

# WILD FRONTIER ECOLOGY

Borough Council of King's Lynn and  
West Norfolk



Preliminary Habitats Regulations  
Assessment of Site Specific Policies:  
Issues and Options Document

September 2011

Wild Frontier Ecology Ltd	Client details
Report produced by: Dr Kelly Moyes MIEEM	Borough Council of King's Lynn and West Norfolk
Report checked by: Robert Yaxley CEnv MIEEM	Contact: Peter Jermany
Unit 2 Cold Blow Farm Great Snoring Fakenham Norfolk NR21 0HF	King's Court Chapel Street King's Lynn PE30 1EX
Tel: 01328 864633 info@wildfrontier-ecology.co.uk	Tel: 01553 616239 Peter.Jermany@West-Norfolk.gov.uk

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Company Registered in England and Wales No 4942219.

Registered Office - Bank Chambers, Market Place, Reepham Norfolk NR10 4JJ

Director Robert Yaxley BSC (Hons) CEnv MIEEM VAT Reg No. 887 4692 54

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## 1 Executive Summary

This document has been produced to inform the Issues and Options stage of the Site Specific Proposals DPD. No consultation has taken place prior to the production of this document and it is intended to form a starting point of an iterative process with consultees. The Site Specific Proposals DPD forms part of a hierarchical process and draws on the policies from the Core Strategy (adopted in July 2011). The Core Strategy was subject to a Habitats Regulations Assessment to ensure no negative effect of the policies on European Sites. Therefore the assessment presented within this document relates specifically to the fine-scale policies, rather than assessing the broad-scale potential effects considered within the Core Strategy Habitats Regulations Assessment.

Likely significant effects on Natura 2000 sites for each site and policy were assessed.

Likely significant effects were identified as a result of:

- disturbance of SPA species through increased recreation due to increased population local to the sites
- hydrological impacts as a result of increased nutrient input the River Wensum SAC
- direct disturbance due to housing allocation adjacent to the North Norfolk Coast SPA

For sites where increased recreation may lead to disturbance to SPA species, the policy is to stipulate a programme of monitoring in conjunction with partners to identify current visitor numbers, and to monitor any increases and to identify potential adverse effects on SPA features. Should adverse effects be identified, suitable mitigation measures will be decided between partners and implemented. The success of mitigation measures will also be monitored, and adjusted if necessary.

Potential hydrological effects on the River Wensum require thorough research to ensure no adverse effects. This includes ensuring current sewage treatment works allow capacity for the proposed housing allocation.

Housing allocation that can be viewed from the SPA (currently Thornham) should include stipulation to prevent disturbance of SPA species during construction and to allow adequate screening to prevent direct disturbance effects during occupation of the housing.

Adjustments to the current proposals and policies at this early stage have therefore been stipulated to ensure no adverse effects on the integrity of Natura 2000 sites. Given these adjustments to the policies, the Site Specific Proposals will not affect the integrity of Natura 2000 sites, but it is recognised that policies will evolve through the LDF process and are likely to be further adjusted.

## 2 Introduction

The Habitats and Birds Directives<sup>1</sup> protect sites of exceptional importance in respect of rare, endangered or vulnerable natural habitats and species within Europe. These sites are referred to as European Sites and consist of Special Areas of Conservation (SACs), Special Protection Areas (SPAs) and Offshore Marine Sites (OMSs), however there are no OMSs designated at present.

Articles 6(3) and 6(4) of the Habitats Directive require Appropriate Assessment (AA) of any plans or projects likely to have a significant effect on a designated feature of a European Site. Appropriate Assessment is an assessment of the potential effects of a proposed plan on all European sites, both within and adjacent to the plan area. The intention is that a plan or project should only be approved after determining that it will not adversely affect the integrity of any European Site. If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, compensatory measures must be incorporated to ensure that the overall coherence of a European Site is protected.

An Appropriate Assessment is a determination by the 'Competent Authority', in this case the Borough Council of King's Lynn and West Norfolk (BCKLWN), as to whether a proposed plan or project will result in an adverse effect on the integrity of any European sites. *Planning Policy Guidance Note 9* (PPG9, the precursor to PPS9) (Department of the Environment, 1994) defined a site's integrity as "*the coherence of the site's ecological structure and function, across its whole area, or the habitats, complex of habitats and/or population of the species for which the site is classified*".

On the 20th October 2005, the European Court of Justice (ECJ) ruled that the UK had not transposed the *Habitats Directive* into law in the proper manner. Land use plans were incorrectly described under the UK Habitats Regulations as not requiring an Appropriate Assessment to determine impacts on sites designated under the *Habitats and Birds Directives*.

Appropriate assessment is considered to be a risk-based assessment, drawing on available information. The Department for Communities and Local Government (DCLG) has produced draft guidance on carrying out Appropriate Assessment for the protection of European sites for Regional Planning Bodies and Local Planning Authorities. It addresses determining the need for an Appropriate Assessment for a given plan and the provision of an assessment if one is required. The UK Habitats Regulations have also been amended to include provisions for land use plans (the *Conservation (Natural Habitats &c.) (Amendment) (England and Wales) Regulations (2007)*). There is draft Natural England (formerly English Nature) guidance on the provision of Appropriate Assessments for Regional Spatial Strategies and Sub-Regional Strategies. These two documents: "*Planning for the Protection of European Sites: Appropriate Assessment*" (DCLG, 2006) and "*The Assessment of Regional Spatial Strategies under the Provisions of the Habitats Regulations - Draft Guidance*" (English Nature, 2006), currently provide the most cohesive source of guidance relating to Appropriate Assessments of land use plans. Further documents which have provided scope to this work are the Royal Society for the Protection of Birds (RSPB) publication "*The Appropriate Assessment of Land Use Plans in England*" (2007) and recent guidance for competent authorities (Tyldesley and Hoskin 2008).

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<sup>1</sup> Council Directive 79/409/EEC of 2 April 1979 on the Conservation of Wild Birds Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora

The report therefore takes the following format:

- Evidence gathering - Identifying European sites within the District and outside potentially affected, qualifying features, condition of sites, conservation objectives and other relevant plans or projects.
- Task 1 - Screening. Deciding whether or not a policy is likely to have a significant effect. It is considered that at this stage there is sufficient available information to effectively screen policies.
- Task 2 - Appropriate Assessment and ascertaining the effect on site integrity.

It is anticipated that the main outcomes of this report are likely to be adjustments to policies subsequent to the Assessment (Table 2).

## **2.1 Requirement for an Appropriate Assessment for the Local Development Framework Site Specific Proposals (SSP)**

A number of International sites (Natura 2000 and Ramsar sites) occur within the boundaries of King's Lynn and West Norfolk District, and several others lie in adjoining districts or within reasonable catchments of the settlements where growth is proposed. BCKLWN is therefore taking a proactive and precautionary approach in ensuring that these sites will not be adversely affected by proposed future growth. They also recognise the potential for 'in combination' impacts resulting from interactions between their Site Specific Proposals (SSP) and factors associated with the Local Development Frameworks of nearby authorities.

### 3 The Appropriate Assessment process

#### Task 1: Screening for likely significant effects

Identifying whether a plan option is likely to have a significant effect on any European Site. This will determine whether the subsequent steps of Appropriate Assessment are required.

The precautionary principle must be used when assessing whether effects are significant. Where there is any doubt or further research is needed the Appropriate Assessment process should proceed to the next test, rather than reach a conclusion of 'no significant effect'.

The assessment of likely significant effect needs to take account of impacts in combination with other plans and projects, however only those plans or projects which are considered most relevant should be considered.

If there are found to be likely significant effects the plan option must be subject to Appropriate Assessment of its implications for the conservation objectives of the European Site.

#### Task 2: Appropriate Assessment

The implications for the conservation objectives of the European Site should be examined.

A plan should only be adopted after having ascertained that it will not adversely affect the integrity of the European Site. There may be a need to fine-tune the plan as it emerges to ensure that significant effects on European sites are avoided. This process will render Stage 3 unnecessary, which is important since this task is complex, expensive and not in keeping with the spirit of the Habitats Directive.

#### Task 3: Alternative Solutions and Mitigation

Where the plan is assessed as having an adverse effect on the integrity of a site, then alternative solutions must be considered.

In considering whether a plan or project will adversely affect the integrity of the site, regard to the manner in which it is proposed to be carried out or to any conditions or restrictions must be considered.

The primary aim of any mitigation of an option should be to allow 'no adverse affect on integrity' to be concluded. Where this is not possible then mitigation should aim to reduce the adverse affect as much as possible. Measures will normally involve the modification of an option.

After mitigation measures and possible alternatives have been exhausted and it still cannot be concluded 'no adverse affect on integrity' as a rule the option should be abandoned.

In exceptional circumstances, and as an exception to that rule, if the pursuit of the option is justified by 'imperative reasons of overriding public interest' consideration can be given to proceeding. Strong justification will be required to support this and it must be demonstrated to the satisfaction of the Secretary of State that there were no possible mitigation measures and/or alternative solutions to cancel out the negative effects. In these cases the Secretary of State shall secure any necessary compensatory measures to ensure the overall coherence of the European site is protected.

## **4 Consultation and Preparation**

Natural England is the statutory nature conservation body responsible for providing advice on Appropriate Assessment, and has been involved throughout the AA process on the KLWNBC Core Strategy Policies. The consultations for the Core Strategy also included extensive dialogue with the RSPB, including the Examination in Public.

As this is an initial report on the Issues and Options stage of the site specific proposals, no consultation has taken place prior to the production of this document - rather, this document is intended to form the start of an iteration process with consultees, and it is expected that responses will be received during the formal consultation process.



## 5 Methods

The methods for this exercise have been developed in accordance with DCLG and Natural England guidance, as well as that offered by the RSPB. The approach developed has also been tailored to ensure that the requirements of the Habitats Regulations and supporting guidance are met. Additionally, Appropriate Assessment methodologies devised for large scale developments have been evaluated to ensure that our approach is based on practical implementation of the Habitats Regulations.

Given that the application of Appropriate Assessments to land use plans in the UK remains in its early stages we have taken a carefully-considered approach to developing the methodology to ensure that the process is as simple and transparent as possible. The need to ensure that the assessment is 'appropriate' to the evaluation of policy is also recognised.

The process has been broken down into a series of clearly defined steps that will provide a transparent and accountable assessment of the proposed sites. These steps are outlined below and where necessary references are provided to the specific guidance utilised in informing the process.

### 5.1 Task 1. Policy Screening - Test of Likely Significant Effect (LSE)

This screening stage undertakes two levels of assessment prior to Appropriate Assessment. It:

- Determines which options have Likely Significant Effect and will therefore be subject to full Appropriate Assessment; and
- Provides a discussion on the implications of each option where appropriate

This stage is provided as a coarse filter based on available information and a consideration of the likely effects of policy (both positive and negative) in regard to the sensitivities of the sites in question. This stage considers the effects both alone and in combination with other plans and projects.

### 5.2 Task 2. Determination, Preventative, Avoidance and Mitigation Measures. Assessment of Effects on the Integrity of the Site(s) - The 'Appropriate Assessment'

Where sites are determined to have a Likely Significant Effect they will be subject to Appropriate Assessment. It should be stressed however, that the assessment is provided at the plan level. Policies and allocated sites need to be considered at this individual level and then as a whole. It is possible however, to establish policies and sites where any effect can be discounted. Sites for which 'no adverse effect on the integrity of the site' cannot be determined (alone, or in-combination with other plans and projects), alternative solutions and mitigation and avoidance measures will be pursued.

Where it is not possible to avoid adverse effects of site integrity through adopting mitigation and avoidance measures the case for pursuing particular development sites on the basis of imperative reasons of over-riding public importance (IROPI) may be made. At all stages, site integrity and conservation objectives for each international site will be a central consideration; justification for the (un)acceptability of options makes reference to these. Greater detail on the full assessment is provided below.

#### 5.2.1 Provision of an 'in combination' assessment

The 'in combination' assessment builds on the assessment of individual sites (the 'alone' stage). As this assessment of Site Specific Proposals differs significantly from an assessment of, for example, an LDF Core Strategy, the approach taken to the in

combination assessment differs from previous studies. As there is the potential for many interactions between sites, with compound effects on particular International sites, the assessment focuses on the receptor (the site) and identifies those settlement proposals which might be considered to contribute to an in-combination impact. The additional impact of other policies or approved projects yet to be implemented is also incorporated at this stage.

The in-combination assessment will provide an account of all Site Specific Proposals collectively (assessment at the plan level) and in-combination with other plans and policies.

### *5.2.2 Consideration of preventative, avoidance, and mitigation measures*

If the assessment concludes that no sites, considered alone or 'in combination' with other plans or projects, will have an adverse effect on the international sites then the assessment would end at this stage. It would be possible to recommend that the proposed sites can be brought forward for development.

However, if following completion of the above stages sites remain where an adverse effect on site integrity cannot be ruled out, preventative, avoidance and mitigation measures must be considered.

Working with the Planning Departments of BCKLWN and other relevant authorities, available guidance and best practice would be used to determine measures which are both practically implementable and acceptable in terms of the Habitats Regulations.

Broad classes of measures, employed in Appropriate Assessments elsewhere, are outlined below by way of example:

- **Monitoring public use** on international sites in response to new housing development, so that implementing other measures (e.g. SANG, site management) can be based on evidence that disturbance thresholds are being exceeded;
- **Management of access** to international sites e.g. restriction of public access certain times of year or to specific locations, requirements to keep dogs on leads, limiting parking to key areas where site information /management can be supplied/implemented;
- **Allocation of Sustainable Accessible Natural Greenspace (SANG)** to attract residents away from undertaking informal recreation on International sites;
- **Highlighting** within Appropriate Assessments that compliance with water quality and water resources requirements on international sites is dependant on water infrastructure development, which needs to be sanctioned by OFWAT;
- **Implementation of additional policies** within development planning documents which will avoid or offset other policies or developments which have potential to adversely affect the integrity of European Sites.

### *5.2.3 Determination of alternative solutions and imperative reasons of overriding public interest*

As outlined above if options/sites have been identified as potentially having an adverse impact on the integrity of the site(s), and preventive measures or mitigation are not adequate or appropriate, further consideration should include:

First, alternative solutions should be considered. Can another site which meets local needs but also avoids potential impacts on International sites be identified instead?

Consideration of alternatives will require the combined efforts of the Appropriate Assessment project team and the local planning officers: and

Second, if a viable alternative is not available, then the matter of whether it is required in the interests of overriding public interest should be considered. Claims for policy adoption on the grounds of imperative reasons of overriding public interest need to be carefully considered in regard to Regulations 85C and E (of the amended Habitats Regulations). The procedure is well defined in the Habitats Regulations and in associated guidance. Particulars will depend both on the reasons for the IROPI claim and the priority attached to the species or habitat in question. Claims for IROPI must be submitted to Central Government with clear reasoning, and with compensatory mechanisms fully defined. This process would be followed according to regulation.

## **6 Evidence Gathering for Appropriate Assessment**

Prior to beginning the Appropriate Assessment, the following evidence should be gathered:

- European sites within and surrounding the potentially affected areas of the proposed plans;
- The characteristics of those European sites and their conservation objectives; and
- Other relevant plans or projects

### **6.1 Potentially affected International and European Protected Sites**

Special Areas of Conservation (SAC)

- Breckland (directly bordering)
- Norfolk Valley Fens
- Ouse Washes
- Roydon Common and Dersingham Bog
- The Wash and North Norfolk Coast

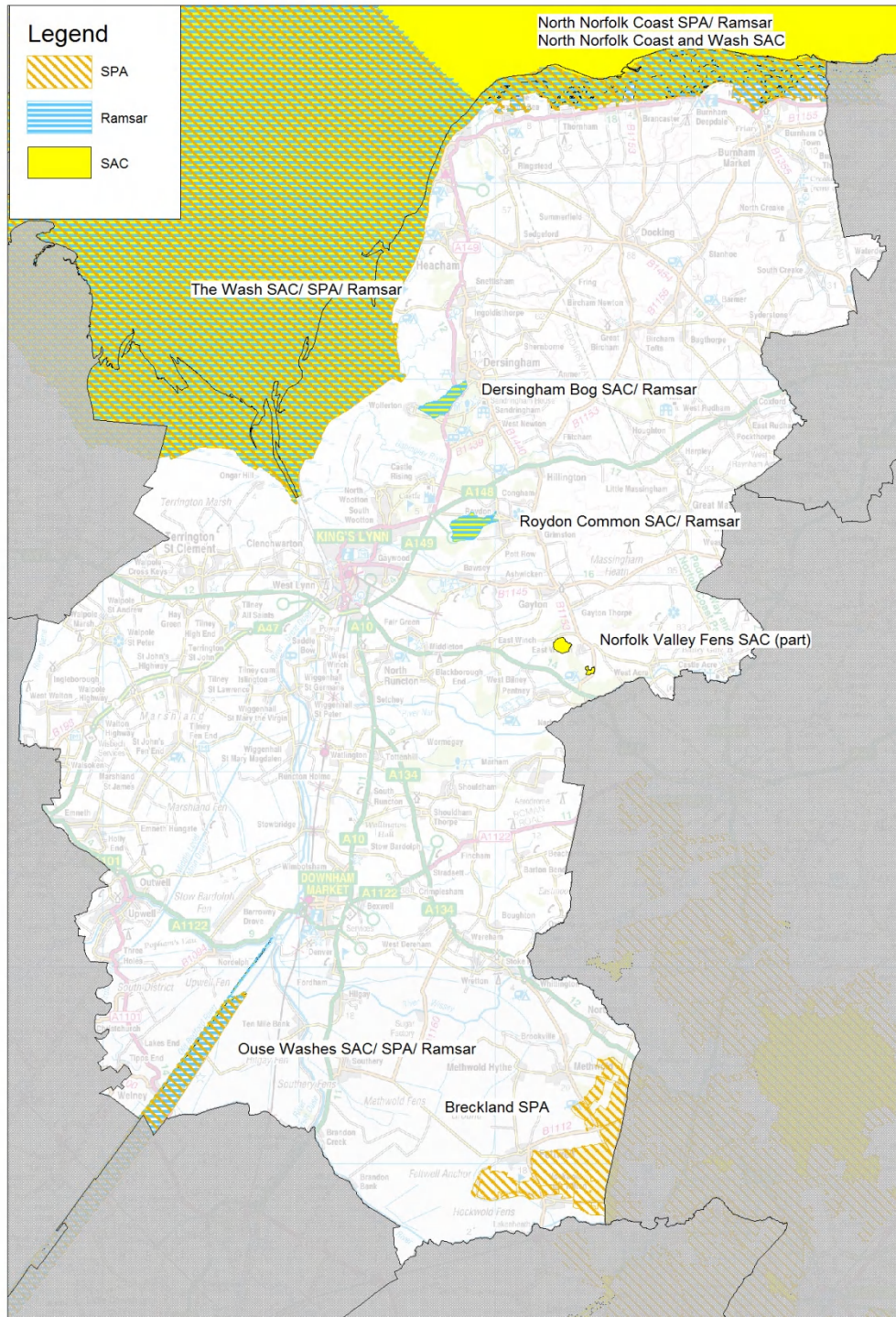
Special Protection Areas (SPA)

- Breckland (Breckland Farmland and Breckland Forest)
- The North Norfolk Coast
- The Ouse Washes
- The Wash

Wetlands of International Importance (Designated under the Ramsar Convention)

- Dersingham Bog
- North Norfolk Coast
- Ouse Washes
- Roydon Common
- The Wash

Figure 1. Plan showing location of European Sites within the Borough (Base map reproduced from Ordnance survey digital map data, © Crown Copyright 2011).



## 6.2 Description, Characteristics and Conservation Objectives of SAC Sites

### 6.2.1 Breckland SAC

Designated on 1st April 2005

Site Area: 7548.06ha, of which 141.2ha borders the Borough for approximately 6.2km. No part of the SAC falls within the Borough.

#### 6.2.1.1 Site Condition

100% of the Breckland Farmland sections of the SAC are in “favourable condition”. 100% of the Breckland Forest sections of the SAC are in “favourable condition”. This is according to information taken from Natural England’s website in March 2009.

General site character as given on the Joint Nature Conservation Committee’s website:

- Inland water bodies (standing water, running water) (0.5%)
- Bogs, marshes, water fringed vegetation, fens (1%)
- Heath, scrub, maquis and garrigue, Phrygana (20%)
- Dry grassland, steppes (59.4%)
- Improved grassland (0.2%)
- Other arable land (0.1%)
- Broad-leaved deciduous woodland (9%)
- Coniferous woodland (5%)
- Mixed woodland (4%)
- Inland rocks, screes, sands, permanent snow and ice (0.5%)
- Other land (including towns, villages, roads, waste places, mines, industrial sites) (0.3%)

#### 6.2.1.2 Designated Features

Annex I habitats that are a primary reason for selection of this site:

*2330 Inland dunes with open *Corynephorus* and *Agrostis* grasslands:* Wangford Warren and adjoining parts of RAF Lakenheath are included in the Breckland site as the only occurrence of this habitat type in the UK. The site has one of the best-preserved systems of active inland sand dunes in the UK. The habitat type, which is in part characterised by the nationally rare grey hair-grass *Corynephorus canescens* occurring here at its only inland station, is associated with open conditions with active sand movement. The site shows the colonisation sequence from open sand to acidic grass-heath.

*3150 Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation:* The Breckland meres in Norfolk represent natural eutrophic lakes in the east of England. They are examples of hollows within glacial outwash deposits and are fed by water from the underlying chalk aquifer. Natural fluctuations in groundwater tables mean that these lakes occasionally dry out. The flora is dominated by stonewort - pondweed *Characeae* - *Potamogetonaceae* associations.

*4030 European dry heaths:* The dry heaths of Breckland are representative of European dry heaths in East Anglia, in eastern England, developed under a semi-continental climate. Breckland has an average annual precipitation of only 600 mm, relatively hot summers and cold winters. Frosts can occur in any month of the year. The dry acidic

heath of Breckland represents H1 *Calluna vulgaris* - *Festuca ovina* heath in the SAC series. The sand sedge-dominated *Carex arenaria* sub-community (H1d) is typical of areas of blown sand - a very unusual feature of this location. The highly variable soils of Breckland, with underlying chalk being largely covered with wind-blown sands, have resulted in mosaics of heather-dominated heathland, acidic grassland and calcareous grassland that are unlike those of any other site. In many places there is a linear or patterned distribution of heath and grassland, arising from fossilised soil patterns that formed under peri-glacial conditions. Breckland is important for rare plants, such as perennial knawel *Scleranthus perennis* ssp. *prostratus*, and rare invertebrates.

*6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (Festuco-Brometalia)*: Breckland in East Anglia is the most extensive surviving area of the rare grassland type CG7 *Festuca ovina* - *Hieracium pilosella* - *Thymus praecox* grassland. The grassland is rich in rare species typical of dry, winter-cold, continental areas, and approaches the features of grassland types in central Europe more than almost any other semi-natural dry grassland found in the UK. The terrain is relatively flat, with few physical variations, but there are mosaics of calcareous grassland and heath/acid grassland, giving rise to patterns of structural variation.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) \* Priority feature

Annex II species present as a qualifying feature, but not a primary reason for site selection:

1166 Great crested newt *Triturus cristatus*

## 6.2.2 Norfolk Valley Fens SAC

Designated on 20th May 2004

Site Area: 616.21ha, of which 62.27ha is within the Borough. This is the SSSI known as East Walton and Adcock's Common.

### 6.2.2.1 Site Condition

100% of the East Walton and Adcock's Common section of the Norfolk Valley Fens site is in "unfavourable declining" condition, according to Natural England's website.

General site character as given on the Joint Nature Conservation Committee's website:

- Inland water bodies (standing water, running water) (5%)
- Bogs, marshes, water fringed vegetation, fens (25%)
- Heath, scrub, Maquis and garrigue, *Phrygana* (30%)
- Dry grassland, steppes (5%)
- Humid grassland, Mesophile grassland (5%)
- Broad-leaved deciduous woodland (30%)

### 6.2.2.2 Designated Features

Annex I habitats that are a primary reason for selection of this site:

**7230 Alkaline fens:** Norfolk Valley Fens is one of two sites selected in East Anglia, in eastern England, where the main concentration of lowland Alkaline fens occurs. This site comprises a series of valley-head spring-fed fens. Such spring-fed flush fens are very rare in the lowlands. Most of the vegetation at this site is of the small sedge fen type, mainly referable to M13 *Schoenus nigricans* - *Juncus subnodulosus* mire, but there are transitions to reedswamp and other fen and wet grassland types. The individual fens vary in their structure according to intensity of management and provide a wide range of variation. There is a rich flora associated with these fens, including species such as grass-of-Parnassus *Parnassia palustris*, common butterwort *Pinguicula vulgaris*, marsh helleborine *Epipactis palustris* and narrow-leaved marsh-orchid *Dactylorhiza traunsteineri*.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

4010 Northern Atlantic wet heaths with *Erica tetralix*

4030 European dry heaths

6210 Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*)

6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*)

7210 Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*  
\*Priority feature

91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) \* Priority feature

Annex II species that are a primary reason for selection of this site:

**1014 Narrow-mouthed whorl snail *Vertigo angustior*:** Norfolk Valley Fens represents narrow-mouthed whorl snail *Vertigo angustior* in East Anglia. At Flordon Common a strong population occurs in flushed grassland with yellow iris *Iris pseudacorus* maintained by light grazing.



*1016 Desmoulin's whorl snail Vertigo moulinsiana*: Norfolk Valley Fens is one of several sites representing Desmoulin's whorl snail *Vertigo moulinsiana* in East Anglia. Within Norfolk Valley Fens there are a number of marginal fens around pingos - pools that formed in hollows left when large blocks of ice melted at the end of the last Ice Age. These are very ancient wetlands and several support strong populations of *V. moulinsiana* as part of a rich assemblage of Red Data Book and Nationally Scarce species in standing water habitat.

### 6.2.3 Ouse Washes SAC

Designated on 20th May 2004

Site Area: 311.5ha, of which approximately 98.3ha is within the Borough.

#### 6.2.3.1 Site Condition

87.07% of the site is in “unfavourable no change” condition and 12.93% is in “favourable” condition, according to Natural England’s website. It should be noted that approximately 31.56% of The Ouse Washes SAC is within the Borough, but it is impossible to distinguish the locations of the areas which are in the conditions given above. It is possible that 100% of the site within the Borough is in “unfavourable no change” condition, but it is also possible that all 12.93% of the area in “favourable” condition could be within the Borough, and the remaining 18.63% could be in “unfavourable no change” condition. In all likelihood the actual percentages will be in between these numbers.

General site character as given on the Joint Nature Conservation Committee’s website:

- Inland water bodies (standing water, running water) (50%)
- Bogs, marshes, water fringed vegetation, fens (20%)
- Improved grassland (30%)

#### 6.2.3.2 Designated Features

Annex II species that are a primary reason for selection of this site:

*1149 Spined loach Cobitis taenia*: The Ouse Washes represent spined loach *Cobitis taenia* populations within the River Ouse catchment. The Counter Drain, with its clear water and abundant macrophytes, is particularly important, and a healthy population of spined loach is known to occur.

#### 6.2.4 Roydon Common and Dersingham Bog SAC

Designated on 20th May 2004

Site Area: 351.83ha, entirely within the Borough.

##### 6.2.4.1 Site Condition

Roydon Common: 95.53% of the site is in “unfavourable recovering” condition and 4.47% is in “unfavourable declining” condition according to Natural England’s website.

Dersingham Bog: 62.26% of the site is in “unfavourable recovering” condition and 37.74% is in “favourable” condition according to Natural England’s website.

General site character as given on the Joint Nature Conservation Committee’s website:

- Inland water bodies (standing water, running water) (0.3%)
- Bogs, marshes, water fringed vegetation, fens (5%)
- Heath, scrub, Maquis and garrigue, Phygrana (67%)
- Dry grassland, steppes (1%)
- Improved grassland (1.7%)
- Broad-leaved deciduous woodland (11%)
- Coniferous woodland (7%)
- Mixed woodland (6%)
- Other land (including towns, villages, roads, waste places, mines, industrial sites) (1%)

##### 6.2.4.2 Designated Features

Annex I habitats that are a primary reason for selection of this site:

*4010 Northern Atlantic wet heaths with Erica tetralix:* Roydon Common and Dersingham Bog represent the largest and best examples of M16 *Erica tetralix* - *Sphagnum compactum* wet heath in East Anglia. This vegetation community is part of a lowland mixed valley mire, a complex series of plant communities grading from wet acid heath through valley mire to calcareous fen. This gradation is of outstanding interest. The mire is extremely diverse and supports many rare plants, birds and insects, including the dragonfly *Sympetrum scoticum*, a northern species with a very local distribution in south-east England. Birds protected at European level occurring in the heathland at this site include European nightjar *Caprimulgus europaeus*, hen harrier *Circus cyaneus* and merlin *Falco columbarius*.

*7150 Depressions on peat substrates of the Rhynchosporion:* Dersingham Bog represents Depressions on peat substrates of the *Rhynchosporion* in eastern England. There are examples of this habitat type present 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*.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

4030 European dry heaths

### 6.2.5 River Wensum SAC

Designated: 20th May 2004

Site Area: 381.74 ha, of which approximately 31.34ha is in the Borough at Broomsthorpe and Helhoughton Commons.

#### 6.2.5.1 Site Condition

As on 1st April 2009, 41.22% of the site was in favourable condition, with 26.78% “unfavourable recovering”, a further 1.82% being “unfavourable no change” and 30.18% “unfavourable declining”.

General Site Character:

- Inland water bodies 42%
- Bogs, marshes, water-fringed vegetation, fens 12%
- Humid grassland, mesophile grassland 40%
- Broad-leaved deciduous woodland 6%

#### 6.2.5.2 Designated Features

Annex I habitats that are a primary reason for selection of this site:

*3260 Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation:* The Wensum represents sub-type 1 in lowland eastern England. Although the river is extensively regulated by weirs, *Ranunculus* vegetation occurs sporadically throughout much of the river’s length. Stream water-crowfoot *R. penicillatus* ssp. *pseudofluitans* is the dominant *Ranunculus* species but thread-leaved water-crowfoot *R. trichophyllus* and fan-leaved water-crowfoot *R. circinatus* also occur.

Annex II species that are a primary reason for selection of this site:

*1092 White-clawed (or Atlantic stream) crayfish Austropotamobius pallipes:* The Wensum is a chalk-fed river in eastern England, and is an eastern example of riverine white-clawed crayfish *Austropotamobius pallipes* populations. As with most of the remaining crayfish populations in the south and east of England, the threats from non-native crayfish species and crayfish plague are severe. Designation of the river as a SAC provides as much protection as can be afforded to such vulnerable populations.

Annex II species present as a qualifying feature, but not a primary reason for site selection:

1016 Desmoulin`s whorl snail *Vertigo moulinsiana*

1096 Brook lamprey *Lampetra planeri*

1163 Bullhead *Cottus gobio*

### 6.2.6 The Wash and North Norfolk Coast SAC

Designated: 20th May 2004

Site Area: 107761.28ha, of which <10% is within the Borough, but it directly borders the entire coastline (approximately 56.7km) of the Borough.

#### 6.2.6.1 Site Condition

The Wash: 62.24% of the site is in “favourable” condition, 37.25% of the site is in “unfavourable recovering” condition and 0.51% of the site is in “unfavourable declining” condition.

North Norfolk Coast: 96.62% of the site is in “favourable” condition, 2.8% of the site is in “unfavourable recovering” condition and 0.58% is in “unfavourable no change” condition.

It should be noted that neither The Wash nor North Norfolk Coast are entirely within the boundaries of the Borough. It is impossible to distinguish the locations of the areas in different conditions, but in all likelihood, the areas of varying conditions are all present to some degree within the Borough (with the possible exception of “unfavourable declining”

General site character as given on the Joint Nature Conservation Committee’s website:

- Marine areas, sea inlets (51%)
- Tidal rivers, estuaries, mud flats, sand flats, lagoons (including saltwork basins) (46%)
- Salt marshes, salt pastures, salt steppes (3%)

#### 6.2.6.2 Designated Features

Annex I habitats that are a primary reason for selection of this site:

*1110 Sandbanks which are slightly covered by sea water all the time:* On this site sandy sediments occupy most of the subtidal area, resulting in one of the largest expanses of sublittoral sandbanks in the UK. It provides a representative example of this habitat type on the more sheltered east coast of England. The subtidal sandbanks vary in composition and include coarse sand through to mixed sediment at the mouth of the embayment. Sublittoral communities present include large dense beds of brittlestars *Ophiothrix fragilis*. Species include the sand-mason worm *Lanice conchilega* and the tellin *Angulus tenuis*. Benthic communities on sandflats in the deeper, central part of the Wash are particularly diverse. The subtidal sandbanks provide important nursery grounds for young commercial fish species, including plaice *Pleuronectes platessa*, cod *Gadus morhua* and sole *Solea solea*.

*1140 Mudflats and sandflats not covered by seawater at low tide:* The Wash, on the east coast of England, is the second-largest area of intertidal flats in the UK. The sandflats in the embayment of the Wash include extensive fine sands and drying banks of coarse sand, and this diversity of substrates, coupled with variety in degree of exposure, means that there is a high diversity relative to other east coast sites. Sandy intertidal flats predominate, with some soft mudflats in the areas sheltered by barrier beaches and islands along the north Norfolk coast. The biota includes large numbers of polychaetes, bivalves and crustaceans. Salinity ranges from that of the open coast in most of the area (supporting rich invertebrate communities) to estuarine close to the rivers. Smaller, sheltered and diverse areas of intertidal sediment, with a rich variety of communities, including some eelgrass *Zostera* spp. beds and large shallow pools, are protected by the north Norfolk barrier islands and sand spits.

*1160 Large shallow inlets and bays:* The Wash is the largest embayment in the UK, and

represents Large shallow inlets and bays on the east coast of England. It is connected via sediment transfer systems to the north Norfolk coast. Together, the Wash and North Norfolk Coast form one of the most important marine areas in the UK and European North Sea coast, and include extensive areas of varying, but predominantly sandy, sediments subject to a range of conditions. Communities in the intertidal include those characterised by large numbers of polychaetes, bivalve and crustaceans. Sublittoral communities cover a diverse range from the shallow to the deeper parts of the embayments and include dense brittlestar beds and areas of an abundant reef-building worm ('ross worm') *Sabellaria spinulosa*. The embayment supports a variety of mobile species, including a range of fish and 1365 Common seal *Phoca vitulina*.

**1170 Reefs:** The Wash is the largest embayment in the UK with extensive areas of subtidal mixed sediment. In the tide-swept approaches to the Wash, with a high loading of suspended sand, the relatively common tube-dwelling polychaete worm *Sabellaria spinulosa* forms areas of biogenic reef. These structures are varied in nature, and include reefs which stand up to 30 cm proud of the seabed and which extend for hundreds of metres (Foster-Smith & Sotheran 1999<sup>2</sup>). The reefs are thought to extend into The Wash where super-abundant *S. spinulosa* occurs and where reef-like structures such as concretions and crusts have been recorded. The site and its surrounding waters is considered particularly important as it is the only currently known location of well-developed stable *Sabellaria* reef in the UK. The reefs are particularly important components of the sublittoral as they are diverse and productive habitats which support many associated species (including epibenthos and crevice fauna) that would not otherwise be found in predominantly sedimentary areas. As such, the fauna is quite distinct from other biotopes found in the site. Associated motile species include large numbers of polychaetes, mysid shrimps, the pink shrimp *Pandalus montagui*, and crabs. *S. spinulosa* is considered to be an important food source for the commercially important pink shrimp *P. montagui* (see overview in Holt et al. 1998<sup>3</sup>).

**1310 Salicornia and other annuals colonising mud and sand:** The largest single area of this vegetation in the UK occurs at this site on the east coast of England, which is one of the few areas in the UK where saltmarshes are generally accreting. The proportion of the total saltmarsh vegetation represented by *Salicornia* and other annuals colonising mud and sand is high because of the extensive enclosure of marsh in this site. The vegetation is also unusual in that it forms a pioneer community with common cord-grass *Spartina anglica* in which it is an equal component. The inter-relationship with other habitats is significant, forming a transition to important dune, saltmeadow and halophytic scrub communities.

**1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*):** This site on the east coast of England is selected both for the extensive ungrazed saltmarshes of the North Norfolk Coast and for the contrasting, traditionally grazed saltmarshes around the Wash. The Wash saltmarshes represent the largest single area of the habitat type in the UK. The Atlantic salt meadows form part of a sequence of vegetation types that are unparalleled among coastal sites in the UK for their diversity and are amongst the most important in Europe. Saltmarsh swards dominated by sea-lavenders *Limonium* spp. are particularly well-represented on this site. In addition to typical lower and middle

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<sup>2</sup> Foster-Smith, RL & Sotheran, I (1999) Broad scale remote survey and mapping of sublittoral habitats and biota of the Wash and the Lincolnshire and the north Norfolk coasts. *English Nature Research Reports*, No. 336.

<sup>3</sup> Holt, TJ, Rees, EI, Hawkins, SJ & Seed, R (1998) Biogenic reefs. Volume IX: An overview of dynamics and sensitivity characteristics for conservation and management of marine SACs. Scottish Association for Marine Science (UK Marine SACs Project). [www.ukmarinesac.org.uk/pdfs/biogreef.pdf](http://www.ukmarinesac.org.uk/pdfs/biogreef.pdf)

saltmarsh communities, in North Norfolk there are transitions from upper marsh to freshwater reedswamp, sand dunes, shingle beaches and mud/sandflats.

*1420 Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi):* The Wash and North Norfolk Coast, together with the North Norfolk Coast, comprises the only area in the UK where all the more typically Mediterranean species that characterise Mediterranean and thermo-Atlantic halophilous scrubs occur together. The vegetation is dominated by a shrubby cover up to 40 cm high of scattered bushes of shrubby sea-blite *Suaeda vera* and sea-purslane *Atriplex portulacoides*, with a patchy cover of herbaceous plants and bryophytes. This scrub vegetation often forms an important feature of the upper saltmarshes, and extensive examples occur where the drift-line slopes gradually and provides a transition to dune, shingle or reclaimed sections of the coast. At a number of locations on this coast perennial glasswort *Sarcocornia perennis* forms an open mosaic with other species at the lower limit of the sea-purslane community.

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site:

1150 Coastal lagoons \* Priority feature

Annex II species that are a primary reason for selection of this site:

*1365 Common seal Phoca vitulina:* The Wash, on the east coast of England, is the largest embayment in the UK. The extensive intertidal flats here and on the North Norfolk Coast provide ideal conditions for common seal *Phoca vitulina* breeding and hauling-out. This site is the largest colony of common seals in the UK, with some 7% of the total UK population.

Annex II species present as a qualifying feature, but not a primary reason for site selection:

1355 Otter *Lutra lutra*

## 6.3 Description, Characteristics and Conservation Objectives of SPA Sites

### 6.3.1 Breckland SPA

Site Area: 39433.66ha, of which approximately 2159.95ha is within the Borough. The only component sections within the Borough are Breckland Farmland and Breckland Forest.

#### 6.3.1.1 Site description

The Breckland of Norfolk and Suffolk lies in the heart of East Anglia on largely sandy soils of glacial origin. In the 19th century the area was termed a sandy waste, with small patches of arable cultivation that were soon abandoned. The continental climate, with low rainfall and free-draining soils, has led to the development of dry heath and grassland communities. Much of Breckland was planted with conifers through the 20th century, and elsewhere arable farming is the predominant land use. The remnants of dry heath and grassland that have survived these changes support heathland-breeding birds, where grazing by sheep and rabbits is sufficiently intensive to create short turf and open ground. These species have also adapted to live in forestry and arable habitats. Woodlark *Lullula arborea* and Nightjar *Caprimulgus europaeus* breed in recently felled areas and open heath areas within the conifer plantations, while Stone Curlew *Burhinus oedicnemus* establishes nests on open ground provided by arable cultivation in the spring.

#### 6.3.1.2 Designated Features

This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

During the breeding season:

*Nightjar Caprimulgus europaeus*: 415 pairs representing up to 12.2% of the breeding population in Great Britain (Count at at 1998)

*Stone Curlew Burhinus oedicnemus*: 142 pairs representing up to 74.7% of the breeding population in Great Britain (Count as at 1998)

*Woodlark Lullula arborea*: 430 pairs representing up to 28.7% of the breeding population in Great Britain (Count as at 1997)



### 6.3.2 The North Norfolk Coast SPA

Site Area: 7886.79ha, of which approximately 2267ha is within the Borough and approximately 21.1km of the Borough's coastline directly borders it.

#### 6.3.2.1 Site description

The North Norfolk Coast SPA encompasses much of the northern coastline of Norfolk in eastern England. It is a low-lying barrier coast that extends for 40 km from Holme to Weybourne and includes a great variety of coastal habitats. The main habitats - found along the whole coastline - include extensive intertidal sand- and mud-flats, saltmarshes, shingle and sand dunes, together with areas of freshwater grazing marsh and reedbed, which has developed in front of rising land. The site contains some of the best examples of saltmarsh in Europe. There are extensive deposits of shingle at Blakeney Point, and major sand dunes at Scolt Head. Extensive reedbeds are found at Brancaster, Cley and Titchwell. Maritime pasture is present at Cley and extensive areas of grazing marsh are present all along the coast. The grazing marsh at Holkham has a network of clear water dykes holding a rich diversity of aquatic plant species. The great diversity of high-quality freshwater, intertidal and marine habitats results in very large numbers of waterbirds occurring throughout the year. In summer, the site holds large breeding populations of waders, four species of terns, Bittern *Botaurus stellaris* and wetland raptors such as Marsh Harrier *Circus aeruginosus*. In winter, the coast is used by very large numbers of geese, sea-ducks, other ducks and waders. The coast is also of major importance for staging waterbirds in the spring and autumn migration periods. Breeding terns, particularly Sandwich Tern *Sterna sandvicensis*, and wintering sea-ducks regularly feed outside the SPA in adjacent coastal waters.

To the west, the coastal habitats of North Norfolk Coast SPA are continuous with The Wash SPA, with which area the ecology of this site is intimately linked.

#### 6.3.2.2 Designated Features

This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

##### During the breeding season:

*Avocet Recurvirostra avosetta*: 177 pairs representing at least 30.0% of the breeding population in Great Britain (Count as at 1998)

*Bittern Botaurus stellaris*: 3 individuals representing at least 15.0% of the breeding population in Great Britain (Count as at 1998)

*Common Tern Sterna hirundo*: 460 pairs representing at least 3.7% of the breeding population in Great Britain (Count, as at 1996)

*Little Tern Sterna albifrons*: 377 pairs representing at least 15.7% of the breeding population in Great Britain (5 year mean 1994-1998)

*Marsh Harrier Circus aeruginosus*: 14 pairs representing at least 8.8% of the breeding population in Great Britain (Count as at 1995)

*Mediterranean Gull Larus melanocephalus*: 2 pairs representing at least 20.0% of the breeding population in Great Britain (Count as at 1996)

*Roseate Tern Sterna dougallii*: 2 pairs representing at least 3.3% of the breeding population in Great Britain (5 year mean 1994-1998)

*Sandwich Tern Sterna sandvicensis*: 3,457 pairs representing at least 24.7% of the breeding population in Great Britain (5 year mean 1994-1998)

##### Over winter;

*Avocet Recurvirostra avosetta*: 153 individuals representing at least 12.0% of the wintering population in Great Britain (Count as at 1997/8)

*Bar-tailed Godwit Limosa lapponica*: 1,236 individuals representing at least 2.3% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

*Bittern Botaurus stellaris*: 5 individuals representing at least 5.0% of the wintering population in Great Britain (5 year peak mean 1993/4 - 1998/9)

*Golden Plover Pluvialis apricaria*: 2,667 individuals representing at least 1.1% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

*Hen Harrier Circus cyaneus*: 16 individuals representing at least 2.1% of the wintering population in Great Britain (5 year mean 1993/4-1997/8)

*Ruff Philomachus pugnax*: 54 individuals representing at least 7.7% of the wintering population in Great Britain (5 year peak mean 1993/4 - 1998/9)

This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

During the breeding season:

*Redshank Tringa tetanus*: 700 pairs representing at least 1.2% of the breeding Eastern Atlantic - wintering population (Count as at 1998)

*Ringed Plover Charadrius hiaticula*: 220 pairs representing at least 1.4% of the breeding Europe/Northern Africa - wintering population (Count as at 1998)

On passage:

*Ringed Plover Charadrius hiaticula*: 1,256 individuals representing at least 2.5% of the Europe/Northern Africa - wintering population (5 year peak mean 1994/5 - 1998/9)

Over winter:

*Dark-bellied Brent Goose Branta bernicla bernicla*: 11,512 individuals representing at least 3.8% of the wintering Western Siberia/Western Europe population (5 year peak mean 1991/2 - 1995/6)

*Knot Calidris canutus*: 10,801 individuals representing at least 3.1% of the wintering Northeastern Canada/Greenland/Iceland/Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)

*Pink-footed Goose Anser brachyrhynchus*: 23,802 individuals representing at least 10.6% of the wintering Eastern Greenland/Iceland/UK population (5 year peak mean 1991/2 - 1995/6)

*Pintail Anas acuta*: 1,139 individuals representing at least 1.9% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)

*Redshank Tringa tetanus*: 2,998 individuals representing at least 2.0% of the wintering Eastern Atlantic - wintering population (5 year peak mean 1993/4 - 1997/8)

*Wigeon Anas Penelope*: 14,039 individuals representing at least 1.1% of the wintering Western Siberia/Northwestern/Northeastern Europe population (5 year peak mean 1991/2 - 1995/6)

Assemblage qualification: A wetland of international importance

The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl

Over winter, the area regularly supports 91,249 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Shelduck *Tadorna tadorna*, *Avocet Recurvirostra avosetta*, *Golden Plover Pluvialis apricaria*, *Ruff Philomachus pugnax*, *Bar-tailed Godwit*

*Limosa lapponica*, Pink-footed Goose *Anser brachyrhynchus*, Dark-bellied Brent Goose *Branta bernicla bernicla*, Wigeon *Anas penelope*, Pintail *Anas acuta*, Knot *Calidris canutus*, Redshank *Tringa totanus*, Bittern *Botaurus stellaris*, White-fronted Goose *Anser albifrons albifrons*, Dunlin *Calidris alpina alpina*, Gadwall *Anas strepera*, Teal *Anas crecca*, Shoveler *Anas clypeata*, Common Scoter *Melanitta nigra*, Velvet Scoter *Melanitta fusca*, Oystercatcher *Haematopus ostralegus*, Ringed Plover *Charadrius hiaticula*, Grey Plover *Pluvialis squatarola*, Lapwing *Vanellus vanellus*, Sanderling *Calidris alba*, Cormorant *Phalacrocorax carbo*.

### 6.3.3 Ouse Washes SPA

Site Area: 2447.26ha, of which approximately 725.5ha is within the Borough.

#### 6.3.3.1 Site Description

The Ouse Washes are located in eastern England on one of the major tributary rivers of The Wash. It is an extensive area of seasonally flooding wet grassland ('washland') lying between the Old and New Bedford Rivers, and acts as a floodwater storage system during winter months. The cycle of winter storage of floodwaters from the river and traditional summer grazing by cattle, as well as hay production, have given rise to a mosaic of rough grassland and wet pasture, with a diverse and rich ditch fauna and flora. The washlands support both breeding and wintering waterbirds. In summer, there are important breeding numbers of several wader species, as well as Spotted Crake *Porzana porzana*. In winter, the site holds very large numbers of swans, ducks and waders. During severe winter weather elsewhere, the Ouse Washes can attract waterbirds from other areas due to its relatively mild climate (compared with continental Europe) and abundant food resources. In winter, some wildfowl, especially swans, feed on agricultural land surrounding the SPA.

#### 6.3.3.2 Designated Features

This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

##### During the breeding season:

*Ruff Philomachus pugnax*: 1 individuals representing at least 9.1% of the breeding population in Great Britain (5 year mean 1983-1987)

*Spotted Crake Porzana porzana*: 3 individuals representing at least 6.0% of the breeding population in Great Britain (3-4 males = minimum)

##### Over winter:

*Bewick's Swan Cygnus columbianus bewickii*: 4,639 individuals representing at least 66.3% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

*Hen Harrier Circus cyaneus*: 12 individuals representing at least 1.6% of the wintering population in Great Britain (6 year mean, 1982-1987)

*Ruff Philomachus pugnax*: 137 individuals representing at least 19.6% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

*Whooper Swan Cygnus Cygnus*: 963 individuals representing at least 17.5% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

##### During the breeding season:

*Black-tailed Godwit Limosa limosa limosa*: 26 pairs representing <0.1% of the breeding Western Europe/W Africa population (Count, as at late 1980s-early 1990s)

*Gadwall Anas strepera*: 111 pairs representing at least 1.1% of the breeding Northwestern Europe population

*Shoveler Anas clypeata*: 155 pairs representing at least 1.2% of the breeding Northwestern/Central Europe population (Count, as at late 1980s-early 1990s).

##### Over winter:

*Black-tailed Godwit Limosa limosa islandica*: 1,198 individuals representing at least

1.7% of the wintering Iceland - breeding population (5 year peak mean 1991/2 - 1995/6)

*Gadwall Anas strepera*: 342 individuals representing at least 1.1% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)

*Pintail Anas acuta*: 1,755 individuals representing at least 2.9% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)

*Pochard Aythya farina*: 3,590 individuals representing at least 1.0% of the wintering Northwestern/Northeastern Europe population

*Shoveler Anas clypeata*: 681 individuals representing at least 1.7% of the wintering Northwestern/Central Europe population (5 year peak mean 1991/2 - 1995/6)

*Wigeon Anas Penelope*: 29,713 individuals representing at least 2.4% of the wintering Western Siberia/Northwestern/Northeastern Europe population (5 year peak mean 1991/2 - 1995/6)

Assemblage qualification: A wetland of international importance

The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl

*Over winter, the area regularly supports 64,392 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including: Lapwing Vanellus vanellus, Coot Fulica atra, Tufted Duck Aythya fuligula, Mallard Anas platyrhynchos, Teal Anas crecca, Cormorant Phalacrocorax carbo, Black-tailed Godwit Limosa limosa islandica, Pochard Aythya ferina, Shoveler Anas clypeata, Pintail Anas acuta, Gadwall Anas strepera, Wigeon Anas penelope, Ruff Philomachus pugnax, Whooper Swan Cygnus cygnus, Bewick's Swan Cygnus Columbianus bewickii.*

### 6.3.4 The Wash SPA

Site Area: 62211.66ha, of which approximately 741.9ha is within the Borough and approximately 33.63km of the Borough's coastline directly borders it.

#### 6.3.4.1 Site description

The Wash is located on the east coast of England and is the largest estuarine system in the UK. It is fed by the rivers Witham, Welland, Nene and Great Ouse that drain much of the east Midlands of England. The Wash comprises very extensive saltmarshes, major intertidal banks of sand and mud, shallow waters and deep channels. The eastern end of the site includes low chalk cliffs at Hunstanton. In addition, on the eastern side, the gravel pits at Snettisham are an important high-tide roost for waders. The intertidal flats have a rich invertebrate fauna and colonising beds of Glasswort *Salicornia* spp. which are important food sources for the large numbers of waterbirds dependent on the site. The sheltered nature of The Wash creates suitable breeding conditions for shellfish, principally Mussel *Mytilus edulis*, Cockle *Cardium edule* and shrimps. These are important food sources for some waterbirds such as Oystercatchers *Haematopus ostralegus*. The Wash is of outstanding importance for a large number of geese, ducks and waders, both in spring and autumn migration periods, as well as through the winter. The SPA is especially notable for supporting a very large proportion (over half) of the total population of Canada/Greenland breeding Knot *Calidris canutus islandica*. In summer, the Wash is an important breeding area for terns and as a feeding area for Marsh Harrier *Circus aeruginosus* that breed just outside the SPA.

To the north, the coastal habitats of The Wash are continuous with Gibraltar Point SPA, whilst to the east The Wash adjoins the North Norfolk Coast SPA.

#### 6.3.4.2 Designated Features

This site qualifies under Article 4.1 of the Directive (79/409/EEC) by supporting populations of European importance of the following species listed on Annex I of the Directive:

##### During the breeding season:

*Common Tern Sterna hirundo*: 152 pairs representing at least 1.2% of the breeding population in Great Britain (Count, as at 1993)

*Little Tern Sterna albifrons*: 33 pairs representing at least 1.4% of the breeding population in Great Britain (5 year mean, 1992-1996)

*Marsh Harrier Circus aeruginosus*: 15 pairs representing at least 9.4% of the breeding population in Great Britain (Count as at 1995)

##### Over winter:

*Avocet Recurvirostra avosetta*: 110 individuals representing at least 8.7% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

*Bar-tailed Godwit Limosa lapponica*: 11,250 individuals representing at least 21.2% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

*Golden Plover Pluvialis apricaria*: 11,037 individuals representing at least 4.4% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

*Whooper Swan Cygnus Cygnus*: 68 individuals representing at least 1.2% of the wintering population in Great Britain (5 year peak mean 1991/2 - 1995/6)

This site also qualifies under Article 4.2 of the Directive (79/409/EEC) by supporting populations of European importance of the following migratory species:

##### On passage:

*Ringed Plover Charadrius hiaticula*: 1,185 individuals representing at least 2.4% of the Europe/Northern Africa - wintering population (5 year peak mean 1991/2 - 1995/6)

*Sanderling Calidris alba*: 1,854 individuals representing at least 1.9% of the Eastern Atlantic/Western & Southern Africa - wintering population (2 year mean Aug 1994 - 1995)

Over winter:

*Black-tailed Godwit Limosa limosa islandica*: 59 individuals representing at least 1.2% of the wintering Iceland - breeding population (5 year peak mean 1991/2 - 1995/6)

*Curlew Numenius arquata*: 3,835 individuals representing at least 1.1% of the wintering Europe - breeding population (5 year peak mean 1991/2 - 1995/6)

*Dark-bellied Brent Goose Branta bernicla bernicla*: 22,248 individuals representing at least 7.4% of the wintering Western Siberia/Western Europe population (5 year peak mean 1991/2 - 1995/6)

*Dunlin Calidris alpina alpina*: 35,620 individuals representing at least 2.5% of the wintering Northern Siberia/Europe/Western Africa population (5 year peak mean 1991/2 - 1995/6)

*Grey Plover Pluvialis squatarola*: 9,708 individuals representing at least 6.5% of the wintering Eastern Atlantic - wintering population (5 year peak mean 1991/2 - 1995/6)

*Knot Calidris canutus*: 186,892 individuals representing at least 53.4% of the wintering Northeastern Canada/Greenland/Iceland/Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)

*Oystercatcher Haematopus ostralegus*: 25,651 individuals representing at least 2.9% of the wintering Europe & Northern/Western Africa population (5 year peak mean 1991/2 - 1995/6)

*Pink-footed Goose Anser brachyrhynchus*: 33,265 individuals representing at least 14.8% of the wintering Eastern Greenland/Iceland/UK population (5 year peak mean 1991/2 - 1995/6)

*Pintail Anas acuta*: 923 individuals representing at least 1.5% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)

*Redshank Tringa tetanus*: 2,953 individuals representing at least 2.0% of the wintering Eastern Atlantic - wintering population (5 year peak mean 1991/2 - 1995/6)

*Shelduck Tadorna tadorna*: 15,981 individuals representing at least 5.3% of the wintering Northwestern Europe population (5 year peak mean 1991/2 - 1995/6)

*Turnstone Arenaria interpres*: 717 individuals representing at least 1.0% of the wintering Western Palearctic - wintering population (5 year peak mean 1991/2 - 1995/6)

Assemblage qualification: A wetland of international importance

The area qualifies under Article 4.2 of the Directive (79/409/EEC) by regularly supporting at least 20,000 waterfowl

*Over winter, the area regularly supports 400,273 individual waterfowl (5 year peak mean 1991/2 - 1995/6) including:* Black-tailed Godwit *Limosa limosa islandica*, Avocet *Recurvirostra avosetta*, Golden Plover *Pluvialis apricaria*, Bar-tailed Godwit *Limosa lapponica*, Pink-footed Goose *Anser brachyrhynchus*, Dark-bellied Brent Goose *Branta bernicla bernicla*, Shelduck *Tadorna tadorna*, Pintail *Anas acuta*, Oystercatcher *Haematopus ostralegus*, Grey Plover *Pluvialis squatarola*, Whooper Swan *Cygnus cygnus*, Dunlin *Calidris alpina alpina*, Sanderling *Calidris alba*, Curlew *Numenius arquata*, Redshank *Tringa totanus*, Turnstone *Arenaria interpres*, Little Grebe *Tachybaptus*

*ruficollis*, Cormorant *Phalacrocorax carbo*, White-fronted Goose *Anser albifrons albifrons*, Wigeon *Anas penelope*, Mallard *Anas platyrhynchos*, Ringed Plover *Charadrius hiaticula*, Lapwing *Vanellus vanellus*, Knot *Calidris canutus*, Whimbrel *Numenius phaeopus*.



## 6.4 Description, Characteristics and Conservation Objectives of Ramsar Sites

### 6.4.1 Dersingham Bog Ramsar

Site Area: 157.75ha, entirely within the Borough.

#### 6.4.1.1 General overview (as given on "Ramsar Information Sheet: UK11019")

Dersingham Bog is East Anglia's largest remaining example of pure acid valley mire, and supports extensive bog, wet heath and transition communities over peat. These are sustained via groundwater, fed by springs and seepage from the underlying greensand, which in places has caused the development of iron pans. The mire grades into dry heathland along the greensand scarp slope. The scarp slope is a former sea cliff, and the bog habitats are a remnant of the transition mires that formerly existed between this former shoreline and the now mostly land-claimed salt marshes around The Wash. In addition to its internationally important plant communities, the site also supports important assemblages of birds and British Red Data Book invertebrates.

#### 6.4.1.2 Ramsar Criteria:

2: Supports an important assemblage of invertebrates - nine British Red Data Book species have been recorded.

### 6.4.2 North Norfolk Coast Ramsar

Site Area: 7862.39ha, of which approximately 2254ha is within the Borough, and approximately 21.1km of the Borough's coastline directly borders it.

#### 6.4.2.1 General overview (as given on Ramsar Information Sheet: UK11048)

This low-lying barrier coast site extends for 40km from Holme to Weybourne and encompasses a variety of habitats including intertidal sands and muds, saltmarshes, shingle and sand dunes, together with areas of land-claimed freshwater grazing marsh and reedbed, which is developed in front of rising land. Both freshwater and marine habitats support internationally important numbers of wildfowl in winter and several nationally rare breeding birds. The sandflats, sand dune, saltmarsh, shingle and saline lagoons habitats are of international importance for their fauna, flora and geomorphology.

#### 6.4.2.2 Ramsar Criteria:

1: The site is one of the largest expanses of undeveloped coastal habitat of its types in Europe. It is a particularly good example of marshland coast with intertidal sand and mud, saltmarshes, shingle banks and sand dunes. There are a series of brackish-water lagoons and extensive areas of freshwater grazing marsh and reed beds.

2: Supports at least three British Red Data Book and nine nationally scarce vascular plants, one British Red Data Book lichen and 38 British Red Data Book invertebrates.

5: Assemblages of international importance:

Species with peak counts in winter: 98462 waterfowl (5 year peak mean 1998/99-2002-03)

6: species/populations occurring at levels of international importance.

#### Qualifying species/populations (as identified at designation):

Species regularly supported during the breeding season:

*Sandwich Tern Sterna (Thalasseus) sandvicensis sandvicensis (W Europe)*: 4275 apparently occupied nests, representing an average of 7.7% of the breeding population (Seabird 2000 Census)

*Common Tern, Sterna hirundo hirundo (N & E Europe)*: 408 apparently occupied nests, representing an average of 4% of the GB populations (Seabird 2000 Census)

*Little Tern Sterna albifrons albifrons (W Europe)*: 291 apparently occupied nests, representing an average of 2.5% of the breeding population (Seabird 2000 Census)

Species with peak counts in spring/autumn:

*Red Knot Calidris canutus islandica (W & S Africa - wintering)*: 30781 individuals, representing an average of 6.8% of the population (5 year peak mean 1998/99-2002/03)

Species with peak counts in winter:

*Pink-footed Goose Anser brachyrhynchus (Greenland, Iceland/UK)*: 16787 individuals, representing an average of 6.9% of the population (5 year peak mean 1998/99-2002/03)

*Dark-bellied Brent Goose Branta bernicla bernicla*: 8690 individuals, representing an average of 4% of the population (5 year peak mean 1998/99-2002/03)

*Eurasian Wigeon Anas penelope (NW Europe)*: 17940 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/99-2002/03)

*Northern Pintail Anas acuta, NW Europe*: 1148 individuals, representing an average of 1.9% of the population (5 year peak mean 1998/99-2002/03)

Species/populations identified subsequent to designation for possible future consideration under criterion 6.

Species with peak counts in spring/autumn:

*Ringed Plover Charadrius hiaticula (Europe/NW Africa)*: 1740 individuals, representing an average of 2.3% of the population (5 year peak mean 1998/99-2002/03)

*Sanderling Calidris alba (Eastern Atlantic)*: 1303 individuals, representing an average of 1% of the population (5 year peak mean 1998/99-2002/03)

*Bar-tailed Godwit, Limosa lapponica lapponica (W Palearctic)*: 3933 individuals, representing an average of 3.2% of the population (5 year peak mean 1998/99-2002/03)

### 6.4.3 Ouse Washes Ramsar

Site Area: 2469.08ha, of which approximately 761.1ha is within the Borough.

#### 6.4.3.1 General overview (as given on Ramsar Information Sheet: UK11051)

This site is an area of seasonally-flooded washland habitat managed in a traditional agricultural manner. The washlands support nationally and internationally important numbers of wintering waterfowl and nationally important numbers of breeding waterfowl. The site is also of note for the large area of unimproved neutral grassland communities which it holds, and for the richness of the aquatic flora within the associated watercourses.

#### 6.4.3.2 Ramsar Criteria:

1: The site is one of the most extensive areas of seasonally-flooding washland of its type in Britain.

2: The site supports several nationally scarce plants, including small water pepper *Polygonum minus*, whorled water-milfoil *Myriophyllum verticillatum*, greater water parsnip *Sium latifolium*, river water dropwort *Oenanthe fluviatilis*, fringed water-lily *Nymphoides peltata*, long-stalked pondweed *Potamogeton praelongus*, hair-like pondweed *Potamogeton trichoides*, grass-wrack pondweed *Potamogeton compressus*, tasteless water pepper *Polygonum mite* and marsh dock *Rumex palustris*.

3: Invertebrate records indicate that the site holds relict fenland fauna, including British Red Data Book species large darter dragonfly *Libellula fulva*, and the rifle beetle *Oulimnius major*.

4: The site also supports a diverse assemblage of nationally rare breeding waterfowl associated with seasonally-flooding wet grassland.

5: Assemblages of international importance:

Species with peak counts in winter: 59133 waterfowl (5 year peak mean 1998/99-2002/03)

6: Species/populations occurring at levels of international importance.

#### 6.4.3.3 Qualifying species/populations (as identified at designation):

##### Species with peak counts in winter:

*Tundra Swan Cygnus columbianus bewickii (NW Europe)*: 1140 individuals, representing an average of 3.9% of the population (5 year peak mean 1998/99-2002/03)

*Whooper Swan Cygnus cygnus (Iceland/UK/Ireland)*: 653 individuals, representing an average of 3.1% of the population (5 year peak mean 1998/99-2002/03)

*Eurasian Wigeon Anas penelope (NW Europe)*: 22630 individuals, representing an average of 1.5% of the population (5 year peak mean 1998/99-2002/03)

*Gadwall Anas strepera strepera (NW Europe)*: 438 individuals, representing an average of 2.5% of the GB population (5 year peak mean 1998/99-2002/03)

*Eurasian Teal Anas crecca (NW Europe)*: 3384 individuals, representing an average of 1.7% of the GB population (5 year peak mean 1998/99-2002/03)

*Northern Pintail Anas acuta (NW Europe)*: 2108 individuals, representing an average of 3.5% of the population (5 year peak mean 1998/99-2002/03)

*Northern Shoveler Anas clypeata (NW & C Europe)*: 627 individuals, representing an average of 1.5% of the population (5 year peak mean 1998/99-2002/03)

6.4.3.4 Species/populations identified subsequent to designation for possible future consideration under criterion 6.

Species with peak counts in winter:

*Mute Swan Cygnus olor (Britain):* 722 individuals, representing an average of 1.9% of the population (5 year peak mean 1998/99-2002/03)

*Common Pochard Aythya ferina (NE & NW Europe):* 4678 individuals, representing an average of 1.3% of the population (5 year peak mean 1998/99-2002/03)

*Black-tailed Godwit Limosa limosa islandica (Iceland/W Europe):* 2647 individuals, representing an average of 7.5% of the population (5 year peak mean 1998/99-2002/03)

#### 6.4.4 Roydon Common Ramsar

Site Area: 194.1ha, entirely within the Borough

##### 6.4.4.1 General overview (as given on Ramsar Information Sheet: UK11061)

Roydon Common is an area of lowland mixed valley mire surrounded by heathland. It sits on the Cretaceous greensand of west Norfolk, within a broad south-west-facing valley basin. It has a classic sequence of vegetation types associated with valley mires of this type. The dry heath of the upper slopes is hydrologically linked with wetter lower slopes, which experience seasonal waterlogging and are colonised by wet heath. This grades into the valley bottom, which is permanently waterlogged, and comprises acid bog and nutrient-poor fen communities, blending into more base-rich fen and carr woodland in the valley bottom.

##### 6.4.4.2 Ramsar Criteria

1: The site is the most extensive example of valley mire-heathland biotype within East Anglia. - It is a mixed valley mire holding vegetation communities which reflect the influence of both base-poor and base-rich water.

3: The vegetation communities have a restricted distribution within Britain. - It also supports a number of acidophilic invertebrates outside their normal geographic range and six British Red Data Book invertebrates.

#### 6.4.5 The Wash Ramsar

Site Area: 62211.66ha, of which approximately 741.9ha is within the Borough and approximately 33.63km of the Borough's coastline directly borders it.

##### 6.4.5.1 General overview (as given on Ramsar Information Sheet: UK11072)

The Wash is the largest estuarine system in Britain. It is fed by the rivers Witham, Welland, Nene and Great Ouse. There are extensive saltmarshes, intertidal banks of sand and mud, shallow waters and deep channels. It is the most important staging post and over-wintering site for migrant wildfowl and wading birds in eastern England. It supports a valuable commercial fishery for shellfish and also an important nursery area for flatfish. It holds one of the North Sea's largest breeding populations of common seal *Phoca vitulina* and some grey seals *Halichoerus grypus*. The sublittoral area supports a number of different marine communities including colonies of the reef-building polychaete worm *Sabellaria spinulosa*.

##### 6.4.5.2 Ramsar Criteria:

1: The Wash is a large shallow bay comprising very extensive saltmarshes, major intertidal banks of sand and mud, shallow water and deep channels.

3: Qualifies because of the inter-relationship between its various components including saltmarshes, intertidal sand and mud flats and the estuarine waters. The saltmarshes and the plankton in the estuarine water provide a primary source of organic material which, together with other organic matter, forms the basis for the high productivity of the estuary.

5: Assemblages of international importance:

Species with peak counts in winter: 292541 waterfowl (5 year peak mean 1998/99-2002/03)

6: Species/populations occurring at levels of international importance.

##### 6.4.5.3 Qualifying species/populations (as identified at designation):

Species with peak counts in spring/autumn:

*Eurasian Oystercatcher Haematopus ostralegus ostralegus (Europe & NW Africa - wintering):* 15616 individuals, representing an average of 1.5% of the population (5 year peak mean 1998/99-2002/03)

*Grey Plover Pluvialis squatarola (E Atlantic/W Africa - wintering):* 13129 individuals, representing an average of 5.3% of the population (5 year peak mean 1998/99-2002/03 - spring peak)

*Red Knot Calidris canutus islandica (W & S Africa - wintering):* 68987 individuals, representing an average of 15.3% of the population (5 year peak mean 1998/99-2002/03)

*Sanderling Calidris alba (Eastern Atlantic):* 3505 individuals, representing on average 2.8% of the population (5 year peak mean 1998/99-2002/03)

*Eurasian Curlew Numenius arquata arquata (Europe - breeding):* 9438 individuals, representing an average of 2.2% of the population (5 year peak mean 1998/99-2002/03)

*Common Redshank Tringa totanus tetanus:* 6373 individuals, representing an average of 2.5% of the population (5 year peak mean 1998/99-2002/03)

*Ruddy Turnstone Arenaria interpres interpres (NE Canada, Greenland/W Europe & NW Africa):* 888 individuals, representing an average of 1.7% of the GB population (5 year peak mean 1998/99-2002/03)

Species with peak counts in winter:

*Pink-footed Goose Anser brachyrhynchus (Greenland, Iceland/UK):* 29099 individuals, representing an average of 12.1% of the population (5 year peak mean 1998/99-2002/03)

*Dark-bellied Brent Goose Branta bernicla bernicla:* 20861 individuals, representing an average of 9.7% of the population (5 year peak mean 1998/99-2002/03)

*Common Shelduck Tadorna tadorna (NW Europe):* 9746 individuals, representing an average of 3.2% of the population (5 year peak mean 1998/99-2002/03)

*Northern Pintail Anas acuta (NW Europe):* 431 individuals, representing an average of 1.5% of the GB population (5 year peak mean 1998/99-2002/03)

*Dunlin Calidris alpina alpina (W Siberia/W Europe):* 36600 individuals, representing an average of 2.7% of the population (5 year peak mean 1998/99-2002/03)

*Bar-tailed Godwit Limosa lapponica lapponica (W Palearctic):* 16546 individuals, representing an average of 13.7% of the population (5 year peak mean 1998/99-2002/03)

6.4.5.4 Species/populations identified subsequent to designation for possible future consideration under criterion 6.

Species with peak counts in spring/autumn

*Ringed Plover Charadrius hiaticula (Europe/Northwest Africa):* 1500 individuals, representing an average of 2% of the population (5 year peak mean 1998/99-2002/03)

*Northern Lapwing Vanellus vanellus (Europe - breeding):* 46422 individuals, representing an average of 1.3% of the population (5 year peak mean 1998/99-2002/03)



## 6.5 Other Relevant Plans or Projects

The assessment of significant effects of a given option needs to take account of the option's impact in combination with other plans and projects. The guidance states that only those that are considered most relevant should be collected for the 'in combination' test - an exhaustive list could render the assessment exercise unworkable. The following plans or strategies are considered to have potential effects and therefore have been included within the assessment:

- Core Strategy 2011-2025 adopted 28th July 2011;
- Local Transport Plan for Norfolk 2006-2011;
- King's Lynn Urban Development Strategy 2006;
- Waterfront Regeneration Master Plan (revised 2009) & Project; (Marina project);
- King's Lynn Town Centre Extension Master Plan 2008;
- Hunstanton Town Centre & Southern Seafront Master Plan July 2008;
- King's Lynn Growth Plan (Integrated Programme of Development 2009/10 - 2010/11) Oct. 2008 (funding announced Dec 08);
- KLWN Green Infrastructure Study;
- KLWN Water Cycle Study;
- The Wash & Fens Green Infrastructure Plan Consultation Draft Feb. 11;
- Cambridgeshire Green Infrastructure Strategy July 11;
- Thetford Green Infrastructure Study Sept. 07;
- Shoreline Management Plans for North Norfolk and the Wash;
- Wash Biodiversity Action Plan - Currently being prepared;
- The Wash Estuary Management Plan 2<sup>nd</sup> Revised Edition 2004;
- Brecks Biodiversity Action Plan - Currently being prepared;
- Grimston Heath is currently being expanded by the Norfolk Wildlife Trust;
- Norfolk Coast Partnership Management Plan (2009-14 published Sept 09);
- AONB Action Plan 2009-14 (latest published annual Action Plan 2010-11);
- AONB Visitor Management Strategy 1995;
- Fen Restoration Project - Currently being undertaken by Norfolk Wildlife Trust;
- "Grasslands: Magical Meadows" - Currently being undertaken by Norfolk Wildlife Trust;
- Gaywood Valley SURF Project;
- Wissey Living Landscape Project;
- Breckland Stone Curlew 1500m development exclusion zone policy/Breckland Adopted Core Strategy 2009.

### 6.5.1 Neighbouring District/Boroughs

The Borough of King's Lynn and West Norfolk borders North Norfolk, Breckland, Forest Heath, Fenland, East Cambridgeshire and South Holland districts. The Local Development Framework for each District are at the following stages:

North Norfolk District Council - adopted Site Allocations Development Plan Document 23 February 2011

Breckland District Council - Core Strategy published December 2009; Site Specific Policies and Proposals DPD expected to be adopted end of 2011

Forest Heath District Council - Core strategy DPD adopted May 2010; Site Specific Allocation Plan expected to be adopted end of 2011

Fenland District Council - Core Strategy currently in consultation

East Cambridgeshire District Council - Core Strategy adopted October 2009; Revised Core Strategy consultation in 2011/2012

South Holland District Council - Core Strategy incomplete at the end of 2009/10

## 7 *Appropriate Assessment and Plan Analysis*

In order to determine whether the BCKLWN Site Specific Policies DPD represents an adverse affect to the integrity of any European Site within the Borough a two stage assessment has been carried out.

Task 1 - Identifying whether a plan option is likely to have a significant effect.

Task 2 - Where there is found to be a likely significant effect, assess the effect to the integrity of the European site and explore any mitigation measures that could reduce or remove the impact. Where insufficient information is available to carry out a reasonable assessment, identify gaps in knowledge and outline research programme designed to fill such gaps.

Task 1 is a screening process. Those policies which are considered not to have a likely significant effect on any European Site need be considered no further. Those that are considered to have a likely significant effect will be taken forward to Task 2. The screening process involves consultation with the statutory nature conservation body (Natural England), and is a judgement based on a number of factors including the proximity of proposals to the European Sites, the type of impacts likely to be caused by the policy, the qualifying features of the European Site, the probability of the impact, the duration, frequency and reversibility of the impact.

The term “significant” means **not trivial or inconsequential** but an effect that is potentially relevant to the site’s Conservation Objectives. The Conservation Objectives for each site are produced by Natural England, and are the objectives of management necessary to maintain the qualifying features in favourable condition. Maintenance implies restoration where the feature is currently in unfavourable condition.

A series of matrices have been created which seek to assess the following:

- Whether the policy is necessary for the conservation management of a European Site.
- If a ‘likely significant effect’ can be expected.
- What is the likely mechanism for impact and the feature/features affected?
- Is an Appropriate Assessment required?
- Can it be ascertained it will not adversely affect the integrity of the European Site?
- Can it be carried out in a different way or be conditioned or restricted?
- What modifications to the policy/option are required?
- Can the modified policy/option be pursued without adversely affecting the integrity of the European Site?

### 7.1 **Considered Impacts**

This section sets out the nature of potential impacts that policies within the Local Development Framework document could have upon European sites within or around the Borough. Table 1 below identifies which of these impacts is appropriate to each policy.

The impacts considered are as follows.

#### 7.1.1 *Loss of Supporting Habitats*

As the European sites themselves are protected, it is unlikely that any developments will take place directly on these sites, but some could be located immediately adjacent to them, hence impacting any protected species which also use neighbouring land. This

is particularly relevant to birds, where normally only roosting/nesting sites are protected whereas feeding/foraging areas are often overlooked and can therefore be located beyond the borders of the European site. If such land is used for developments, it reduces the amount of supporting habitat available for use by protected species and can therefore potentially affect the integrity of the SPA populations.

### 7.1.2 Habitat Fragmentation Impacts

This is where development increases the separation of available habitats, either by removing or degrading intermediate habitats, or splitting extensive areas of suitable habitat. Once again SPA bird populations are the most likely to be affected by this impact.

### 7.1.3 Proximity Impacts

These are the impacts on protected habitats and species brought about by their proximity to development. They are numerous, diverse and largely site and project specific, but can include the following:

- Disturbance effects from construction activities (including noise and lighting)
- Increased traffic impacts from construction activities.
- Increased human disturbance from use of the development.
- Increased predation from pets and animals associated with urban areas (cats, foxes, rats).
- Increased fly tipping.
- Increased incidence of fires on heathland.
- Increased levels of lighting.
- Increased random disturbance events.

There is particular concern about proximity impacts on Breckland SPA species, mainly stone curlew. To avoid detrimental proximity impacts on stone curlew, the Core Strategy Policy CS12 Environmental Assets states: *“New built development will be restricted within 1,500m of the Breckland SPA. Development will be restricted to the re-use of existing buildings or where existing development completely masks the new proposal from the Breckland SPA. Beyond the SPA, a 1,500m buffer will also be applied to areas where the qualifying features are known to exist, or where nesting attempts have been made. In this area, development may be acceptable where suitable alternative habitat (outside the SPA) can be secured.”* The Site Specific Policies therefore follow this policy.

### 7.1.4 Hydrological Impacts

#### Hard Surface Runoff

Changes in hard surface runoff (i.e. over urban areas) may lead to altered flow patterns in watercourses (storm water surges), and during the construction phase could increase nutrient and sediment discharge into watercourses. Ouse Washes and The Wash could be affected by increased sediment discharge and deposition.

#### Groundwater Supply

This is where water stored in aquifers or porous strata are depleted or contaminated by development activity. Dersingham Bog and Roydon Common would be particularly vulnerable to this, as they are both dependent on a relatively stable water level in the areas surrounding them. Any depletion or contamination could disastrously affect these sites as all protected species and habitats would be highly sensitive to such changes.

### Sewerage Capacity

The capacity of the current sewerage system to process increased levels of human waste could form a limitation to development where nutrient levels are likely to exceed targets set for European sites, including the River Wensum SAC where phosphate levels are of critical importance to site condition.

Sewage discharge into the North Sea could also increase as the number of people living in the new housing developments rises. This could impact the mudflats, sandbanks and shingle of The Wash and North Norfolk Coast through changes in nutrient status.

#### *7.1.5 Impacts from Increased Recreation and Leisure Pressures*

As many of these policies refer to increasing the volume of housing in the Borough, the population will inevitably rise. The projected rise in housing in the Borough 2001 to 2025 is for 16,200 new houses. The latest population estimate for the Borough in 2010 was 139,100 people. The combined effects of increases in homes and people on Natura 2000 sites were considered within the Core Strategy Habitats Regulations Assessment. Therefore in this document we assess the effects of finer scale housing allocation to specific areas on Natura 2000 sites, rather than the cumulative increase.

There is also likely to be increased use of the Borough for tourism, though no projected figures are available. It should also be considered that the Natura 2000 sites attract visitors from outside of the Borough. Increased recreation in these areas is therefore on partially contributed by local residents. The Regional Spatial Strategy for the East of England considered the combined effects of recreation as a result of increased population density within the region.

This will increase the usage of sites for informal recreation and leisure, such as coastal areas along The Wash and North Norfolk Coast. A further potential impact is that of dog walkers disturbing protected birds. The use of sites by resident populations may be significant in that there is likely to be less of a seasonal bias, and a resulting increase in winter use of European sites.

Horse riders, cyclists/mountain bikers and joggers use protected European Sites, such as the coastline of The Wash, North Norfolk Coast and Breckland. Increased levels of these activities could also disrupt protected birds' usage of these sites. However, the indications are that the populations of many species using the SPA are increasing, and have not adversely suffered from increasing visitor levels over recent years.

The Green Infrastructure Strategy for the Borough takes the following strategy approach to "Maintain and where appropriate enhance the value of The Wash and Norfolk Coast, Brecks and Ouse Washes as a resource for wildlife, whilst also conserving and, where appropriate enhancing their landscape and historic value and their value as a resource for people." Such an approach suggests an approach to leisure use of these sites which puts the interests of the wildlife (and presumably the designated European features) very much at the forefront while indicating pragmatism towards sensible development of leisure facilities.

Two SPA species of the North Norfolk Coast, Ringed Plover and Little Tern, have been identified as being in particular risk of recreational disturbance associated with use of the North Norfolk Coast. Nesting numbers of both species have declined at some localities, with human disturbance being a likely contributory cause. While Little Terns are colonial and are largely situated within Nature reserves, and therefore relatively easy to defend against accidental disturbance, Ringed Plovers are more dispersed, and more challenging to conserve. The nesting period coincides with increased visitor numbers in the April to June period. Main concentrations of Little Terns in West Norfolk are found at Holme, Scolt Head and Burnham Overy, while Ringed Plovers are found at Holme, Titchwell and Scolt Head. Impacts from disturbance are best alleviated by

effective on-site protection, such as by wardening or temporary fencing of nesting sites.

The two SPA species in the Breckland which are likely to be vulnerable to recreational disturbance, woodlark and nightjar, have been studied in some detail in work commissioned by Breckland District Council. The indications from this work are that “the low level of disturbance is not likely to have a significant effect, yet a lack of research to the contrary led to the precautionary conclusion that adverse effects could not be ruled out with the necessary certainty” (Liley et al 2008).

#### *7.1.6 Impacts from Increased Use of Roads*

This refers to the impacts of increased traffic flows resulting from new development, including increased noise impacts (volume, duration), increased vehicular emissions, increasing road mortality, and increasing fragmentation impacts. These impacts are most likely to be important for SPA bird species and certain SAC habitats. However transport planning is undertaken at a county-wide level, and is detailed in the County Transport Plan identified in section 4.3.

Effects from vehicular emissions on Breckland SAC and SPA are noted as being small in the AA report of the Regional Spatial Strategy, and not likely to adversely affect the integrity of the European sites. This report has no evidence to present contradicting this assessment, and therefore does not identify emissions as a likely source of impacts on European sites.

#### *7.1.7 Cumulative Impacts*

Cumulative impacts are those where an impact in itself may not be significant, but in combination with other impacts from this plan, or from other plans and projects, may amount to a significant impact. Such impacts may arise from conflicting policies between districts or from impacts on European sites shared between districts.

#### *7.1.8 Other Impacts*

It should be noted that none of the policies in the LDF are considered necessary for the conservation management of European Sites.

It should also be made clear that impacts on European sites could arise within the Borough that are outside the scope of Local Plans and policies, such as those arising from changes in agriculture or those policies delivered at a county level such as mineral extraction and road network planning.

## **8 Task 1: Screening for Likely Significant Effects.**

**Table 2: Identification of likely significant effects on Natura 2000 sites as a result of proposals, with the allocation for Key Rural Service Centres and Rural Villages based on the size of the existing population**

Site	Distance to closest Natura 2000 site	Possible Mechanism by which Policy may impact European Site(s)	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
4. King's Lynn Town Centre: 1920 homes	4.0km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Hydrological Impacts - increased sewage discharge. However the Core Strategy Appropriate Assessment predicted no likely significant effect based on results of the Water Cycle Study.  Increased visitors to the coast may result in disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA.	SPA features (disturbance of breeding/wintering birds)	Yes
4. King's Lynn NE - adjacent to Knight's Hill: 750 homes	1.32km from Roydon Common and Dersingham Bog SAC and Roydon Common Ramsar	Increased visitors to the coast may result in disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA.	SPA features (disturbance of breeding/wintering birds)	Yes
5.1. South Wootton: 800 homes	3.74km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Increased visitors to the coast may result in disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA.	SPA features (disturbance of breeding/wintering birds)	Yes



Site	Distance to closest Natura 2000 site	Possible Mechanism by which Policy may impact European Site(s)	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
5.2. North Wootton: no allocation	3.72km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	No current allocation of houses, therefore no likely significant effect.		No
5.3. South-east Kings Lynn - West Winch and North Runcton area: 1600 homes	7.84km from Roydon Common and Dersingham Bog SAC; 7.84km from Roydon Common Ramsar	Increased visitors to the coast may result in disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA.	SPA features (disturbance of breeding/wintering birds)	Yes
6. Downham Market: 390 homes	3.52km from Ouse Washes SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.  Increased visitors to the coast may result in disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA.	SPA features (disturbance of breeding/wintering birds)	Yes
7. Hunstanton: 220 homes	0.45km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Hydrological Impacts - increased sewage discharge. However the Core Strategy Appropriate Assessment predicted no likely significant effect based on results of the Water Cycle Study.  Increased visitors to the coast may result in disturbance of breeding and wintering birds.	SPA features (disturbance of breeding/wintering birds)	Yes

Site	Distance to closest Natura 2000 site	Possible Mechanism by which Policy may impact European Site(s)	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
8. Wisbech Fringe: 550 units (divided between Emneth and Walsoken)	9.38km from the Nene Washes SPA and Ramsar	Development not sufficiently close enough to Natura 2000 site to cause a likely significant effect.		No
9.1 Brancaster/ Brancaster Staithe/Burnham Deepdale: 11 homes	0.68km from The North Norfolk Coast SPA and Ramsar and The Wash and North Norfolk Coast SAC	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.2 Burnham Market: 13 homes	1.17km from The North Norfolk Coast SPA and Ramsar and The Wash and North Norfolk Coast SAC	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.3 Castle Acre: 11 homes	6.42km from Norfolk Valley Fens SAC	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.4 Clenchwarton: 29 homes [no potential sites identified]	3.18km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.5 Dersingham: 63 homes	0.59km from Roydon Common and Dersingham Bog SAC and Dersingham Bog Ramsar	Increased visitors to the coast may result in disturbance of breeding and wintering birds.	SPA features	Yes

Site	Distance to closest Natura 2000 site	Possible Mechanism by which Policy may impact European Site(s)	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
9.6 Docking: 15 homes	6.47km from The North Norfolk Coast SPA and Ramsar and The Wash and North Norfolk Coast SAC	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.7 East Rudham: 8 homes [no potential sites identified]	2.06km from River Wensum SAC	Increase in phosphate levels caused by increased sewage output in upper reaches of the River Wensum. The Water Cycle Study also highlights that an Appropriate Assessment may be necessary for development in East Rudham.	SAC features	Yes
9.8 Feltwell & Hockwold cum Wilton: 56 homes	0.29km from Breckland SPA	Proximity impacts for birds sensitive to human presence.  Recreational impacts from daily activities such as dog walking in the forest. The recreational impacts are thought to be insufficient in scale from the proposed allocations alone to cause likely significant effects, but may do so in combination with plans from neighbouring authorities.	SPA features particularly stone curlew for sensitivity to human presence, and nightjar and woodlark for recreational impacts.	Yes
9.9 Gayton, Grimston and Pott Row: 46 homes	2.43km from Norfolk Valley Fens	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.10 Great Massingham: 12 homes	8.67km from Norfolk Valley Fens	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.11 Heacham: 63 homes	1.18km from The Wash Ramsar and SPA	Increased visitors to the coast may result in disturbance of breeding and wintering birds.	SPA features	Yes

Site	Distance to closest Natura 2000 site	Possible Mechanism by which Policy may impact European Site(s)	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
9.12 Marham: 38 homes	5.59km from Breckland SPA	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.13 Methwold and Northwold: 40 homes	1.62km from Breckland SPA	Proximity impacts for birds sensitive to human presence. Recreational impacts from daily activities such as dog walking in the forest. The recreational impacts are thought to be insufficient in scale from the proposed allocations alone to cause likely significant effects, but may do so in combination with plans from neighbouring authorities. All proposed sites are outside of the 1,500m stone curlew buffer.	SPA features particularly stone curlew for sensitivity to human presence, and nightjar and woodlark for recreational impacts.	Yes
9.14 Outwell/Upwell: 60 homes	7.05km from Ouse Washes Ramsar and SAC	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.15 Snettisham: 35 homes	2.97km from The Wash Ramsar and SPA	Increased visitors to the coast may result in disturbance of breeding and wintering birds.	SPA features	Yes

Site	Distance to closest Natura 2000 site	Possible Mechanism by which Policy may impact European Site(s)	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
9.16 Stoke Ferry: 14 homes	4.28km from Norfolk Valley Fens	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.17 Terrington St. Clement: 56 homes	6.15km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.18 Terrington St. John/St. John's Highway/ Tilney St. Lawrence: 35 homes [no potential sites identified]	11.06km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.19 Watlington: 32 homes	9.63km from the Ouse Washes Ramsar and SAC	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
9.20 West Walton/ Walton Highway: 23 homes [no potential sites identified]	12.82km from Nene Washes Ramsar and SPA	Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.		No
10.1 Ashwicken: 5 homes [no potential sites identified]	2.90km from Roydon Common Ramsar and Roydon Common and Dersingham Bog SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.2 Burnham Overy Staithe: 2 homes	0.43km from The North Norfolk Coast SPA and Ramsar and The Wash and North	Possible disturbance of SPA features during construction, particularly breeding birds. Proximity impacts for birds sensitive to	SPA features	No due to the small scale and site of the proposal.

Site	Distance to closest Natura 2000 site	Possible Mechanism by which Policy may impact European Site(s)	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
	Norfolk Coast SAC	human presence.  However, the allocated site is shielded from the SPA by existing development and is therefore unlikely to cause a significant effect as a result of the proposal's presence or construction. Two additional homes are unlikely to cause a likely significant effect on SPA features as a result of recreational disturbance.		
10.3 Castle Rising: 2 homes [no potential sites identified]	2.22km from Roydon Common and Dersingham Bog SAC and Roydon Common Ramsar	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.4 Denver: 9 homes	2.56km from Ouse Washes SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.5 East Winch: 8 homes	3.54km from Norfolk Valley Fens	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.6 Fincham: 5 homes	7.54km from Breckland SPA	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.7 Flitcham: 2 homes [no potential sites identified]	4.18km from Roydon Common and Dersingham Bog SAC and Roydon Common Ramsar	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No

Site	Distance to closest Natura 2000 site	Possible Mechanism by which Policy may impact European Site(s)	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
10.8 Great Bircham/Bircham Tofts: 4 homes	8.76km from Roydon Common and Dersingham Bog SAC and Dersingham Bog Ramsar	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.9 Harpley: 3 homes	9.15km from Roydon Common and Dersingham Bog SAC; 1.32km from Roydon Common Ramsar	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.10 Hillington: 3 homes	2.85km from Roydon Common and Dersingham Bog SAC; 1.32km from Roydon Common Ramsar	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.11 Hilgay: 9 homes	4.87km from Ouse Washes Ramsar and SPA	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.12 Ingoldisthorpe: 7 homes	2.78km from Roydon Common and Dersingham Bog SAC and Dersingham Bog Ramsar	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.13 Marshland St. James, St. Johns Fen/Tilney Fen End: 13 homes [no potential sites]	10.24km from Ouse Washes Ramsar and SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No

Site	Distance to closest Natura 2000 site	Possible Mechanism by which Policy may impact European Site(s)	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
identified]				
10.14 Middleton: 14 homes	5.70km from Roydon Common and Dersingham Bog SAC; 1.32km from Roydon Common Ramsar	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.15 Old Hunstanton: 4 homes [no potential sites identified]	0.42km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Increased visitors to the coast may result in disturbance of breeding and wintering birds. In isolation, the proposal is unlikely to cause a likely significant effect on designated sites, although in combination with other proposals a likely significant effect could be identified.	SPA features	Yes
10.16 Runcton Holme: 6 homes	8.18km from Ouse Washes Ramsar and SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.17 Sedgeford: 5 homes	5.01km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.18 Shouldham: 6 homes	8.25km from Breckland SPA	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No



Site	Distance to closest Natura 2000 site	Possible Mechanism by which Policy may impact European Site(s)	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
10.19 Southery: 12 homes	6.32km from Ouse Washes SPA and Ramsar	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.20 Syderstone: 5 homes	11.07km from The North Norfolk Coast SPA and Ramsar and The Wash and North Norfolk Coast SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.21 Ten Mile Bank: 4 homes [no site allocated]	3.46km from Ouse Washes SPA and Ramsar	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.22 Three Holes: 4 homes [no potential sites identified]	5.89km from Ouse Washes SPA SAC Ramsar	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.23 Thornham: 4 homes	0.14km from The North Norfolk Coast SPA and Ramsar and The Wash and North Norfolk Coast SAC	<p>Possible disturbance of SPA features during construction, particularly breeding birds.</p> <p>Proximity impacts for birds sensitive to human presence.</p> <p>The allocated site is not shielded from the SPA by existing development; therefore despite the small scale of development, a significant effect may occur.</p>	SPA features - breeding/wintering birds	Yes
10.24 Tilney All Saints: 6 homes [no potential sites identified]	6.74km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No

Site	Distance to closest Natura 2000 site	Possible Mechanism by which Policy may impact European Site(s)	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
10.25 Walpole Cross Keys: 5 homes [no potential sites identified]	6.13km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.26 Walpole Highway: 7 homes	12.13km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.27 Walpole St Peter / Walpole St Andrew / Walpole Marsh: 17 homes	9.67km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.28 Welney: 5 homes [no potential sites identified]	~0.49km from Ouse Washes SPA SAC Ramsar	<p>Possible disturbance of SPA features during construction, particularly breeding or wintering birds.</p> <p>Proximity impacts for birds sensitive to human presence.</p> <p>Currently no site is allocated within Welney, should a site later be allocated this should be subject to a project-level appropriate assessment.</p>		No
10.29 Wereham: 6 homes [no potential sites identified]	6.45km from Norfolk Valley Fens SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No

Site	Distance to closest Natura 2000 site	Possible Mechanism by which Policy may impact European Site(s)	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
10.30 West Newton: 2 homes [no potential sites identified]	2.22km from Dersingham Bog Ramsar and Roydon Common & Dersingham Bog SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.31 Wimbotsham: 6 homes	4.99km from Ouse Washes SPA and Ramsar	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.32 Wiggerhall St Germans: 13 homes [no potential sites identified]	9.42km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.33 Wiggerhall St Mary Magdalen: 7 homes [no potential sites identified]	9.85km from Ouse Washes SAC	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No
10.34 Wormegay: 3 homes	8.16km from Norfolk Valley Fens	Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect.		No

Development Management Policies			
Policy	Possible Mechanism by which Policy may Impact European Site	Possible Feature(s) Impacted	Likely significant effect and need for Appropriate Assessment?
DM1 - Replacement Dwellings and Extensions to Dwellings in the Countryside	There is no mechanism for impacts on European Sites		No
DM2 - Removal of agricultural occupancy conditions	There is no mechanism for impacts on European Sites		No
DM3 - Houses in Multiple Occupation (HMOs)	There is no mechanism for impacts on European Sites		No
DM4 - Town Centres	There is no mechanism for impacts on European Sites		No
DM5 - Gaywood Clock area	There is no mechanism for impacts on European Sites		No
DM6 - Holiday and Seasonal Occupancy Conditions	There is no mechanism for impacts on European Sites		No
DM7 - Static Holiday Caravan Sites and Touring, Camping and Caravan Sites	Dependent on the location and size of these sites, a likely significant effect may occur as a result of recreational disturbance to SPA receptors.	SPA and SAC features: particularly breeding birds	Yes
DM8 - Flood Risk - Coastal Hazard Zones	There is no mechanism for impacts on European Sites		No

DM9 Disused Railway	There is no mechanism for impacts on European Sites		No
DM10 Corridors of Movement	There is no mechanism for impacts on European Sites		no
DM11 Protection of Existing Green Infrastructure and Open Space	The policy supports retention of green space, but may result in likely significant effects through relocation of amenity areas and valued habitats	SPA birds	Yes
DM12 Boroughwide (Rural Areas and Coastal Areas) Green Infrastructure	Linking of disjointed long distance paths may lead to disturbance issues	SPA and SAC features: particularly breeding birds	Yes

## 9 Task 2: Appropriate Assessment

European Sites and mechanisms for impacts	Can it be ascertained it will not adversely affect the integrity of the European Site	Can it be carried out in a different way or be conditioned or restricted?	Modification to original policy	Can it be ascertained that the modified policy will not adversely affect the integrity of the European Site
<p><b>European Site:</b> The Wash SPA and Ramsar and The North Norfolk Coast SPA and Ramsar</p> <p><b>Possible Mechanism(s):</b> Indirect impacts - recreation</p> <p><b>Affected sites:</b> King's Lynn Downham Market King's Lynn NE South Wootton</p>	No	The Site Specific Allocations and Policies DPD can be modified to stress a partnership approach (with RSPB?) to visitor management in the SPA.	Include policy wording to establish a programme of monitoring in conjunction with partners to identify current visitor numbers, and to monitor any increases and to identify potential adverse effects on SPA features. Should adverse effects be identified, suitable mitigation measures will be decided between partners and implemented. The success of mitigation measures will also be monitored, and adjusted if necessary.	Yes - no residual effects
<p><b>European Site:</b> The Wash SPA and Ramsar</p> <p><b>Possible Mechanism(s):</b> Indirect impacts - recreation</p> <p><b>Affected sites:</b> Hunstanton, Heacham, Snettisham, Dersingham, Old Hunstanton</p>	No	The Site Specific Allocations and Policies DPD can be modified to stress a partnership approach (with RSPB?) to visitor management in the SPA.	Include policy wording to establish a programme of monitoring in conjunction with partners to identify current visitor numbers, and to monitor any increases and to identify potential adverse effects on SPA features. Should adverse effects be identified, suitable mitigation measures will be decided between partners and implemented. The success of mitigation measures will also	Yes - no residual effects

European Sites and mechanisms for impacts	Can it be ascertained it will not adversely affect the integrity of the European Site	Can it be carried out in a different way or be conditioned or restricted?	Modification to original policy	Can it be ascertained that the modified policy will not adversely affect the integrity of the European Site
			be monitored, and adjusted if necessary.	
<p><b>European Site:</b> Breckland SPA</p> <p><b>Possible Mechanism(s):</b> Direct impacts - proximity and disturbance.</p> <p><b>Affected sites:</b> Feltwell &amp; Hockwold cum Wilton Methwold and Northwold</p>	No	<p>The Feltwell and Hockwold cum Wilton sites should ensure that they are completely masked by existing development from the Breckland SPA. A project-level Habitats Regulations Assessment will be required for development within these areas.</p> <p>The Methwold and Northwold sites comply with the Core Strategy by being outside 1,500m of the SPA. Therefore no direct negative effects on stone curlew are expected as a result of this development.</p>	Developments within Feltwell and Hockwold cum Wilton should only be permitted once no adverse effects on the SPA are determined by a project-level Habitats Regulations Assessment.	Yes
<p><b>European site:</b> Breckland SPA</p> <p><b>Possible Mechanism(s):</b> Indirect impacts - recreation (woodlark and nightjar).</p> <p><b>Affected Sites:</b> Feltwell &amp; Hockwold cum Wilton</p>	No	Paragraph 7.5.9 of the Core Strategy stated that in conjunction with partners the Council will undertake a baseline visitor assessment and secure monitoring programme of visitor pressure and to identify mitigation measures to prevent adverse effects on protected sites. This should also be implemented as part of the Site Specific Allocations.	Include policy wording to reiterate that of the Core Strategy.	Yes - no residual effects

European Sites and mechanisms for impacts	Can it be ascertained it will not adversely affect the integrity of the European Site	Can it be carried out in a different way or be conditioned or restricted?	Modification to original policy	Can it be ascertained that the modified policy will not adversely affect the integrity of the European Site
Methwold and Northwold				
<p><b>European site(s):</b> River Wensum SAC</p> <p><b>Possible Mechanism(s):</b> Hydrological impacts</p> <p><b>Affected Sites:</b> East Rudham</p>	No	Ensure that the capacity of the sewage treatment works is sufficient to allow for the proposed development.	Include stipulation that the sewage treatment works will be appropriate to allow for the new development.	Yes
<p><b>European Site(s):</b> The North Norfolk Coast SPA</p> <p><b>Possible Mechanism(s):</b> Direct and indirect disturbance</p> <p><b>Affected Policies:</b> Thornham</p>	No	Proposal could be constructed outside of the breeding bird season. The development should provide adequate screening from the SPA.	Include stipulation that construction would occur outside of the breeding bird survey and that adequate screening should be provided and maintained prior to construction. A project-level Appropriate Assessment may be necessary to ascertain the necessity of screening.	Yes - no residual effects
<p><b>European Site(s):</b> The Wash SPA and Ramsar and The North Norfolk Coast SPA and Ramsar</p> <p><b>Possible Mechanism(s):</b> Direct and indirect disturbance</p> <p><b>Affected Policies:</b></p>	No	The proposal should ensure there are no adverse effects on Natura 2000 sites.	The wording of the policy should be altered to state: “Elsewhere, proposals for new static caravan sites and touring camping and caravan sites will be acceptable where: There is no adverse impact on the visual amenity or natural environmental qualities of the surrounding landscape	Yes - no residual effects



European Sites and mechanisms for impacts	Can it be ascertained it will not adversely affect the integrity of the European Site	Can it be carried out in a different way or be conditioned or restricted?	Modification to original policy	Can it be ascertained that the modified policy will not adversely affect the integrity of the European Site
DM7			and <u>no adverse effect on Natura 2000 sites.</u> "	
<p><b>European Site(s):</b> The Wash SPA and Ramsar and The North Norfolk Coast SPA and Ramsar</p> <p><b>Possible Mechanism(s):</b> Direct and indirect disturbance</p> <p><b>Affected Policies:</b></p> <p>DM11</p>	No	The policy should ensure that amenity areas are not relocated where direct or indirect disturbance to Natura 2000 sites is increased.	Policy should communicate that provision of alternative leisure space is in an acceptable place with regard to European sites.	Yes - no residual effects
<p><b>European Site(s):</b> The Wash SPA and Ramsar and The North Norfolk Coast SPA and Ramsar</p> <p><b>Possible Mechanism(s):</b> Direct and indirect disturbance</p> <p><b>Affected Policies:</b></p> <p>DM12</p>	No	The proposal should ensure there are no adverse effects on Natura 2000 sites.	Policy should state that path routes are only acceptable if they demonstrably do not increase human disturbance to European sites	Yes - no residual effects

