

Borough Council of King's Lynn & West Norfolk



Habitats Regulations Assessment of Gypsy and Traveller and Travelling Showpeople Sites

May 2024

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1.0 Introduction

- 1.1 This document satisfies the requirement for a Habitat Regulations Assessment (HRA) of Local Plans under the Conservation of Habitats and Species Regulations 2017 (as amended). This includes the requirements relating to the sites of greatest significance and international importance for nature, for which the UK has a special responsibility: breeding and resting sites for rare and threatened species and natural habitats that are at risk. The regulations and subsequent amendments require the UK to apply the Habitats and Bird Directives (EU Legislation) on how European Sites are designated and protected.
- 1.2 Special Protection Areas (SPA) and Special Areas of Conservation (SAC) are defined in the regulations as forming a national network of 'European sites'. The Regulations regulate the management of land within European sites, requiring land managers to have the consent of Natural England before carrying out management. Byelaws may also be made to prevent damaging activities and if necessary land can be compulsorily purchased to achieve satisfactory management.
- 1.3 The Regulations define competent authorities as public bodies or statutory undertakers. Competent authorities are required to make an appropriate assessment of any plan or project they intend to permit or carry out, if the plan or project is likely to have a significant effect upon a European site. The permission may only be given if the plan or project is ascertained to have no adverse effect upon the integrity of the European site. If the competent authority wishes to permit a plan or project despite a negative assessment, imperative reasons of over-riding public interest must be demonstrated, and there should be no reasonable alternatives to the scheme. The permissions process would involve the Secretary of State and the option of consulting the European Commission. In practice, there will be very few cases where a plan or project is permitted despite a negative assessment. This means that a plan such as the Borough Council of King's Lynn and West Norfolk Local Plan must be assessed, and the assessment must either decide that it is likely to have no significant effect on a European site or ascertain that there is no adverse effect upon the integrity of the European site.
- 1.4 The purpose of this HRA is therefore to assess the proposed sites that have been identified to the needs of Gypsy, Traveller and Travelling Showpeople (GTTS) within the Local Plan, and identify if they have the potential to cause a 'likely significant effect' on Natura 2000 or European Sites. This document should be read alongside the Habitats Regulations Assessment of the King's Lynn and West Norfolk Local Plan Review (May 2021).

2.0 Habitats Regulations Assessment Process

2.1 A Habitats Regulations Assessment is a step-by-step process which is undertaken in order to determine whether a project or plan will have a likely significant effect (LSE) upon a European site. Before a competent authority can authorise a proposal, they must carry out an Appropriate Assessment of a plan or project in line with procedure detailed in the Habitats Regulations. The whole procedure is called a Habitats Regulations Assessment, with the Appropriate Assessment being part of one of four

stages necessary to complete an HRA. The results of the HRA are intended to influence the decision of the competent authority when considering whether or not to authorise a proposal.

3.0 Stages of Habitats Regulations Assessment.

- 3.1 Stage One of the HRA is 'Screening'. Plans, projects or sites will be investigated for their potential to have a likely significant effect upon a European site. If it is assessed that there is likely to be a significant effect, and is not connected to the management of the site, an Appropriate Assessment is required. Proposals that are found not likely to have a significant effect upon a European site will be 'screened out' at this stage and no further investigation will be required.
- 3.2 Stage Two of the HRA is the 'Appropriate Assessment and the Integrity Test'. The plan-making authority must undertake an Appropriate Assessment which seeks to provide an objective and scientific assessment of how the proposed Local Plan may affect the qualifying features and conservation strategies of European sites.
- 3.3 The UK Government accepts the definition for the 'integrity' of a site as 'the coherence of its ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which the site is (or will be) designated.' Other factors may also be used to describe the 'integrity' of a site.
- 3.4 Stage Three of the HRA is 'Imperative reasons of overriding public interest and compensatory measures'. If the Competent Authority determines that there are imperative reasons of overriding public interest notwithstanding adverse impacts upon the integrity of the European site, and there are no alternatives, the plan may be given effect. In this case, the plan-making authority must notify the Secretary of State at least 21 days before authorisation; the Secretary of State may give a direction prohibiting the plan from being given effect. It is unlikely that this stage would be reached.

4.0 Consultation

4.1 Natural England is a statutory consultee, and has been consulted during the drafting of this HRA. Natural England has been consulted upon previous stages of the Local Plan and HRA, and the HRA has been included in previous public consultations of the emerging Local Plan.

5.0 European Sites

5.1 European sites (also known as Natura 2000/N2K sites) are sites that have been classified or designated by the Department for Environment, Food, and Rural Affairs (Defra) or Natural England, as Special Protection Areas (SPA) for those sites where birds are the special interest feature, and Special Areas of Conservation (SAC) where the habitats or species (other than birds) are the reason for designation. The distribution of these across the Borough of King's Lynn and West Norfolk are shown in figure 1.



Figure 1: European sites across the Borough of King's Lynn and West Norfolk

- 5.2 Wetlands of International Importance, designated under the Ramsar Convention, are called Ramsar sites and are designated and overseen by the International Union for the Conservation of Nature (ICUN), and are not European sites. There is often considerable overlap between the boundaries of Ramsar sites, and those of European sites. Government policy in the National Planning Policy Framework (NPPF) also requires Ramsar sites to be treated in the same manner as European sites. This also applies for sites that are being evaluated for designation, including potential Special Protection Area (pSPA), Site of Community Importance (SCI), Candidate Special Area of Conservation (cSAC) and proposed Ramsar sites. Therefore, although Appropriate Assessment only legally applies to European sites, previously mentioned should be assessed. Therefore, for the purposes of this report, the term 'European site(s)' refers to all sites under assessment.
- 5.3 As can be noted in Appendix B the notable features of the Ramsar sites are usually very similar to the notable features of the SPA and / or SAC designations, both geographically and ecologically.
- 5.4 These are all large sites that contain a range of plant and animal species and their supporting habitats. There are also Sites of Special Scientific Interest (SSSI) across the area, some of which overlap with the Ramsar, SAC & SPA sites and others that are completely separate and are usually smaller in size. The impact of development on these sites needs to be assessed according to the reason for their designation i.e. if the site is a breeding ground for a species it will have a different impact risk zone identified than if it is a notable geological feature. Impact of development of these sites should also be assessed as part of the project HRA. Figure 2 depicts the SSSIs in the area along with the European sites and the proposed Gypsy, Traveller and Travelling Showpeople sites.



Figure 2: European Sites and the SSSIs across the Borough of King Lynn and West Norfolk

6.0 Assessment of Sites

- 6.1 A Habitats Regulations Assessment for the pre-submission Plan dated May 2021 is published on the Council's website and examines the full Local Plan. This current addendum to the HRA assesses the potential GTTS sites that have been consulted on in January 2024 and responds to the Natural England consultation response that was received.
- 6.2 The following sites will also be subject to a further consultation in May 2024 where additional comments may be received. This HRA will be amended accordingly once following the period of consultation.
- 6.3 The following sites are identified as being proposed allocations for Gypsy, Traveller and Travelling Showpeople to have pitches/plots provided through intensification, formalisation and/ or extension of current sites. These sites are being proposed to address the identified GTTS accommodation needs within the Borough for the first five years of the Local Plan period as required by National Planning Policy.
- 6.4 The sites have been subject to individual site assessments and public consultation. Where sites are constrained by issues, such as flood risk, separate evidence base reports have been prepared.

Site Reference	Address	Proposed number of Pitches/Plots
Intensification and / or extens	ion	
GT05	19 - 121 Magdalen Road, Tilney St Lawrence	1
GT09	The Stables, Marshland St James	1
GT11	Homefields, (Western Side, Goose Lane), Marshland St James	1
GT14	Land at Blunts Drove (Proposed Allocation) Social Site	10
GT17	Land at The Lodge, Small Lode, Upwell	9
GT18	Land at 2 Primrose Farm, Small Lode, Upwell	13
GT20	Land at Botany Bay, Upwell	1
GT21	Land at Four Acres, Upwell	5
GT28	Many Acres (Smithy's Field), Small Lode, Upwell, Norfolk	2
GT29	No 2 The Stables, (Rear of stables), Lynn Road, Wiggenhall St Germans	1
GT34	Land at Creaksville, South Creake	1

Table 1: Proposed sites for Gypsy, Traveller and Travelling Showpeople pitches/plots

Site Reference	Address	Proposed number of Pitches/Plots
GT54	Land at the Pines,	1
	Whittington	
GT55	Land at Victoria Barns, Basin Road, Outwell	1
GT56	Wheatley Bank, Walsoken (South of Worzals parallel to A47)	9
GT59	Land at Spriggs Hollow, Walsoken	5
GT65	Tall Trees, (A1122) Downham Market	4
GT66	Land at Brandon Road, Methwold	1
Authorising Pitches	·	
GT59	Land at Spriggs Hollow, Walsoken	1
GT65	Tall Trees, (A1122) Downham Market	1
Sites for Travelling Showped	ple	
GT25	Land at the Oaks, Northwold	2
GT62	Land at Redgate Farm, Magdalen Road, Tilney St Lawrence	2

7.0 GIRAMS

- 7.1 Norfolk Councils have developed the Norfolk Green Infrastructure and Recreational Impact Avoidance and Mitigation Strategy (known locally as GIRAMS). GIRAMS addresses the concern that residential growth, combined with an increase in tourism accommodation, will result in more people visiting and possibly harming Habitats Sites. The document provides the County with the opportunity to address mitigation strategically. As it is not possible to rule out residual effects, strategic mitigation is proposed within the document. This is in order to ensure that Local Plans can be adopted and to enable planned growth through the implementation of measures to avoid adverse effects on the integrity of Habitats Sites.
- 7.2 Gypsy, Traveller and Travelling Showpeople accommodation is considered to be a form of housing and therefore the provision of new pitches, whether by intensifying the use of an existing site or the creation of new sites, requires GIRAMS to be considered. In accordance with the requirements of GIRAMS all residential development within the Zone of Influence (ZOI) should provide a project level HRA at planning application stage.
- 7.3 GIRAMS identifies that the ZOI recreational impact from residential development on Habitat Sites covers the majority of Norfolk. In addition to this, the document identifies the Impact Risk Zones (IRZ) for Habitat Sites in Norfolk. The Habitat Sites

within the King's Lynn and West Norfolk Borough and their IRZs are identified in the table below outlining the GTTS sites that fall within them.

Table 2: Current Impact Risk Zones for Habitat Areas

Habitat Site	Current Impact Risk Zone	Sites within Impact Risk Zones
Ouse Washes SPA/SAC/Ramsar	5km	GT65 (1.5km)
Breckland SPA/SAC	8km	GT66 (0.27km); GT54 (4.07km); GT25 (2.18km)
Roydon Common SAC/ Ramsar & Dersingham Bog SAC	7km	-
The Wash SPA/ Ramsar	3km	-
The Wash & North Norfolk Coast SAC	3km	-
North Norfolk Coast SPA & Ramsar	5km	-
River Wensum SAC	4km	-
Norfolk Valley Fens	3km	GT25 (2.95km); GT54 (2.82km)

- 7.4 Further to the Impact Risk Zone, the Breckland SPA/SAC also has a 1.5km buffer zone around it. Within the buffer zone it is predicted that development would result in a significant effect on the Stone Curlews especially those that are established outside the confines of the protected areas but are a part of the population inhabiting the SPA/SAC.
- 7.5 Information relating to the proposed allocated sites and Habitat Sites that are nearest to them is in Appendix A.
- 7.6 There are further sites that lie just outside the Impact Risk Zone and should be carefully evaluated as part of the planning application process. GTTS sites GT17; GT18; and GT28 are over 5km but below 6kms from the Ouse Washes and GT34 and GT39 are under 4.5km from the River Wensum SAC.
- 7.7 The GIRAMS requires all sites to provide project level HRAs for residential developments within the Zone of Influence which encompasses all of KLWN, as outlined within GIRAMS guidance¹. It is recommended that the sites within or close to Impact Risk Zones (IRZs) i.e. those specifically mentioned above in Table 2 and in Paragraph 7.6, provide a bespoke HRA addressing the possible impacts of the development regardless of its scale as part of a detailed planning application.

¹ GIRAMS guidance note May23.pdf

Appendix A: Distance of each Proposed Gypsy Traveller and Showpeople Site from the nearest Habitat Site

Site Name/Settlement	19 - 121 Magdalen Road, Tilney St Lawrence	Site Reference	GT05
Site Capacity	Some remaining capacity	Site Area (Ha)	0.23
Proposed Number of additional pitches/plots	1	Ownership	Private
Nearby Habitat sites	The Wash & North Norfolk Coast SAC The Wash Ramsar /SPA The Wash NNR	Distance	11.26km 11.26km 11.08km

Site Name/Settlement	The Stables, Gooses Lane, Walpole St Andew	Site Reference	GT09
Site Capacity	Some remaining capacity.	Site Area (Ha)	0.26
Proposed Number of pitches to be authorised	1	Ownership	Private
Nearby Habitat sites	The Wash NNR/ Ramsar/SPA Ouse Washes Ramsar/SAC Ouse Washes SPA Wiggenhall St. Germans SSSI	Distance	16.26km 10.36km 11.9km 7.99km

Site Name/Settlement	Homefields, (Western Side, Goose Lane), Walpole St Andrew, (Homefield)	Site Reference	GT11
Site Capacity	Some remaining capacity	Site Area (Ha)	0.21
Proposed Number of additional pitches/plots	1	Ownership	Private
Nearby Habitat sites	The Wash NNR/Ramsar/SPA Ouse Washes Ramsar/SAC/SSSI Ouse Washes SPA Wiggenhall St. Germans SSSI	Distance	16.24km 10.46km 11.99km 8.02km

Site Name/Settlement	West Walton Court, Blunts Drove, Walton Highway	Site Reference	GT14
Site Capacity	Some remaining capacity	Site Area (Ha)	1.34
Proposed Number of additional pitches/plots	10	Ownership	Private/ Public
Nearby Habitat sites	Ouse Washes Ramsar/SAC/SSSI Ouse Washes SPA The Wash NNR Nene Washes SPA Islington Heronry SSSI	Distance	12.62 12.62 14.42 13.32 7.85

Site Name/Settlement	The Lodge, 196 - 198 Small Lode, Upwell (The Caravan Site)	Site Reference	GT17
Site Capacity	Limited remaining capacity, but more with Broad Location	Site Area (Ha)	2.23
Proposed Number of additional pitches/plots	9	Ownership	Private
Nearby Habitat sites	The Wash NNR/Ramsar/SPA Ouse Washes Ramsar/SAC/SSSI Ouse Washes SPA	Distance	22.44km 5.83km
			5.87km

Site CapacityLimited remaining capacity, but more with Broad LocationSite Area (Ha)2.17Proposed Number of additional pitches/plots13OwnershipPrivateNearby HabitatThe WashDistance22.37km	Site Name/Settlement	Primrose Farm, Small Lode, Upwell	Site Reference	GT18
of additional pitches/plots	Site Capacity	capacity, but more	Site Area (Ha)	2.17
Nearby Habitat The Wash Distance 22.37km	of additional	13	Ownership	Private
sites NNR/Ramsar/SPA Ouse Washes Ramsar/SAC/SSSI Ouse Washes SPA 5.87km 5.93km	-	NNR/Ramsar/SPA Ouse Washes Ramsar/SAC/SSSI	Distance	5.87km

Site Name/Settlement	Botany Bay, Stonehouse Road, Upwell	Site Reference	GT20
Site Capacity	Some remaining capacity	Site Area (Ha)	0.19
Proposed Number of additional pitches/plots	1	Ownership	Private
Nearby Habitat sites	The Wash NNR/Ramsar/SPA Ouse Washes Ramsar/SAC/SSSI Ouse Washes SPA		23.06 6.92 6.92

Site Name/Settlement	Four Acres, March Riverside, Upwell	Site Reference	GT21
Site Capacity	Some remaining capacity	Site Area (Ha)	01.49
Proposed Number of additional pitches/plots	5	Ownership	Private
Nearby Habitat sites	The Wash NNR/Ramsar/SPA Ouse Washes Ramsar/SAC/SSSI/ SPA	Distance	24.4km 7.49km

Site Name/Settlement	The Oaks, Mill Drove, Northwold	Site Reference	GT25
Site Capacity	Some remaining capacity	Site Area (Ha)	0.32
Proposed Number of additional pitches/plots	2	Ownership	Private
Nearby Habitat sites	Breckland SPA/SAC Norfolk Valley Fens SAC Ouse Washes Ramsar/SAC/SPA/SSSI Weeting Heath NNR The Brinks SSSI, Northwold	Distance	2.18km 2.95km 15.87km 7.05km 1.95km

Site Name/Settlement	Many Acres (Smithy's Field), Small Lode, Upwell, Norfolk	Site Reference	GT28
Site Capacity	Some remaining capacity	Site Area (Ha)	0.36
Proposed Number of additional pitches/plots	2	Ownership	Private
Nearby Habitat sites	The Wash NNR/Ramsar/SPA Ouse Washes Ramsar/SAC/SSSI/ SPA	Distance	22.56 5.94

Site Name/Settlement	The Stables, Wiggnehall St Germans	Site Reference	GT29
Site Capacity	No remaining capacity and no prospect of an extension to the site	Site Area (Ha)	0.11
Proposed Number of additional pitches/plots	1	Ownership	Private
Nearby Habitat sites	The Wash NNR/Ramsar/SPA	Distance	7.73km-8.29km
	The Wash & North Norfolk Coast SAC Ouse Washes Ramsar/SAC/SPA/SSSI		8.29km
	Wiggenhall St. Germans SSSI		1.55km

Site Name/Settlement	Creakesville, The Common, South Creake, Fakenham	Site Reference	GT34
Site Capacity	Some remaining capacity	Site Area (Ha)	0.41
Proposed Number of additional pitches/plots	1	Ownership	Private
Nearby Habitat sites	North Norfolk Coast Ramsar River Wensum	Distance	9.6km 4.12km
	SAC/SSSI Holkham NNR		9.6km

Site Name/Settlement	The Pines, Methwold Road, Whittington	Site Reference	GT54
Site Capacity	Some remaining capacity	Site Area (Ha)	0.19
Proposed Number of additional pitches/plots	1	Ownership	Private
Nearby Habitat sites	Breckland SPA/SAC Norfolk Valley Fens SAC	Distance	4.07km 2.82km
	Ouse Washes Ramsar/SAC/SSSI/ SPA		14.09km
	Holkham NNR		8.69km
	Boughton Fen SSSI		2.75km

Site Name/Settlement	Victoria Barn, Land East of Basin Farm, Basin Road, Outwell	Site Reference	GT55
Site Capacity	Some remaining capacity	Site Area (Ha)	0.13
Proposed Number of additional pitches/plots	1	Ownership	Private
Nearby Habitat sites	The Wash NNR/Ramsar/SPA Ouse Washes Ramsar/SAC/SSSI/ SPA	Distance	21km 8.21km

Site Name/Settlement	Wheatley Bank, Walsoken (South of Worzals paralell to A47)	Site Reference	GT56
Site Capacity	Some remaining capacity	Site Area (Ha)	0.13
Proposed Number of additional pitches/plots	9	Ownership	Private
Nearby Habitat sites	The Wash NNR Nene Washes Ramsar/SAC/SPA Islington Heronry SSSI	Distance	13.83km 12.5km 8.89km

Site Name/Settlement	Spriggs Hollow	Site Reference	GT59
Site Capacity	Some remaining capacity	Site Area (Ha)	0.48
Proposed Number of additional pitches/plots	5	Ownership	Private
Nearby Habitat sites	The Wash NNR/Ramsar/SPA Ouse Washes Ramsar/SAC/SPA/SSSI	Distance	20.15km 1.5km

Site Name/Settlement	Redgate Farm, Magdalen Road, Tilney St Lawrence Travelling Showpeople	Site Reference	GT62
Site Capacity	Some remaining capacity	Site Area (Ha)	0.24
Proposed Number of additional pitches/plots	2	Ownership	Private
Nearby Habitat sites	The Wash NNR/Ramsar/SPA Ouse Washes Ramsar/SAC/SPA/SSSI Wiggenhall St.	Distance	11.07km 11.33km
	Germans SSSI		2.2km

Site Name/Settlement	Tall Trees, Downham Road Salters Lode Downham Market	Site Reference	GT65
Site Capacity	Some remaining capacity	Site Area (Ha)	0.47
Proposed Number of additional pitches/plots	4	Ownership	Private
Nearby Habitat sites	The Wash NNR/Ramsar/SPA	Distance	11.44km
	Ouse Washes Ramsar/SAC/SPA/SSSI		10.36
	Wiggenhall St. Germans SSSI		1.91km

Site Name/Settlement	Land at Brandon Road, Methwold	Site Reference	GT66
Site Capacity	Some remaining capacity	Site Area (Ha)	0.47
Proposed Number of additional pitches/plots	1	Ownership	Private
Nearby Habitat sites	Breckland SAC/SPA Breckland Forest SSSI	Distance	0.27km 0.27km

Appendix B: Detail on each of the Habitat Sites within King's Lynn and West Norfolk

The Wash		
Site Description Summary		Qualifying Features
The Wash. 30/03/88; England; 62,212 ha;	H1110	Sandbanks which are
52°56'N 000°17'E. Special Protection Area EC		slightly covered by sea
Directive; Nature Reserve, SSSI, Area of		water all the time; Subtidal
Outstanding Natural Beauty, Local Nature		sandbanks H1140. Mudflats
Reserve. A vast intertidal embayment		and sandflats not covered
incorporating one of the largest and most		by seawater at low tide;
important areas of estuarine mudflats, sandbanks		Intertidal mudflats and
and saltmarsh in Britain. Counts of wintering	114450	sandflats
waterbirds reach 320,673 individuals and include	H1150	Coastal lagoons
nationally and internationally important numbers of numerous species, notably up to 17,000	H1160	Large shallow inlets and
passerines (perching songbirds). The site is also	114470	bays
of outstanding international importance for	H1170 H1310	Reefs Salicornia and other annuals
passage birds, notable waders, and supports	пізіо	colonising mud and sand;
various breeding birds, an important shell fishery,		Glasswort and other
and the largest breeding colony in Europe of the		annuals colonising mud and
seal Phoca vitulina. Adjoining land is used for		sand
intensive agriculture, and includes several	H1330	Atlantic salt meadows
localized industrial and residential zones. There		(Glauco-Puccinellietalia
are few public access points. Ramsar site no.		maritimae)
395. Most recent RIS information: 2007.	H1420	Mediterranean and
		17enelop-Atlantic
SAC Description		halophilous scrubs
Sandbanks which are slightly covered by sea water all the time for which this is considered to		(Sarcocornetea
be one of the best areas in the United Kingdom.		17enelope17);
Mudflats and sandflats not covered by seawater		Mediterranean saltmarsh
at low tide for which this is considered to be one	S1355	scrub
of the best areas in the United Kingdom. Coastal	S1355 S1365	Lutra lutra; Otter
lagoons for which the area is considered to	51305	Phoca vitulina; Common seal
support a significant presence. Large shallow		seal
inlets and bays for which this is considered to be		
one of the best areas in the United Kingdom.		
Reefs for which this is considered to be one of		
the best areas in the United Kingdom. Salicornia		
and other annuals colonising mud and sand for		
which this is considered to be one of the best		
areas in the United Kingdom. Atlantic salt		
meadows (Glauco-Puccinellietalia maritimae) for which this is considered to be one of the best		
areas in the United Kingdom. Mediterranean and		
17enelop-Atlantic halophilous scrubs		
(Sarcocornetea 17enelope17) for which this is		
one of only four known outstanding localities in		
the United Kingdom. Which is considered to be		
rare as its total extent in the United Kingdom is		
estimated to be less than 1000 hectares. Lutra		

lutra for which the area is considered to support a significant presence. Phoca vitulina for which this is considered to be one of the best areas in the United Kingdom.	SPA Objectives
	Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring; The extent and distribution of the habitats of the qualifying features The structure and function of the habitats of the qualifying features The supporting processes on which the habitats of the qualifying features rely The population of each of the qualifying features, and, The distribution of the qualifying features within the site.
European Site Conservation Objectives for The Wash & North Norfolk Coast SAC – UK0017075 (naturalengland.org.uk) European Site Conservation Objectives for The Wash SPA – UK9008021 (naturalengland.org.uk)	

Dersingham Bog	
Dersingham Bog is the largest, and most intact	
example of an acid valley mire in East Anglia. The	
site lies in the Lower Greensand zone with the	
Sandringham Sands exposed in an old sandpit.	
The mire itself lies on shallow peat and has	
extensive areas dominated by bog mosses with	
several locally rare species of plant. The mire is	
bordered on one side by an escarpment, which	
marks the edge of an ancient coastline, which has	
large areas of heathland on its slopes. Self-	
regenerating pine woodland has developed on the	
top of the escarpment. The site also has	
considerable ornithological and entomological	
interest. On the lowest-lying land there is a strong	
iron pan formation on shallow peat with Common	
Cottongrass Eriophorum angustifolium as the	

dominant species. The main area dominated by	
Bog Mosses Sphagnum spp. Lies along the base	
of the escarpment. Several uncommon plants are	
present including Round-leaved Sundew Drosera	
rotundifolia, Bog Asphodel Narthecium	
ossifragum, Cranberry Vaccinium oxycoccos and	
White Beak Sedge Rhynchospora alba. Small bog	
pools are common in this zone which is widest at	
the southern end of the site. Within the mire are	
areas of wet heath and marshy grassland	
dominated by Cross-leaved Heath Erica tetralix	
and Purple Moor-grass Molinia caerulea	
respectively. In the damp heath areas, the rare	
moss Dicranum spurium is locally abundant as is	
the local Sphagnum molle. Scrub and young trees	
are encroaching on the bog in many places. Bog	
Myrtle Myrica gale is a common shrub on the mire	
and forms a dense area of scrub with Silver Birch	
Betula pendula at the northern end of the site. In	
the valley is a small piece of carr dominated by	
Alder Alnus glutinosa. Up the sides of the	
escarpment, there is a graduation from wet to dry	
heath which in turn grades to woodland. The	
heathland is dominated by Heather Calluna	
vulgaris but there are also large areas of Bracken	
Pteridium aquilinum on the slopes. The woodland	
is chiefly Scots Pine Pinus sylvestris and Silver	
Birch with Bracken in the field layer.	
Rhododendron Rhododendrom ponticum is	
invasive in places. The site is noted for the	
presence of the dragonfly Sympetrum scoticum, a	
northern species with a very local distribution in	
SE England. The site is notable for the large	
breeding population of Shelduck, with up to 100	
pairs nesting. The surrounding heathland is an	
important breeding site for Nightjars. Other local	
breeding species are Tree Pipit and Grasshopper	
Warbler and both Redshank and Curlew have	
nested. There is a colony of Sand Martins in the	
exposed face of the sandpit. Part of the site,	
Dersingham Pit, is of geological interest and is the	
type locality for the Dersingham Formation. It	
shows a section through the topmost Leziate	
Beds of the Sandringham Sands and the basal	
Dersingham Formation Sands. The latter	
underlies the Snettisham Clay locally. This is an	
important regional locality for elucidation of the	
Norfolk Lower Cretaceous rock sequences	
RAMSAR Principle Features	
Principal Features: The largest and most intact	
acid valley mire in the East Anglia region of	
England. It is believed to have developed at the	
foot of an ancient coastal cliff-line, bordered sea-	
wards by reclaimed saltmarshes, and now lies on	
I marao by robalition balandronoo, and now lieb off	

	1
shallow peat at the base of the steep scarp slope.	
The mire vegetation is characterised by	
Narthecium ossifragum, Sphagnum mosses and	
the cotton-grass Eriophorum angustifolium. Wet	
heath dominated by Erica tetralix occupies a	
narrow zone between the mire itself and dry heath	
dominated by Calluna vulgaris and Pteridium	
aquilinum on steeper slopes. Dry heath in turn	
grades into woodland with Pinus sylvestris and	
Betula pendula. The site supports an important	
assemblage of wetland plants, including several	
scarce mosses and liverworts associated with	
mire and wet heath. Wetland invertebrates are	
well represented and include a number of Red	
Data Book species, including the moths	
Choristoneura lafauryana, Buckleria paludum and	
Yponomeuta rorrella; several flies and the water	
beetle Enochrus isotae. The site also supports a	
notable assemblage of breeding birds, including	
Tadorna tadorna, Caprimulgus europaeus,	
Numenius 20enelop and Tringa 20enelop.	
(Criteria 2a,2b).	
NNR Designated Sites View	
(naturalengland.org.uk)	
Ramsar Designated Sites View	
(naturalengland.org.uk)	
SSSI detail (naturalengland.org.uk)	
European Site Conservation Objectives for	
Roydon Common & Dersingham Bog SAC –	
UK0012801 (naturalengland.org.uk)	
Dersingham Bog Ramsar Sites Information	
Service	

Roydon Common		Qualifying Features
Roydon Common. 05/03/93; England; 194 ha;		
52°46'N 000°30'E. SSSI. A mixed valley mire		
exhibiting a classic sequence of vegetation types,		
linked to the varying hydrological characteristics		
of the site and influenced by the nutrient quality		
of the water. Several vulnerable or nationally		
scarce plant and invertebrate species are		
supported. The site provides nesting habitat for		
Caprimulgus europaeus, winter roosting sites for		
raptors Circus cyaneus and Falco columbarius.		
Ramsar site no. 588.		
Roydon Common and Dersingham Bog SAC		Qualifying Features
Roydon Common and Dersingham Bog represent	H4010.	Northern Atlantic wet heaths
the largest and best examples of crossleaved		with Erica tetralix; Wet
heath – bog-moss (Erica tetralix – Sphagnum		heathland with cross-leaved
compactum) wet heath in East Anglia. This		heath
vegetation community is part of a lowland mixed	H4030.	European dry heaths

	117450	
valley mire, a complex series of plant communities grading from wet acid heath through	H7150.	Depressions on peat substrates of the
valley mire to calcareous fen. This gradation is of		Rhynchosporion
outstanding interest. The mire is extremely		Objectives
diverse and supports many rare plants, birds and insects, including the black darter dragonfly Sympetrum scoticum, a northern species with a very local distribution in south-east England. The site also contains an area of dry heathland, which is dominated by heather Calluna vulgaris, gorse Ulex europaeus and young silver birch Betula pendula, and has areas of bracken around the margins. There are examples of depressions on peat substrates in natural bog pools of patterned valley mire, in flushes on the margins of valley mire and locally in disturbed areas associated with trackways and paths in mire and wet heath. Mosaics containing this habitat type are important for bog orchid Hammarbya paludosa		Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring; The extent and distribution of qualifying natural habitats The structure and function (including typical species) of qualifying natural habitats, and The supporting processes on which
		qualifying natural habitats rely
SAC Designated Sites View		
(naturalengland.org.uk)		
NNR Designated Sites View		
(naturalengland.org.uk)		
Ramsar Designated Sites View		
(naturalengland.org.uk)		
SSSI detail (naturalengland.org.uk)		
European Site Conservation Objectives for		
Roydon Common & Dersingham Bog SAC –		
UK0012801 (naturalengland.org.uk)		
Roydon Common Ramsar Sites Information		
Service		

Ouse Washes	Qualifying Features
Ouse Washes. 05/01/76; England; 2,469 ha;	
52°29'N 000°12'E. Special Protection Area EC	
Directive; SSSI. Added to the Montreux Record,	
31/10/00. A long, narrow area of seasonally	
flooded grassland providing flood storage, set	
between two channelized rivers. Wintering	
waterbirds regularly exceed 20,000 individuals,	
including nationally and internationally important	
numbers of wintering swans and various duck	
species. The site is of national importance for	
breeding ducks and waders. Human activities	
include traditional livestock grazing and hay	
production. Declining numbers of breeding	
waterfowl, changes in vegetation communities,	
and declining water quality, apparently caused by	
an increase in summer flooding, among other	

things, led the government to add Cuse Washes to the Montreux Record In October 2000. Subject of a Ramsar Advisory Mission in 2001. Ramsar site no. 77. Most recent RIS information: 1999. SAC The Ouse Washes is one of the country's few remaining areas of extensive washland habitat. The associated dykes and rivers hold a great variety of aquatic plants; the pondweeds Potamogeton spp. Are particularly well represented. The associated aquatic fauna is similarly diverse and includes spined loach Cobits taenia. The Counter Drain, with its clear water and abundant aquatic plants; is particularly important, and a healthy population of spined loach is known to occur. Status of its Cualifying Features, by maintaining or restoring: The extent and distribution of the habitats of qualifying species SPA The opulations of qualifying species, and, The distribution of auelist of qualifying species, and, The distribution of auelist of qualifying species, and, The distribution of auelist of qualifying species, and, The opulations of qualifying species, and, The objectives set out above. SPA Cualifying Features A037 Cygnus columbianus bewickii; Bewick's swan (Non-breeding) A038 Cygnus columbianus bewickii; Bewick's swan (Non-breeding) A054 Anas acuta, Northern printail		1	
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	A055	Anas querquedula;
		Garganey (Breeding)
	A056	Anas clypeata; Northern
		shoveler (Non-breeding)
	A056	Anas clypeata; Northern
		shoveler (Breeding)
	A082	Circus cyaneus; Hen harrier
		(Non-breeding)
	A151	Philomachus pugnax; Ruff
		(Breeding)
	A156a	Limosa limosa limosa;
		Black-tailed godwit
		(Breeding)
		Waterbird assemblage
		Breeding bird assemblage
Ramsar Designated Sites View		
<u>(naturalengland.org.uk)</u>		
SAC Designated Sites View		
(naturalengland.org.uk)		
SPA Designated Sites View		
(naturalengland.org.uk)		
SSSI detail (naturalengland.org.uk)		
European Site Conservation Objectives for Ouse		
Washes SPA – UK9008041		
(naturalengland.org.uk)		
European Site Conservation Objectives for Ouse		
Washes SAC – UK0013011		
(naturalengland.org.uk)		

River Wensum SAC	Notable Species
The Wensum SAC is a calcareous lowland river situated in the east of England. The river supports over 100 species of plants, including three species of water-crowfoot. The river also supports an eastern example of the riverine white-clawed crayfish and populations of Desmoulins whorl snail, Brook lamprey and Bullhead.	White-clawed crayfish
<u>Geomorphological appraisal of the River</u> <u>Wensum Special Area of Conservation –</u> <u>ENRR685 (naturalengland.org.uk)</u> <u>SIP141008FINALv1.0 River Wensum.pdf</u>	

Bawsey SSSI	Notable Features
Description and Reasons for Notification: In west Norfolk a discontinuous zone of till occurs separated from the main East Anglian till sheet by 5–10 km of Chalk outcrop. The age and origin of the till, the number of units present and their mode(s) of deposition are currently the subject of	Geological interest

much discussion and have a key bearing on interpreting Quaternary history in East Anglia. At Bawsey up to 5 m of till occurs above Cretaceous Sandringham Sands, comprising an upper unit, the Bawsey Calcareous Till, overlaying a lower unit, the Woodlands Farm Till. Bawsey is the type site for the former, and it provides one of the few reasonable exposures of the two tills. The site is also important for present and future work directed towards determining the origin of the west Norfolk tills and their relationships to the Marly Drift and Lowestoft Till which form the main till sheet of the region. <u>SSSI detail (naturalengland.org.uk)</u>	
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Blackborough End Pit SSSI	Notable Features
This is an important site for the demonstration of regional stratigraphy and erosional relationships in the Lower Cretaceous. Here the Carstone rests on Leziate Beds, and the normally intervening	Geological record
Dersingham Beds are absent. It is therefore a key locality for the demonstration of sub- Carstone erosion (Albian) and the cutting out (removal) southwards of the successively older rock units by that formation. <u>SSSI detail (naturalengland.org.uk)</u>	

Boughton Fen SSSI	Notable Species
Boughton Fen is situated on shallow fen	Phragmites australis
peats in the valley of a tributary of the River	Filipendula ulmaria
Wissey. A tall fen community covers much	Epilobium hirsutum
of the site and several interesting plants are	Heracleum sphondylium.
present. Scrub is well represented and is	Valeriana officinalis
used by breeding birds. The site is of	Perizoma sagittaria
entomological interest. Reed Phragmites	Other species present include Common
australis forms an almost pure stand where	Valerian Valeriana officinalis, Hemp
the water-table is highest at the southern	Agrimony Eupatorium cannabinum,
end of the site. The remainder of the site is	Angelica Angelica sylvestris, Purple Small-
of variable wetness and a more diverse fen	Reed Calamagrostis canescens and Reed
community has developed. Reed is again	Sweet-Grass Glyceria maxima. On the
dominant, but Meadowseet Filipendula	highest ground, woodland has developed
ulmaria and Great Willowherb Epilobium	and is dominated by Ash Fraxinus excelsior
hirsutum are abundant. And Hogweed	and Alder Alnus glutinosa with some Willow
Heracleum sphondylium. Several areas of	

dense Blackthorn Prunus spinosa scrub are present on the drier parts of the site. Many uncommon species of moth have been recorded from the site, including the rare Perizoma sagittaria. Sedge, reed and grasshopper warblers all breed on the fen and otters are regular visitors. <u>SSSI detail (naturalengland.org.uk)</u>	Salix sp. The ground flora consists of Meadowseet, Nettle Urtica dioica.
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Breckland Farmland SSSI	Notable Species
Description: Breckland Farmland SSSI lies	Stone curlews
between Bury St Edmunds in Suffolk and	
Swaffham in Norfolk. Breckland is	
characterised by its climate and soils.	
Breckland's climate is semi-continental,	
being the driest region of the British Isles	
and subject to great extremes of	
temperature. The soils are complex, but	
typically are very sandy freedraining mixes	
of chalk, sand, silt, clay and flints.	
The predominant land use within the SSSI is arable. This is characterised by field	
scale vegetables and root crops, generally	
in rotation with cereals and outdoor pig	
units. Management for gamebirds is also a	
characteristic feature. Stone curlews nest	
from March each year in cultivated land	
which has plenty of bare ground and very	
short vegetation. Late sown spring crops	
such as sugar beet and vegetables are	
favoured. They also occupy set-aside	
where this has been rotovated. Stone	
curlews are very sensitive to recreational	
disturbance and benefit from lack of	
recreational access on agricultural land;	
they are not usually affected by mechanised	
agricultural operations. Other habitats such	
as grassland are used for foraging. A	
restored mineral working also supports	
breeding stone curlews. Breckland	
Farmland SSSI is adjoined by a number of	
heathland SSSIs which also provide	
breeding and foraging habitat for stone	
curlew.	
SSSI detail (naturalengland.org.uk)	

Breckland Forest SSSI	Notable Species
The clear fell areas and young plantations	knawel Scleranthus perennis subsp.
within Breckland Forest SSSI provide	prostratus (an English endemic restricted to
suitable breeding habitat for woodlark	the East Anglian Breckland),

Lullula arborea and nightjar Caprimulgus	red-tipped cudweed Filago lutescens,
europaeus, which occur in internationally	maiden pink Dianthus armeria,
important numbers.	Breckland mugwort Artemisia campestris
Breckland Forest supports five vascular	and spiked speedwell Veronica spicata
plants listed on Schedule 8 of the Wildlife	subsp. Spicata
and Countryside Act: perennial knawel	Sciurus vulgari (Red Squirrel)
Scleranthus perennis subsp. prostratus (an	
English endemic restricted to the East	
Anglian Breckland), red-tipped cudweed	
Filago lutescens, maiden pink Dianthus	
armeria, Breckland mugwort Artemisia	
campestris and spiked speedwell Veronica	
spicata subsp. spicata, the last of which	
was introduced at this site but within the UK	
is restricted to Breckland. The forest also	
supports an important assemblage of	
Nationally Rare and nationally scarce	
vascular plant species , a number of which	
are largely restricted to East Anglia and	
occupy habitats characteristic of Breckland.	
Breckland Forest SSSI also supports an	
exceptionally rich invertebrate fauna with	
Red Data Book and nationally scarce	
species across most taxonomic groups that	
have been studied.	
A mammal species associated with the	
conifer plantations is the red squirrel	
Sciurus vulgaris. Although the population is	
small it is the only one extant in East Anglia.	
Within Breckland Forest SSSI are three	
important geological areas, formerly notified	
as separate SSSIs. Warren Hill, High Lodge	
and Beeches Pit all provide evidence for	
interpreting and understanding the links	
between the geography, climate,	
environment and human history of East	
Anglia during the Middle Pleistocene.	
SSSI detail (naturalengland.org.uk)	

East Walton Common and Adcock's Common SSSI	Notable Species
These two commons though lying about	red fescue Festuca rubra,
one kilometre apart have a similar	sheep's fescue F. ovina,
topography, vegetation and management.	common bent Agrostis capillaris,
Both are notable for a complex set of basin-	crested hair-grass Koeleria macrantha
shaped depressions separated by chalky	quaking grass Briza media,
ridges which were formed under periglacial	downy oat-grass Helictotrichon pubescens
conditions. Active springs are also a	heath-grass Danthonia decumbens
feature. This varied topography has	glaucous sedge Carex flacca
resulted in a mosaic of habitats ranging	salad burnet Sanguisorba minor
from fen or occasionally open water in the	stemless thistle Cirsium acaule
depressions to chalk grassland or scrub on	Cowslip Primula veris

the intervening ridges. The two commons have traditionally been grazed by cattle. The topography of the area is of considerable geomorphological interest as the hollows and associated ridges are considered to be ground-ice depressions. These features are developed over chalk and superficial deposits of sandy chalk rubble and are the best developed in East Anglia and are among the finest in Britain. They are believed to have formed by differential thaw rates in ground ice during periglacial conditions in the Devensian glaciation. During this time East Anglia lay outside the limits of glaciation but was probably in a zone of permafrost. An alternative interpretation is that some of the features may represent fossil pingos. These are large perennial ice-cored mounds formed by the progressive growth of an icecore where freezing water from springs is forced up at pressure; again these are indications of permafrost conditions. Both fresh and subdued examples of these features are found, implying two separate phases of formation.

The site is also of great botanical interest containing some of the finest unimproved grassland remaining in Norfolk. Chalk grassland occurs on the tops of the ridges as a very species-rich sward closely grazed by cattle and rabbits. It supports a rich mix of herbs and grasses including 7 locally rare species with as many as 32 species per metre. Dominant grasses include red fescue Festuca rubra, sheep's fescue F. ovina, common bent Agrostis capillaris, crested hair-grass Koeleria macrantha with smaller amounts of quaking grass Briza media, downy oat-grass Helictotrichon pubescens and heath-grass Danthonia decumbens. The glaucous sedge Carex flacca is frequent. Many herbs are present in the sward including salad burnet Sanguisorba minor, stemless thistle Cirsium acaule. Cowslip Primula veris, common rockrose Helianthemum nummularium, dropwort Filipendula vulgaris, small scabious Scabiosa columbaria, horseshoe vetch Hippocrepis comosa, squinancy wort Asperula cynanchica, thyme Thymus pulegoides, felwort Gentianella amarella and the locally rare field gentian G. campestris. In places the soils are deeper and less calcareous giving rise to a more

common rockrose Helianthemum nummularium dropwort Filipendula vulgaris small scabious Scabiosa columbaria horseshoe vetch Hippocrepis comosa squinancy wort Asperula cynanchica thyme Thymus pulegoides felwort Gentianella amarella field gentian G. campestris. heather Calluna vulgaris harebell Campanula rotundifolia tormentil Potentilla erecta bog bean Menyanthes trifoliata marsh cinquefoil Potentilla palustris jointed rush Juncus articulates common reed Phragmites australis saw sedge Cladium mariscus tufted sedge Carex elator lesser tussock-sedge Carex diandra bottle sedge Carex rostrata purple moor-grass Molinia caerulea meadow thistle Cirsium dissectum black bog-rush Schoenus nigricans blunt-flowered rush Juncus subnodulosus butterwort Pinguicula vulgaris fragrant orchid Gymnadenia conopsea ssp. Densiflora marsh helleborine Epipactis palustris meadow thistle Cirsium dissectum, tawny sedge Carex hostiana moss Drepanocladus vernicosus water beetles - Haliplus furcatus, Hydroporus scalesianus and Hydraena palustris hoverfly, Cheilosia pubera snail, Vertigo moulinsiana

mesotrophic vegetation and locally acid grassland characterised by patches of heather Calluna vulgaris with harebell Campanula rotundifolia and tormentil Potentilla erecta.

The majority of the hollows contain little or no open water but where standing water occurs there is a discrete community that includes bog bean Menyanthes trifoliata, marsh cinquefoil Potentilla palustris and jointed rush Juncus articulatus. Further stages in the succession are represented by swamp and semi-swamp communities dominated by common reed Phragmites australis, saw sedge Cladium mariscus and tufted sedge Carex elator. In some of the depressions, especially on Adcock's Common, a nationally rare plant community dominated by the lesser tussock-sedge Carex diandra and the bottle sedge Carex rostrata forms a semi-floating mat. Other hollows have a fen meadow community with purple moor-grass Molinia caerulea and meadow thistle Cirsium dissectum as characteristic species.

Springs emerge at a number of places on both commons and here small areas of short-sward, flushed calcareous fen have developed dominated by black bog-rush Schoenus nigricans and blunt-flowered rush Juncus subnodulosus. This community shows a remarkable diversity of fen species including butterwort Pinguicula vulgaris, fragrant orchid Gymnadenia conopsea ssp. densiflora, marsh helleborine Epipactis palustris, meadow thistle Cirsium dissectum, tawny sedge Carex hostiana and the rare moss Drepanocladus vernicosus.

There are also two fields adjacent to Adcock's Common with a fen meadow community and active springs which add diversity, together with areas of carr, woodland and scrub developed elsewhere on the site.

The two commons have a very rich invertebrate fauna with 28 Red Data Book and 79 nationally scarce species recorded since 1981. Almost all of the Red Data Book Species and most of the scarce species are associated with the fen or aquatic habitat; a few are associated with the dry grassland or scrub. The fauna includes an outstanding assemblage of water beetles which are considered to be

fen relict species including Haliplus	
furcatus, Hydroporus scalesianus and	
Hydraena palustris. The site is also one of	
the most important for soldier and snail-	
killing flies in Britain, both families with	
predominately wetland species and	
regarded as useful indicators of habitat	
quality. There is also a large population of	
the Red Data Book hoverfly, Cheilosia	
pubera, which is dependent on marsh	
marigold Caltha palustris. The rare snail,	
Vertigo moulinsiana is also recorded from	
the fen areas.	
The wide range of habitats is attractive to	
many breeding birds which include snipe,	
woodcock, green woodpecker, nightingale	
and reed warbler.	
SSSI detail (naturalengland.org.uk)	

East Winch Common SSSI	Notable Species
An area of predominantly wet acid heathland on shallow peat of a type that has become rare in west Norfolk. Many wet	heather Calluna vulgaris heather crossleaved heath Erica tetralix purple moorgrass Molinia caerulea
aquilinum dominates the drier areas of the open heath.	

The surrounding woodland consists mainly of silver birch and oak Quercus robur with abundant willow scrub in the wetter areas. The ground flora is generally sparse and includes bracken, creeping softgrass Holcus mollis and enchanter's nightshade Circaea lutetiana. Among the more interesting breeding birds are nightingale	
and grasshopper warbler. <u>SSSI detail (naturalengland.org.uk)</u>	

Grimston Warren Pit SSSI	Notable Species
Grimston Warren Pit is a small disused quarry located approximately 3 kilometres Eastnorth-east of King's Lynn. The quarry provides an outstanding opportunity to examine the constituent facies of the Dersingham Formation, a sequence of yellow to rusty coloured clay-rich sands. Beneath these are clean white sands assigned to the Sandringham Formation (Leziate Beds). The Dersingham sands are particularly important as they have yielded the ammonite Endemoceras which indicates an Early Cretaceous (Hauterivian) age. Grimston Warren Pit is a nationally important site for dating the constituent facies of the Lower Cretaceous in north Norfolk and for elucidating the palaeoenvironmental conditions which existed during Hauterivian times. <u>SSSI detail (naturalengland.org.uk)</u>	ammonite Endemoceras (fossil)

Heacham Brick Pit SSSI	Notable Features
Heacham Brick Pit is a locality which affords the only opportunity to examine the Lower Cretaceous Snettisham Clay. This has yielded distinctive Lower Barremian ammonite faunas. A key site in the assessment of regional stratigraphy and in correlations of Lower Cretaceous strata showing a facies rarely exposed and of limited areal extent. <u>SSSI detail (naturalengland.org.uk)</u>	Area valuable for the Geological record

Hilgay Heronry SSSI	Notable species
Hilgay Heronry is a small copse on the	breeding colony of Grey Herons Ardea
edge of the Fens which supports a	cinerea

nationally important breeding colony of Grey Herons Ardea cinerea. There is an average of about 40 occupied nests each year in the mature trees of European Larch Larix decidua and Ash Fraxinus excelsior. The nearby fenland with an extensive system of drainage dykes provides ideal feeding conditions for the birds. <u>SSSI detail (naturalengland.org.uk)</u>	European Larch Larix decidua Ash Fraxinus excelsior
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Hunstanton Park Esker ² SSSI	Notable Features
This site is important for an esker of	Geological record
Devensian age which extends ca. 1.5 km	
from north of Ringstead Downs to	
Hunstanton Hall. The esker is particularly	
well developed in its central and southern	
sections, and occasional sections assist in	
demonstrating the internal structure,	
composition and genesis of this type of	
glaciofluvial landform. Hunstanton Park	
provides a good example of a landform	
which is relatively uncommon in central and	
southern England and is the only one of	
Devensian age in the area.	
SSSI detail (naturalengland.org.uk)	

Hunstanton Cliffs SSSI	Notable Features
A classic and much-quoted locality for the Red Chalk and the underlying Carstone which contains an exceptionally rich Albian ammonite fauna. This is an important locality for the study of the sedimentology of these normally poorly exposed formations, in the area where the Carstone is thickly developed. The site also provides the best exposure of the (Upper Cretaceous) Ferriby Chalk Formation in Norfolk. The Cenomanian Chalk includes a regionally important marker horizon, the Paradoxica Band, and a calcarenite ("coarse grained") bed near the top of the section resembling the Totternhoe Stone of the Chilterns. A key site showing a condensed Lower–Upper Cretaceous (Albian–Cenomanian) sequence important for both research and	Fossil and Geological record

² According to Google Dictionary an esker is a long ridge of gravel and other sediment, typically having a winding course, deposited by meltwater from a retreating glacier or ice sheet.

field education. Additional biological interest is provided by a breeding colony of Fulmars on the cliff face. This is the largest colony on the east coast of England, south of Flamborough Head.	
<u>SSSI detail (naturalengland.org.uk)</u>	

Islington Heronry SSSI	Notable Species
Islington Heronry is a small, isolated stand of mature oaks surrounded by fenland which supports the largest colony of Grey Herons Ardea cinerea in Norfolk. There is an average of about 80 occupied nests each year and the adjacent dykes provide ideal feeding conditions for the birds. Several species of woodland birds, such as Great Spotted Woodpecker, are also present in the wood and represent isolated populations separated from nearby woods by many kilometres of farmland <u>SSSI detail (naturalengland.org.uk)</u>	Grey Herons Ardea cinerea

Latista Sugar & Darby Fana 6601	Natable Creation
Leziate, Sugar & Derby Fens SSSI	Notable Species
Reasons for Notification: These three fens	Purple Moor-grass Molinia caerulea,
are the remnants of a once extensive valley	Sheep's Fescue Festuca ovina,
fen system along the Gaywood River. The	Common Bent Agrostis capillaries,
site has dried out considerably in recent	Sheep's Sorrel Rumex acetosella,
years due to the drainage of surrounding	Soft Rush Juncus effuses,
agricultural land but a wide range of	Marsh Pennywort Hydrocotyle vulgaris,
habitats, from dry calcareous grassland to	Devil's bit Scabious Succisa pratensis,
wet boggy heath, is still present. These	Tormentil Potentilla erecta,
diverse plant communities reflect variations	Heather Calluna vulgaris,
in the underlying soils. Much of the site is	Cross-leaved Heath Erica tetralix,
on the greensand belt and here, extensive	Common Cotton-grass Eriophorum
areas of damp acidic grassland and heath	angustifolium,
have developed.	Creeping Willow Salix repens,
The Gaywood River is fed by chalk springs	Bog Pimpernel Anagallis tenella,
and locally there is species-rich calcareous	Red Fescue Festuca rubra,
grassland on chalky soils.	Quaking Grass Briza media,
Leziate Fen	Stemless Thistle Cirsium acaule,
Much of this area consists of seasonally	Purging Flax Linum catharticum,
wet, rough grassland on thin acidic peats.	Autumn Felwort Gentianella amarella,
The sward includes Purple Moor-grass	Creeping Buttercup Ranunculus repens,
Molinia caerulea, Sheep's Fescue Festuca	Lesser Spearwort R. flammula,
ovina, Common Bent Agrostis capillaries,	Water Mint Mentha aquatica,
Sheep's Sorrel Rumex acetosella and Soft	Alder Alnus glutinosa,
Rush Juncus effuses is dominant or co-	Creeping Bent Agrostis stolonifera,
dominant species with Marsh Pennywort	Ragged Robin Lychnis flos-cuculi,
Hydrocotyle vulgaris, Devil's bit Scabious	Southern Marsh Orchid Dactylorhiza
Succisa pratensis, Tormentil Potentilla	praetermissa,
erecta and Bottle Sedge Carex rostrata.	Marsh Marigold Caltha palustris.
Heather Calluna vulgaris and Cross-leaved	
Heath Erica tetralix are locally frequent	

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River Nar SSSI	Notable Species
The River Nar originates as a spring-fed	78 species of riverine and bankside plants.
stream, west of Mileham in Norfolk and	starwort Callitriche spp.,
flows for 42 km before joining the River	reed sweetgrass, Glyceria maxima,
Great Ouse at King's Lynn, where a sluice	narrow-leaved waterparsnip,
prevents the penetration of seawater at	Berula erecta; mare's-tail,
high tide. The River combines the	Hippuris vulgaris; greater tussock-sedge,
characteristics of a southern chalk stream	Carex paniculata; water crowfoot,
and an East Anglian fen river. Together with	Ranunculus pseudofluitans var. Vertumnus,
the adjacent terrestrial habitats, the Nar is	Groenlandia densa,
an outstanding river system of its type.	Potamogeton spp.,
The solid geology of the catchment is	hornwort, Ceratophyllum demersum,
dominated by chalk of the Upper	water-milfoil, Myriophyllum spicatum,
Cretaceous, which is overlain by glacial drift	river water-dropwort,
deposits of varying thickness. The source of	Oenanthe aquatica,
the Nar lies in an area of clays, sands and	brown trout, Salmo trutta.
gravels, though near Castle Acre this gives	pike, Esox Lucius,
way to exposed chalk. At West Acre the Nar	roach, Rutilus rutilus,
flows over the river valley gravels and then	eel, Anguilla Anguilla,
over alluvial silt from Narborough through	Leuciscus cephalus,
the fens. The river water is base-rich,	tench, Tinca tinca,
alkaline and recharged by clear springs	gudgeon, Gobio gobio,
flowing from the underlying chalk. The upper Nar has a wide range of natural	rudd, Scardinius erythrophthalamus, bullhead, Cottus gobio,
physical features incorporating riffles, pools,	rainbow trout, Salmo gairdneri,
gravel beds and meanders, whilst the lower	spined loach, Cobitis taenia,
reaches below Narborough are embanked	southern marsh orchid, Dactylorhiza majalis
and steep sided with water flowing	subsp. Praetermissa,
sluggishly through a predominantly arable	yellow rattle, Rhinanthus minor,
flood plain. The variation in physical	bogbean, Menyanthes trifoliata,
features and the influence of the underlying	Breeding birds include snipe, lapwing,
chalk give rise to a rich and diverse flora.	redshank, sedge and grasshopper
Amongst the 78 species of riverine and	warblers;
bankside plants are many eutrophic and	Kingfishers,
mesotrophic species, including 5	sand martins,
pondweeds and 8 bryophytes.	grey wagtail,
The flora of the first 10 km of the river, to	reed warblers,
West Lexham, is typical of a calcareous,	teal,
west contain, is typical of a calcaleous,	

lowland ditab community with an	march harriara
lowland ditch community with an	marsh harriers,
abundance of starwort Callitriche spp. and	willow and marsh tits,
reed sweetgrass, Glyceria maxima. The	12 different species of dragonfly.
next 12 km of the River, to Narborough Mill, is fast flowing over stoney substrates and is	
rich in chalk stream plants including narrow-	
leaved waterparsnip, Berula erecta; mare's-	
tail, Hippuris vulgaris; greater tussock-	
sedge, Carex paniculata; water crowfoot,	
Ranunculus pseudofluitans var. vertumnus	
and opposite-leaved pondweed,	
Groenlandia densa. The wet margins, with	
a constantly high water table typical of	
chalk streams, support a wide range of	
emergent plants. The final 18.5 km is	
embanked and although less physically	
diverse than the upper reaches, it	
possesses a contrasting flora with several	
species not found in the upper river. These	
plants are characteristic of sluggish flows	
and include 3 pondweeds, Potamogeton	
spp.; 2 water crowfoots, Ranunculus spp.;	
hornwort, Ceratophyllum demersum; water-	
milfoil, Myriophyllum spicatum; and river	
water-dropwort, Oenanthe aquatica.	
The Nar is well-known locally for its brown	
trout, Salmo trutta. Since 1985, trout	
numbers have increased steadily; pike,	
Esox lucius, numbers have remained fairly	
stable whilst roach, Rutilus rutilus, and eel,	
Anguilla anguilla, have continued to be the	
dominant species in the river. A further 11 species have been recorded in the Nar	
although they contribute only a small	
amount to the total fish biomass e.g.:	
chubb, Leuciscus cephalus; tench, Tinca	
tinca; gudgeon, Gobio gobio; rudd,	
Scardinius erythrophthalamus; bullhead,	
Cottus gobio; rainbow trout, Salmo	
gairdneri; spined loach, Cobitis taenia; and	
roach x bream, Abramis brama, hybrids.	
The chalk acts as a natural aquifer and thus	
maintains flows throughout the year,	
peaking in the spring with frequent flooding	
of adjacent land. This has led to the	
development of a range of adjacent semi-	
natural inundation communities and	
wetland habitats. Many have their water-	
tables intricately linked to and therefore	
dependent on the river whilst others are	
dependent on seasonal inundation. In the	
upper reaches of the river extensive areas	
of traditionally managed unimproved	
pasture survive. A combination of summer	
cattle grazing and hay making have	

encouraged the establishment of a variety	
of wetland species, including southern	
marsh orchid, Dactylorhiza majalis subsp.	
praetermissa; yellow rattle, Rhinanthus	
minor, and bogbean, Menyanthes trifoliata.	
Where land adjacent to the river is	
seasonally flooded and has not been	
reclaimed as pasture, areas of rough fen	
and unmanaged scrub remain. Further	
downstream this scrub has developed into	
mature wet woodland, dominated by alder	
carr. The result is a river corridor of	
considerable importance to wildlife.	
Although the river channel can be regarded	
as nationally important in its own right, the	
quality and type of adjacent habitats	
increases its value for fauna which use both	
the river and floodplain. Breeding birds	
include snipe, lapwing, redshank, sedge	
and grasshopper warblers.	
The variations in river profile including	
slope, width and depth are important factors	
in the provision of nesting sites for	
kingfishers and sand martins, and the	
combination of water meadow, fen, scrub	
and woodland in the upper Nar provides	
feeding and resting grounds for a number of	
other birds including grey wagtail, reed	
warblers, teal, marsh harriers, willow and	
marsh tits. Entomological studies are	
incomplete but 12 different species of	
dragonfly were recorded in 1991 at several	
locations along the Nar; this represents an	
outstanding assemblage for the UK	
SSSI detail (naturalengland.org.uk)	

Setchey SSSI	Notable Features
Setchey is important for studies of Flandrian sea-level change. The stratigraphy conforms to the typical Fenland sequence of a lower peat layer on a weathered till, a marine/brackish clay, a second peat layer, and a surface	Fenland
marine/estuarine clastic bed. The site is important as part of the overall network of Fenland sites, allowing a correlation across the area from west to east. <u>SSSI detail (naturalengland.org.uk)</u>	

Snettisham Carstone Quarry SSSI	Notable Species

Snettisham Carstone Quarry is the only	micro-moth Nothris verbascella,
known locality in Britain for the micro-moth	hoary mullein Verbascum pulverulentum.
Nothris verbascella. Its host species, hoary	
mullein Verbascum pulverulentum, a plant	
of banks and waste places, is restricted to	
East Anglia, but is abundant on the old	
workings in the quarry. Larvae of the moth	
feed in a web on the underside of the	
leaves of hoary mullein from September	
until the following summer. Pupation occurs	
in situ, usually on the underside of the	
same leaf and adults appear in July.	
SSSI detail (naturalengland.org.uk)	

Syderstone Common SSSI	Notable Species
Description: Syderstone Common consists	bracken Pteridium aquilinum,
of a series of heath and grassland	heather Calluna vulgaris,
communities occupying a shallow valley in	wavy hair grass Deschampsia flexuosa,
the headwaters of the River Tat, a tributary	purple moor grass Molinia caerulea,
of the River Wensum. These communities	rushes Juncus spp,
grade from dry heath dominated by gorse	hawthorn Crataegus monogyna,
scrub, but with areas of bracken Pteridium	birch Betula pendula,
aquilinum, heather Calluna vulgaris and	petty whin Genista anglica,
acid grassland dominated by wavy hair	dodder Cuscuta epithymum,
grass Deschampsia flexuosa, to marshy,	natterjack toads Bufo calamita (breeding
acid grassland dominated by purple moor	colony)
grass Molinia caerulea and rushes Juncus	
spp. In the lowest areas there are a series	
of seasonally wet pools. Much of the	
heathland and the gorse dominated area	
also supports hawthorn Crataegus	
monogyna scrub and developing birch	
Betula pendula woodland. Interesting plants	
found in the heathland include petty whin	
Genista anglica and dodder Cuscuta	
epithymum. The soils of Syderstone	
Common are glacially derived sands end	
gravels overlying chalk. Because of this the	
pools, although surrounded by acid	
heathland, contain neutral to alkaline water.	
This provides suitable conditions for	
breeding colonies of five species of	
amphibian including a viable population of	
natterjack toads Bufo calamita. These toads	
are a nationally rare species and are protected under Section 9 of the 1981	
Wildlife and Countryside Act. Syderstone	
Common is one of only two inland	
heathland colonies of natterjack toads that	
are known to have survived recent habitat	
losses and disturbance and it is the more	
viable of the two. It is also one of only three	
breeding colonies now known in East Anglia	

The Brinks (Northwold Meadows) SSSI	Notable Species
Northwold Meadows consists of three	Over 140 flowering plants
adjacent unimproved meadows with a	Red Fescue Festuca rubra,
history of cattle and sheep grazing. They	Downy Oat-grass Helictotrichon pubescens,
cover an extensive area on the northern	Quaking grass Briza media,
side of the String Drain in a shallow valley	Black Knapweed Centaurea nigra,
and are mostly bordered to the south and	Daisy Bellis perennis,
east by conifer plantations and to the north	Pepper Saxifrage Silaum silaus,
by arable. The attractive herb-rich grassy	Birds-foot Trefoil Lotus corniculatus,
sward is a mix of areas of moderately tall	Meadow Vetchling Lathyrus pratensis,
herbage and tightly grazed lawns. A mosaic	Adderstongue fern Ophioglossum vulgare,
of plant communities is developed on a	Green-winged Orchid Orchis morio,
range of soils which are mostly well drained	Early Marsh Orchid Dactylorhiza incarnata,
being derived from the chalks and drift,	Common Spotted Orchid Dactylorhiza
though those underlying the western	38uchsia.
meadow have a higher clay content and are	Lady's Bedstraw Galium verum,
generally less well drained. Soil reactions	Meadow Oat-grass Avenula pratensis,
range from calcareous and neutral to	Sweet Vernal Grass Anthoxanthum
slightly acidic and this is reflected in the	odoratum,
plant communities present which have a	Yorkshire-fog Holcus lanatus,
range of plants from chalk-loving to acidic-	Crested Hair-grass Koeleria cristata,
loving species. In addition to the grassland	Perennial Rye-grass Lolium perenne,
there are small areas of hazel coppice,	Heath Woodrush Luzula campestris,
woodland and scattered pine particularly in	Salad Burnet Sanguisorba officinalis,
the south-east corner and some hawthorn	Red Clover Trifolium pratense,
scrub in the western meadow. A number of	Hoary Plantain Plantago media,
ponds and seasonally wet depressions also	Creeping Willow Salix repens.
occur. Over 140 flowering plants have been	
recorded from the site. In Norfolk as a	
whole such meadows are rare and none	
are known in West Norfolk or the Breckland	
Natural Area. The less well drained soils	
support a mesotrophic grassland which is	
the Meadow Vetchling Lathyrus pratensis	
variant of the Crested Dog's-tail Cynosurus	
cristatus–Black Knapweed Centaurea nigra	
community. The sward includes Red	
Fescue Festuca rubra, Downy Oat-grass	
Helictotrichon pubescens, Quaking grass	
Briza media, and the herbs Black	
Knapweed Centaurea nigra, Daisy Bellis	
perennis, Pepper Saxifrage Silaum silaus,	
Birds-foot Trefoil Lotus corniculatus,	
Meadow Vetchling Lathyrus pratensis,	
Adderstongue fern Ophioglossum vulgare,	
Green-winged Orchid Orchis morio, Early	
Marsh Orchid Dactylorhiza incarnata and	
Common Spotted Orchid Dactylorhiza	
38uchsia. The better drained soils partly	
support the Lady's Bedstraw Galium verum	
variant of this mesotrophic grassland.	
Species present include the grasses	
Meadow Oat-grass Avenula pratensis,	

Downy Oat-grass Helictotrichon pubescens, Sweet Vernal Grass Anthoxanthum odoratum, Red Fescue Festuca rubra, Yorkshire-fog Holcus lanatus, Crested Hair- grass Koeleria cristata, Perennial Rye-grass Lolium perenne and the herbs, Black Knapweed Centaurea nigra, Heath Woodrush Luzula campestris, Salad Burnet Sanguisorba officinalis, Red Clover Trifolium pratense and Hoary Plantain Plantago media. Creeping Willow Salix	
0	
repens is also present in this community. SSSI detail (naturalengland.org.uk)	

Wiggenhall St Germans SSSI	Notable Features
Wiggenhall St Germans was one of the first sites in Britain to be investigated for sea- level studies using pollen and foraminifera analyses. The sequence of deposits is dominated by fine-grained clastic sediments intercalated by three peat layers and with a	Geological and fossil record
thin basal peat. The site Is important both historically and for future research. Detailed analysis of the whole sequence of deposits together with radiocarbon dating will provide much useful palaeoenvironmental and chronological information. SSSI detail (naturalengland.org.uk)	

Wretton SSSI	Notable Features
Wretton SSSIAt Wretton a complex series of latePleistocene (Ipswichian–Devensian) terracedeposits of the River Wissey have beenexposed in the sides of a cut-off channel.The Devensian deposits are of uniqueinterest because they record the mostcomplete sequence of Early Devensiandeposits containing stratigraphically usefulpollen, molluscs, beetles and vertebrates,collectively making this a key stratigraphiclocality. Fluvial deposits here containabundant fossil mammal remains. Thisassemblage includes wolf, arctic fox, bear,reindeer, bison and woolly rhinocerosmaking Wretton Britain's richest vertebratelocality of early Devensian age.SSSI detail (naturalengland.org.uk)	Notable Features Fossil record