwort; 13 water plant species recorded. The most abundant plant in Wheatfen Broad in 2015 was yellow water lily; the site had a total of 16 water plants species recorded. For further information see <http://www.broads-authority.gov.uk/news-and-publications/publications-and-reports/conservation-publications-and-reports/water-conservation-reports>



Langley dyke and Yare valley © Kaarin Wall



## LOCAL ACTION GROUPS

Raising awareness of the area's wildlife and habitats is vital and can lead to local action to help protect and manage our natural heritage. This section highlights the actions being undertaken by a number of community groups and individuals in the area. From individuals coming together to inspire young children to managing land such as Hellington and Rockland St Mary Community Nature Reserve and the South Yare Wildlife Group's Wild Patch initiative. In addition farmers and landowners can do their bit through managing their land sympathetically.

### SOUTH YARE WILDLIFE GROUP

The South Yare Wildlife Group is an open membership group organizing fun & engaging wildlife events, walks, talks & practical conservation tasks for all ages.

The group has the following objectives:

- 1. To promote for the benefit of the public the conservation, protection and improvement of the physical and natural environment of the South Yare area.**
- 2. To advance the education of the public in the conservation, protection and improvement of the physical and natural environment of the South Yare area.**

It pursues these through a range of activities such as regular meetings, walks, social events, active conservation work, working with local stakeholders, recording and surveying and educational events.

For more information, visit: <http://southyarewildlifegroup.org/>



Volunteers managing wildlife habitat © SYWG



## The 'Wild Patch' Project

*'Any piece of land, of any size, where wildlife can be encouraged to live and thrive.'*

The group's most ambitious initiative to date is the 'Wild Patch'. The project has been established through funding provided by the Broads Authority via the Heritage Lottery Fund, has created the 'Wild Patch' aims to encourage householders and landowners to consider how they might manage their gardens or land to encourage wildlife. By encouraging the creation and management of lots of wild patches it is hoped we can help connect wildlife habitats across the area.



You can find out how to join the SYWG and The Wild Patch project at <http://southyarewildlifegroup.org/>



### Young Explorers

Young Explorers is the South Yare Wildlife Group's programme of activities and events for children.

Young Explorers is a club for kids aged 7-11 who are particularly interested in nature and science based activities, run by Wheafen Forest School at the Ted Ellis Trust Nature Reserve. The group explore the local landscape and meet members of the local community with natural history knowledge and passion to share.

The programme includes learning techniques for exploring different habitats; collecting, observing, identifying and recording plants and animals; using a microscope; following tracks and trails; birdwatching; science experiments; conservation work and more.

For more information and to join the group, visit: <http://southyarewildlifegroup.org/> and <http://www.wheatfenforestschool.co.uk/>



## HELLINGTON AND ROCKLAND ST MARY COMMUNITY RESERVE

The reserve comprises 2.7 hectares (6.6 acres) of land owned by the Parochial Church Council (PCC). Since 2014 the land has been rented from the PCC on a long-term lease by the Hellington and Rockland St Mary Community Reserve, financed by an annual subscription from individuals, with additional support from the local Parish Council and Norfolk Wildlife Trust.

For further information on how to support this local project, contact:

[hellington.rsmcommunityreserve@gmail.com](mailto:hellington.rsmcommunityreserve@gmail.com)

## BERGH APTON CONSERVATION TRUST

The Trust was set up in 1994 to conserve the wildlife and natural environment of Bergh Apton and the surrounding area. The Trust owns 10 acres of marshland and woodland in the parish which is managed by volunteers.

For further information on how to support this local project visit: <http://berghapton.org.uk/villorg/bact/>

## TED ELLIS TRUST

The Ted Ellis Trust is responsible for the management of the Wheatfen nature reserve. The site comprises fen, reed beds and wet woodland in the floodplain of the river yare and covers 52ha (130 acres). Besides managing the area for its wildlife the Trust also carries out education activities. You can support the conservation and education work at Wheatfen by becoming a Friend of the Ted Ellis Trust.



For further information, visit <http://www.wheatfen.org/>

## CLAXTON PARISH PIT CHARITY

The Claxton Parish Pit Charity (the Pits Trust) was registered with the Charity Commissioners in July 1965. Its origins date back to the Enclosure Acts when parishes were invested with properties which were for public benefit. The Trust owns and manages Ducan's Marsh Site of Special Scientific Interest with SYWG.

## PORINGLAND LAKES

Poringland Lakes comprises over 5 acres of former gravel pits with woodland and wildflower meadows located in the middle of the village. It was purchased in 2005 and the site is managed by local people for its wildlife and public enjoyment including angling.

For further information, visit <http://www.poringlandlakes.co.uk/Home/>

## NORWICH FRINGE PROJECT

The Norwich Fringe Project was established in 1991 and is a local authority funded countryside management partnership, working with volunteers and local communities to look after the countryside around Norwich. The Fringe Project help to manage a number of sites within the area including Swardeston Common, Whitlingham Marsh and Poringland Wood.



You can find out more about the project and how to volunteer at <https://norwichfringeproject.wordpress.com/>



## NORFOLK WILDLIFE TRUST

**Norfolk Wildlife Trust** provides advice to landowners on managing County Wildlife Sites and encourages and advises local communities to take action for wildlife. The area covered by this report falls within the NWT's Claylands Living Landscape which aims to enhance the management of the area's wildlife habitats and expand its area of grassland and woodland – thereby creating a more joined-up ecological network – as well as to encourage the more sensitive management of farmland.

You can find out more about NWT's work at <https://www.norfolkwildlifetrust.org.uk/a-living-landscape>



## RSPB

The RSPB manages a large expanse of land in the Yare valley. The fens and wet woodland support an abundance of wildlife. Surlingham Church marsh is the most easily accessible area where there is a circular path around this attractive wetland.

You can find out about the RSPB's work in the Yare valley and Norfolk at <http://www.rspb.org.uk/reserves-and-events/find-a-reserve/reserves-near-me/index.aspx?c=norfolk>



giving  
nature  
a home

## BROADS AUTHORITY

The Broads Authority has responsibility for conservation, maintaining the waterways, recreation, tourism and planning within the Broads National Park. Within the SYWG area, the wetland and floodplain adjacent to the river Yare and Chet is all within this statutory boundary. The Broads Authority manages Whitlingham Country Park, which encompasses open water, meadow and woodland habitats. The Authority also has a partnership agreement with Anglian Water to manage the fen adjacent to the Whitlingham water treatment works. Here the Authority's fen harvester machine operates annually to cut and collect fen litter from the site and keep the tall herb vegetation rich and diverse, without reverting to scrub. Along the navigable stretches of the Rivers Yare and Chet, the Broads Authority maintains the water depths and a series of free 24 hour moorings for use by the public.

You can find out more about the Broads Authority and their work in Norfolk at: <http://www.broads-authority.gov.uk/>



The Broads

## **CASE STUDY: THE STORY OF HELLINGTON & ROCKLAND ST. MARY COMMUNITY RESERVE—*Peter Armitage (Committee Member)***

It had long been the hope of nature lovers in Rockland St. Mary and Hellington to have a piece of land that could be opened as a Local Community Reserve to be enjoyed by all residents. An opportunity arose in 2014 when Rockland St. Mary Parochial Church Council asked local landowners if they wished to rent a small piece of land. The site comprised 2.6 hectares of wetland and dry grassland surrounded by mature trees.

A group of local people got together and decided to crowd fund to raise the money for the rent and to develop the area as a community nature reserve. For this to be successful and to be sustainable in the long term it was necessary to establish a management group and to generate interest in the parish. This was done by leafletting households and also by knocking on doors and engaging with villagers.

Such was the enthusiasm for the idea that the crowd funding was successful, with local people pledging £20 each to raise the £1200 rent per annum. There were many reasons given for why local people supported the idea - some wanted an area for walking themselves (and their dogs), some an area where children could explore the environment, and others were just happy to contribute to preserving a bit of the parish.

Once the Reserve was established we were able to consolidate and develop the project. A constitution was drawn up and a committee established. A survey of the reserve was undertaken by the Norfolk Wildlife Trust and the area became recognised as a County Wildlife site. A wide range of events have been organised at the reserve; including nature surveys, treasure hunts, picnics, willow workshops, drawing and art days, yoga day.

The reserve has now been established for 3 years and it has been possible to maintain the number of stakeholders and ensure that local interest remains strong.

For further information on how to support this local project, contact:

[hellington.rsmcommunityreserve@gmail.com](mailto:hellington.rsmcommunityreserve@gmail.com)



# Hellington & Rockland St Mary Community Reserve

The Hellington and Rockland St Mary Community Reserve comprises 2.7 hectares (6.6 acres) of land owned by the Parochial Church Council (PCC).

Since early 2014 the land has been rented from the PCC on a long-term lease by the Hellington and Rockland St Mary Community Reserve, financed by an annual subscription from individuals, with additional support from the local Parish Council and Norfolk Wildlife Trust.

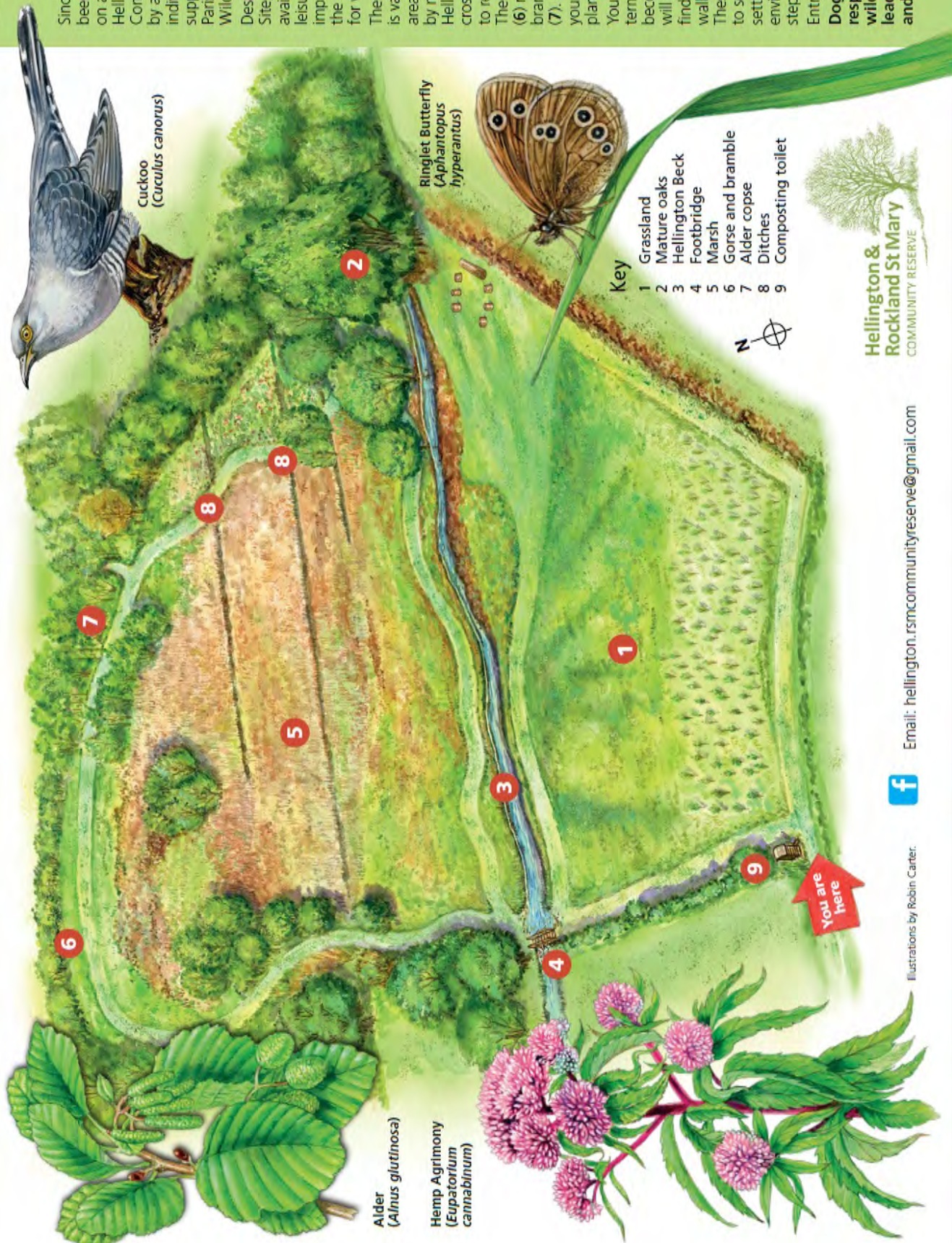
Designated a County Wildlife Site, this special place is now available to the community for leisure and education, whilst also improving the biodiversity of the area and providing a refuge for wildlife.

The landscape within the reserve is varied: there is a rising sandy area of grassland (1) crowned by mature oak trees (2). The Hellington Beck (3) can be crossed using the footbridge (4), to reach a marshy area (5).

The extreme north of the reserve (6) rises slightly, with gorse, bramble and a small alder copse (7). Paths are maintained to take you around the reserve, with planks to cross small ditches (8).

You can help support the long-term viability of the reserve by becoming a stakeholder. You will receive our newsletters and find out about events, surveys, walks, work parties and picnics. These give us all an opportunity to socialise in a beautiful setting, learn about the natural environment and take practical steps to improve it.

Entry is free and open to all. **Dog owners please be responsible: help protect the wildlife by keeping dogs on leads, cleaning up after them and staying on the pathways.**



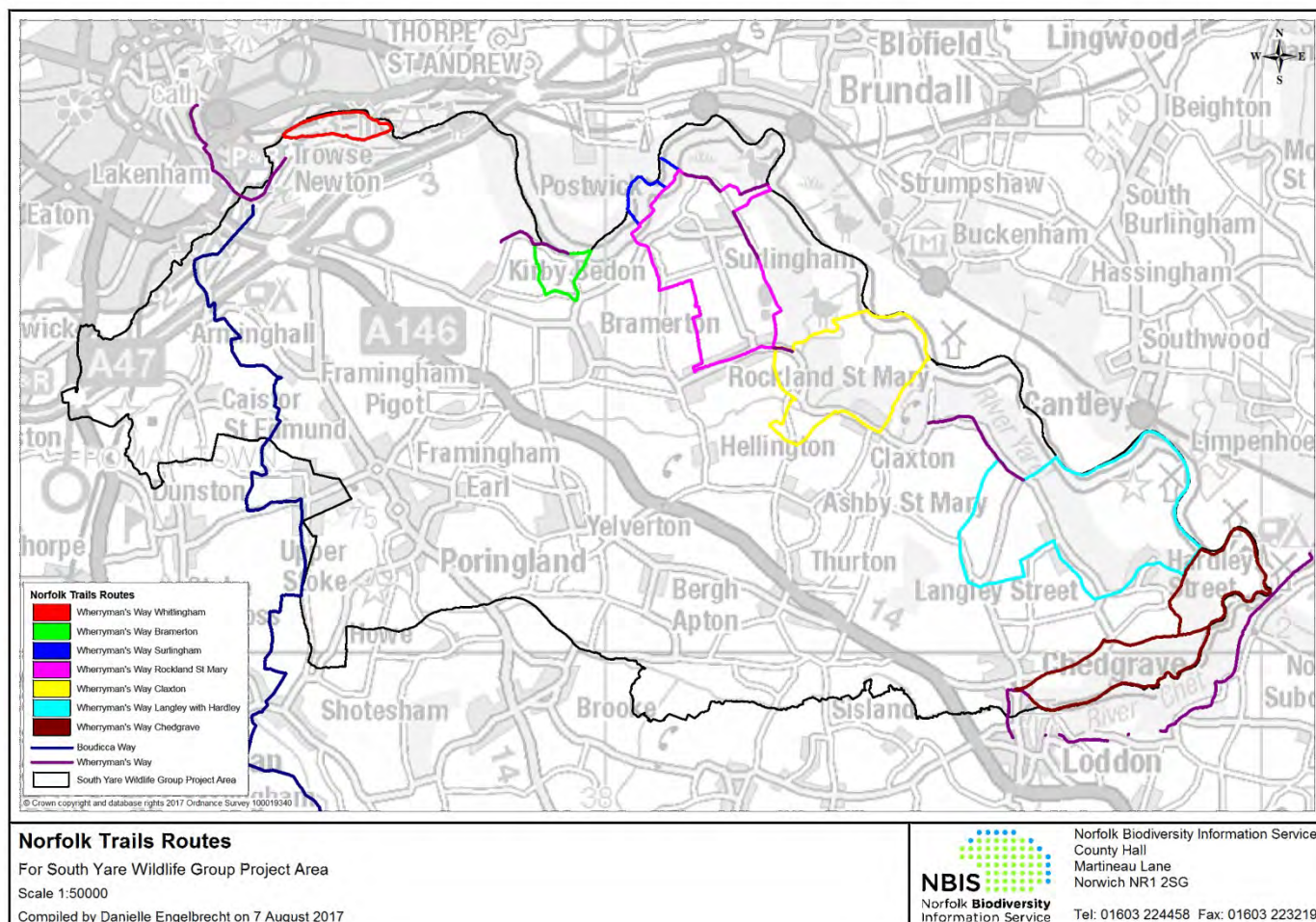
Email: [hellington.rsmcommunityreserve@gmail.com](mailto:hellington.rsmcommunityreserve@gmail.com)

Illustrations by Robin Carter



## GETTING OUT IN THE SOUTH YARE WILDLIFE GROUP AREA

There are lots of opportunities for getting out and enjoying the South Yare Wildlife Group Area. Whether you go for a walk along one of the many circular walks that the Wherryman's Way has to offer or you take a walk along Boudicca's Way, there's plenty of opportunities to enjoy Norfolk's stunning landscape.



### Boudicca Way

“The Boudicca Way is a long distance footpath which runs for approximately 36 miles between Diss and Norwich. The Boudicca Way is named after the legendary warrior Queen of the Iceni, whose tribes once inhabited the area, and passes through the beautiful, unspoilt rural countryside of South Norfolk and the Waveney Valley where visitors will find sites where unusual wildlife and flora are present” - LDWA, 2017.

### Wherryman's Way

“The Wherryman's Way is one of a number of routes following the course of the River Yare between Norwich and Great Yarmouth. The route takes its name from the wherry, a large cargo-carrying barge whose elegant black sails were a once common sight on these waters. You can walk the whole route or explore parts of it by cycle, train and river bus. Alternatively you can explore one of the ten circular village walks en-route. Look out for the unique waymarkers along the route, which include figures and sculptures” - Wherryman's Way, 2017.

Information taken from: <https://www.norfolk.gov.uk/out-and-about-in-norfolk/norfolk-trails>, [https://www.ldwa.org.uk/ldp/members/show\\_path.php?path\\_name=Boudicca+Way](https://www.ldwa.org.uk/ldp/members/show_path.php?path_name=Boudicca+Way), <http://www.wherrymansway.net/>



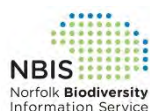
## SPECIES RECORDING

Norfolk Biodiversity Information Service (NBIS) collects, collates, manages and disseminates information on species, habitats, geodiversity and protected sites in Norfolk. The majority of species records come from volunteer recorders, who regularly send in details of the wildlife they have seen.

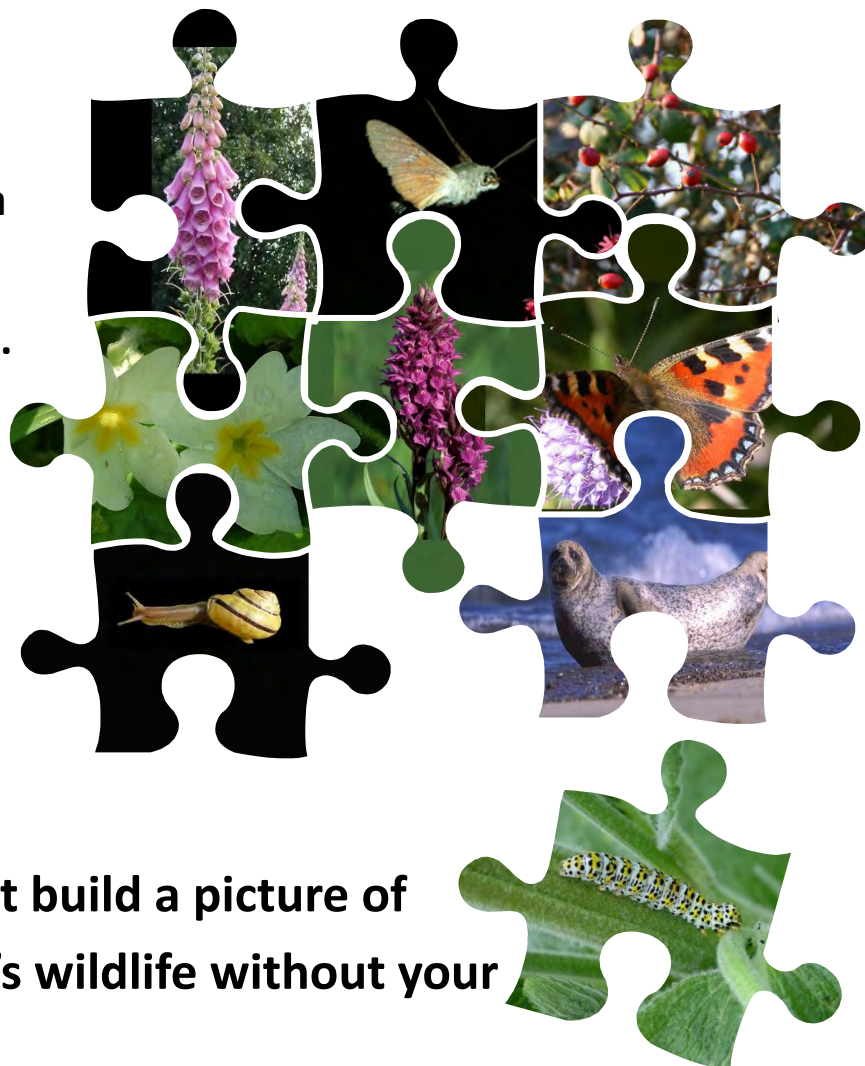
**If you want to record wildlife in the South Yare Wildlife Group Area and be part of improving our understanding of the area's environment, helping to protect it, you need to record the 'four Ws' – WHAT you saw, WHERE you saw it, WHEN you saw it and WHO you are.**

If you're not 100% sure of what species it is, then please don't record it. Or send a photo to NBIS so they can check the identification.

You can email your records to [nbis@norfolk.gov.uk](mailto:nbis@norfolk.gov.uk) or why not use the South Yare Wildlife Group online recording form at : <http://southyarewildlifegroup.org/>



**There's a  
piece  
missing...**



**We can't build a picture of  
Norfolk's wildlife without your  
help!**

Mullein moth caterpillar © Su Waldron



## THE COUNTRYSIDE CODE

The countryside code helps members of the public to respect, protect and enjoy the countryside. It is mostly common sense, and by following it we can ensure that visiting the countryside is an enjoyable experience for everyone.

### **Be safe, plan ahead and follow any signs:**

Even if you're just venturing out locally it is best to get the latest information on where you can and can't go. For example some areas of open land may be closed while work is carried out or during breeding seasons. Follow advice and local signs. Be prepared for the unexpected!

### **Leave gates and property as you find them:**

Respect the working life of the countryside. Our actions can have an effect on people's livelihoods, our heritage and the safety and welfare of animals and ourselves.

### **Protect plants and animals, and take your litter home:**

We have a responsibility to protect our countryside both now and for future generations. Make sure you don't harm animals, birds, plants or trees.

### **Keep dogs under close control:**

The countryside is a great place to exercise dogs. However it is every owner's duty to ensure that their dog is not a danger or nuisance to farm animals, wildlife or other people.

### **Consider other people:**

Showing consideration and respect for other people who live, work or use the countryside for recreation helps to make it a pleasant environment for everyone.



Walking in the woods © NCC



## USEFUL WEB LINKS AND REFERENCES

### General

Norfolk Biodiversity Information Service: [www.nbis.org.uk](http://www.nbis.org.uk)

Norfolk Biodiversity Partnership: [www.norfolkbiodiversity.org](http://www.norfolkbiodiversity.org)

Norfolk Non-native Species Initiative: <http://www.norfolkbiodiversity.org/nonnativespecies/>

Norfolk Wildlife Trust: <http://www.norfolkwildlifetrust.org.uk/>

Norfolk Rivers Trust: <http://www.norfolkriverstrust.org/>

### Geodiversity

Norfolk GEODIVERSITY Partnership: <https://sites.google.com/site/norfolkgeodiversity/>

### Landscape Characterisation:

South Norfolk Landscape Assessment: [https://www.south-norfolk.gov.uk/sites/default/files/](https://www.south-norfolk.gov.uk/sites/default/files/LUC_2001_Landscape_Assesment_Volume_4_Introduction.pdf)

[LUC 2001 Landscape Assesment Volume 4 Introduction.pdf](https://www.south-norfolk.gov.uk/sites/default/files/LUC_2001_Landscape_Assesment_Volume_4_Introduction.pdf),

South Norfolk Landscape Character Assessment: [https://www.south-norfolk.gov.uk/sites/default/files/](https://www.south-norfolk.gov.uk/sites/default/files/LUC_2001_Landscape_Character_Assessment_Introduction.pdf)

[LUC 2001 Landscape Character Assessment Introduction.pdf](https://www.south-norfolk.gov.uk/sites/default/files/LUC_2001_Landscape_Character_Assessment_Introduction.pdf)

Broads Authority Landscape Character Assessment: [http://www.broads-authority.gov.uk/ data/assets/pdf file/0010/412876/Area 13 - Yare - Claxton to Hardley Marshes-1.pdf](http://www.broads-authority.gov.uk/data/assets/pdf_file/0010/412876/Area_13_-_Yare_-_Claxton_to_Hardley_Marshes-1.pdf)

### Important Sites

Protected sites: <http://www.naturalengland.org.uk/ourwork/conservation/designatedareas/default.aspx>

SSSI Glossary: <http://www.sssi.naturalengland.org.uk/special/sssi/glossary.cfm>

SSSI Citations: <http://www.sssi.naturalengland.org.uk/special/sssi/search.cfm>

Yare Broads and Marshes Citations: [https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?](https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1001231&SiteName=Broads&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=)

[SiteCode=S1001231&SiteName=Broads&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=](https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1001231&SiteName=Broads&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=)

County Wildlife Site Citations: [http://www.nbis.org.uk/sites/default/files/documents/](http://www.nbis.org.uk/sites/default/files/documents/cwsinfosheet2016.pdf)  
[cwsinfosheet2016.pdf](http://www.nbis.org.uk/sites/default/files/documents/cwsinfosheet2016.pdf)

County Wildlife Site Information: [https://www.norfolkwildlifetrust.org.uk/documents/cws/](https://www.norfolkwildlifetrust.org.uk/documents/cws/norfolk_county_wildlife_sites_handbook_2013)  
[norfolk county wildlife sites handbook 2013](https://www.norfolkwildlifetrust.org.uk/documents/cws/norfolk_county_wildlife_sites_handbook_2013)

### Threats and Vulnerabilities

Non-native Species: <http://www.norfolkbiodiversity.org/nonnativespecies/>

SSSI Threats: <http://publications.naturalengland.org.uk/file/5757293882769408>

Ramsar Threats: <http://jncc.defra.gov.uk/pdf/RIS/UK11010.pdf>, [https://](https://designatedsites.naturalengland.org.uk/)  
[designatedsites.naturalengland.org.uk/](https://designatedsites.naturalengland.org.uk/)

Recreational Impacts Study: [http://www.nbis.org.uk/sites/default/files/documents/](http://www.nbis.org.uk/sites/default/files/documents/Norfolkreport130117.pdf)  
[Norfolkreport130117.pdf](http://www.nbis.org.uk/sites/default/files/documents/Norfolkreport130117.pdf)

SAC Threats: <http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0013577>

SPA Threats: <http://jncc.defra.gov.uk/page-1400>

## **Habitats and Land-Use**

UK Biodiversity Action Plan Habitats: <http://jncc.defra.gov.uk/page-5717>

Environmental Stewardship: <http://www.naturalengland.org.uk/ourwork/farming/funding/es/default.aspx>

Countryside Stewardship: <https://www.gov.uk/government/collections/countryside-stewardship-get-paid-for-environmental-land-management#capital-grants>

## **Species**

Biodiversity Action Plan species: <http://jncc.defra.gov.uk/page-5717>

Ancient Woodland: <https://www.forestry.gov.uk/fr/infd-5w2g5b> and <http://publications.naturalengland.org.uk/file/113006>

Environmental Stewardship: <http://www.naturalengland.org.uk/ourwork/farming/funding/es/default.aspx>

Byfield, AJ & Wilson, PJ (2005). *Important Arable Plant Areas: identifying priority sites for arable plant conservation in the United Kingdom*. Plantlife International, Salisbury, UK.

Walker, H, Cunningham, S, Ellis, B & Neal, S (2011). *Important Arable Plant Areas in Norfolk. A preliminary study*.

## **Water Quality**

Environment Agency River monitoring: [http://maps.environment-agency.gov.uk/wiyby/queryController?top-c=wfd\\_rivers&ep=2ndtierquery&lang=e&layerGroups=1&x=567473.854&y=326146.109&extraClause=EA\\_WB\\_ID~%27GB105033047620%27&textonly=off&latestValue=&latestField=](http://maps.environment-agency.gov.uk/wiyby/queryController?top-c=wfd_rivers&ep=2ndtierquery&lang=e&layerGroups=1&x=567473.854&y=326146.109&extraClause=EA_WB_ID~%27GB105033047620%27&textonly=off&latestValue=&latestField=)

Environment Agency Water Plant Reports: <http://www.broads-authority.gov.uk/news-and-publications/publications-and-reports/conservation-publications-and-reports/water-conservation-reports>

## **Local Action Groups:**

South Yare Wildlife Group: <http://southyarewildlifegroup.org/> and <https://southyarewildpatch.org/fact-sheets/>

Bergh Apton Conservation Trust: <http://berghapton.org.uk/villorg/bact/>

Ted Ellis Trust: <http://www.wheatfen.org/>

Poringland Lakes: <http://www.poringlandlakes.co.uk/Home/>

Norwich Fringe Project: <https://norwichfringeproject.wordpress.com/>

Norfolk Wildlife Trust: <https://www.norfolkwildlifetrust.org.uk/home>

RSPB: <https://www.rspb.org.uk/>

Broads Authority: <http://www.broads-authority.gov.uk/>

## **Getting Out in the Babingley Catchment Area**

Norfolk Trails: <https://www.norfolk.gov.uk/out-and-about-in-norfolk/norfolk-trails>

Boudicca Way: [https://www.ldwa.org.uk/ldp/members/show\\_path.php?path\\_name=Boudicca+Way](https://www.ldwa.org.uk/ldp/members/show_path.php?path_name=Boudicca+Way)

Wherryman's Way: <http://www.wherrymansway.net/>

## **Species Recording**

NBIS Online Recording: <http://www.nbis.org.uk/AllSpeciesSurvey>



## APPENDIXES

### Appendix 1: County Wildlife Site reference numbers and site names

CWS Reference Number	County Wildlife Site Name
119	Howe Grove
136	Bergh Apton House
259	Abbot's Plantation
260	Narborough House Woods & Dimora Woods
261	Caistor Wood
262	Framingham Hall Grounds
263	Furze Close
265	Framingham Pigot East Pond
271	Long Plantation
272	Foxes' Grove
273	Depot Meadow
274	Cantley Hill & Broken Back
275	Arminghall Wood
277	Bramerton Hall Grounds
279	Whitlingham Fen
280	The Thicks
281	Duncan's Marsh
282	The Beck Meadow
1455	Carrow Abbey Marsh
2029	Hazelmere Hole
2048	Land at Boundary Farm
2120	Caistor St Edmund Roman Town
2192	Chedgrave Common and Marshes
2193	Loddon Common
2197	The Thicket
2210	Trowse Meadows
2211	Old Wood
2212	Whitlingham Marsh
2213	Trowse Wood
2222	Bergh Apton Marsh
2262	Hellington Community Land & Low Common
2291	Land South-East of Burgate Lane Farm

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