WILD FRONTIER ECOLOGY

# Borough Council of King's Lynn and West Norfolk

# Habitats Regulations Assessment of Detailed Policies and Sites Plan: Site Allocations and Development Management Policies – Proposed Submission Document

September 2014

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The data which we have prepared and provided is accurate, and has been prepared and provided in accordance with the CIEEM's Code of Professional Conduct. We confirm that any opinions expressed are our best and professional bona fide opinions.

This report conforms to the British Standard 42020:2013 Biodiversity – Code of practice for planning and development.

# Contents

# 1 Executive Summary

This document has been produced to inform the Site Allocations and Development Management Policies – Proposed Submission Document (formerly known as the Site Specific Proposals Development Plan Document). This Habitats Regulations Assessment (HRA) takes into account comments received from Natural England and the RSPB on the previous HRA undertaken for the Preferred Options stage. The Detailed Policies and Sites Plan forms part of a hierarchical process and adds detail to the policies from the Core Strategy (adopted in July 2011) and once adopted will form part of the Local Plan, along with the existing Core Strategy) for the Borough. The Core Strategy was subject to a Habitats Regulations Assessment to ensure no adverse effect of the policies on European Sites.

The document has considered potential effects on designated sites of European importance of the site-specific preferred options document for the Borough of King's Lynn and West Norfolk. The potential effects were considered to arise from loss of supporting habitats, habitat fragmentation, non-specific proximity impacts, increased recreation and leisure pressures, increased use of roads, and the cumulative impacts on sites arising from multiple housing allocations.

By far the most important of these, in a borough-wide context, was considered to be the multi-faceted and complex impacts arising from increased recreation and leisure pressures on European sites. These were considered in some detail, and the best available evidence was used to inform the assessment. This indicated that visitors likely to cause greatest impacts were local site users, in particular those exercising dogs. This visitor group are most likely to be frequent site visitors. Impacts were predicted to be greatest where local users were within comfortable walking distance of European sites (estimated to be 1km), and would also occur where sites were in a reasonable range of driving, estimated to be around 8km or 5 miles.

Likely significant effects from individual settlements and allocations were effectively removed by significant policy modifications subsequent to the Preferred Options document and HRA.

A more substantial effect was predicted when the in-combination effects of groups of new housing allocations within range of the European sites were considered. Sites where potential in-combination effects were identified were Roydon Common and Dersingham Bog SAC, North Norfolk Coast SPA, Wash SPSA, and the Wash and North Norfolk Coast SAC.

This was especially severe for the combined heath/ bog SAC of Roydon Common and Dersingham Bog where visitor numbers are already considered to be at their upper limit. With large housing allocations proposed for King's Lynn at Knight's Hill, South Wootton and West Winch, the challenge is to accommodate the recreational needs of the extra population while demonstrating no adverse effect on the SAC, and its bird interest, which is considered to be of SPA importance, though not yet designated as such.

Effects are greatest for these areas during the long bird breeding season, the main species affected being nightjar and woodlark. People exercising dogs are predicted to have the greatest disturbance impact.

For the sites around Roydon Common, a dialogue is currently open between stakeholders, but it is considered that the approach taken is workable and is likely to succeed.

While absolute certainty of combined effects cannot be predicted, a series of avoidance measures are proposed to alleviate the current recreational pressure away from these sites, and to reduce the effects from developments within range of local users.

Enhanced informal recreational provision on (or in close proximity to) the allocated site, to limit the likelihood of additional recreational pressure (particularly in relation to exercising dogs) on nearby relevant nature conservation sites. This provision will be likely to consist of an integrated combination of:

a. Informal open space (over and above the Council's normal standards for play space); the spaces provided will need to demonstrate their suitability for a variety of uses, including linear/ circular routes for dog exercising.

b. Landscaping, including landscape planting and maintenance; landscaping in itself will make little difference to alleviate recreational pressure on Roydon or Dersingham. However it may help to make the new housing areas more attractive to residents and dissuade them from travelling a greater distance.

c. A network of attractive pedestrian routes, and car access to these, which provide a variety of terrain, routes and links to the wider public footpath network.

d. Contribution to enhanced management of nearby designated nature conservation sites and/or alternative green space; this could come in the form of a Community Infrastructure Levy (CIL) which could support any changes to the infrastructure on the European sites.

e. An ongoing programme of publicity to raise awareness of relevant environmental sensitivities and of alternative recreational opportunities away from the sensitive sites.

f. The new developments should be subject to screening for HRA. This does not replace those measures specified above, nor does it abdicate the duties of this HRA; rather it provides an additional safeguard that, at the point of delivery, a likely significant effect has been avoided.

g. Use of the European sites should be subject to ongoing monitoring for the years before, during and say 3 years after construction is complete.

h. There should be an ongoing dialogue, most likely organised by the Borough Council, and involving all relevant stakeholders, with the specific aim of reducing effects on these sites, examining the results of site monitoring and acting on any findings.

i. The Borough and other stakeholders should continue to explore options for obtaining long-term access or acquiring further recreational greenspace on an opportunistic basis.

j. As the potential effects on the European site come from a number of sources, some of which are outside the scope of this plan (for example existing settlements), the site managers should continue to innovate and explore ways of reducing on-site impacts of recreational disturbance. This could also be assisted by developer contributions.

For the coastal sites, avoidance of adverse effects in combination with other proposals outside the Borough has already been considered at Core Strategy level, but that the Preferred Options HRA specified that further work is needed to develop an agreed package of habitat protection measures. Baseline visitor pressure data, monitoring and management measures will be developed and demonstrated to be deliverable. The Borough will continue to work with its partners in pursuit of this.

With regard to the combined effect of housing proposals specific to the submission document (Heacham, Hunstanton, Docking, Burnham Market, Snettisham Ingoldisthorpe, Dersingham), a parallel strategy of green infrastructure provision, plus a programme of permanent public information, should be sufficient to ensure

reduction of likely impacts to an insignificant level, and no adverse effect on integrity. This should be tested for larger proposals by submission to HRA screening.

On this basis, no adverse effects on the conservation objectives of these sites are predicted.

# 2 Introduction

The Habitats and Birds Directives 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).

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 7).

## 2.1 Requirement for an Appropriate Assessment for the Detailed Policies and Sites Plan

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. It also recognises the potential for 'in combination' impacts resulting from interactions between its detailed Policies and Sites Plan (SSP) and factors associated with the Local Plans 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 adverse 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.

The responses to the last version of this document, assessing the site specific proposals at the Preferred Options stage, are appended.

# 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 dependent 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 Habs Regs Assessment

Prior to beginning the HRA, 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
- River Wensum

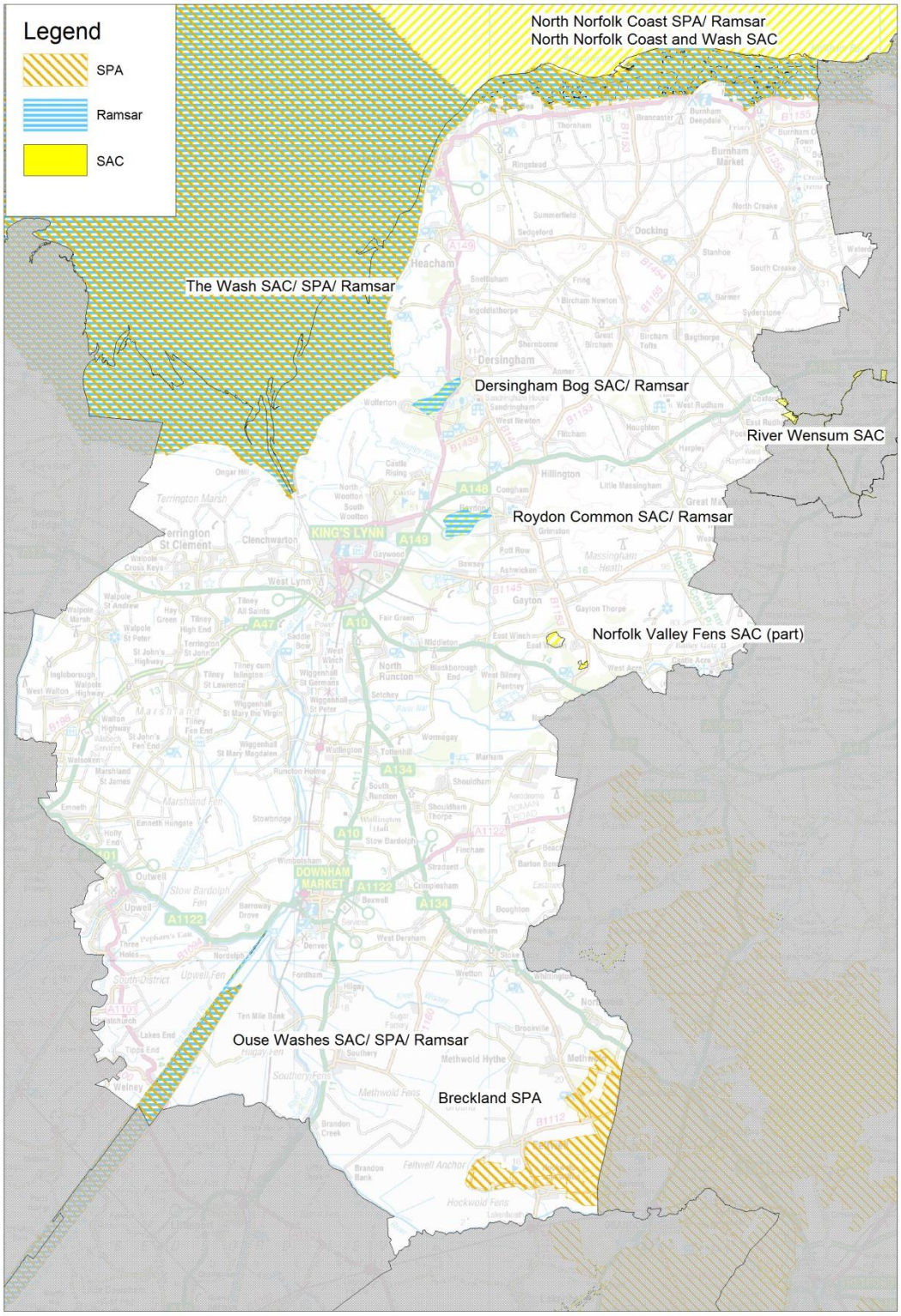
Special Protection Areas (SPA)

- Breckland
- 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 Weeting Heath borders the Borough for approximately 3.5 km. No part of the SAC falls within the Borough.

#### *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%)

Weeting Heath is in the ownership of Norfolk Wildlife Trust, and access to the public is restricted to the visitor centre and hides during the bird nesting season.

#### *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.

#### *Site Condition*

100% of the East Walton and Adcock's Common section of the Norfolk Valley Fens site is in "unfavourable recovering" condition, according to Natural England's website. East Walton Common is open access under the CROW Act, Adcocks Common is privately owned without public access.

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%)

#### *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.

#### 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. The Ouse Washes are not open access land, but can be viewed by the public from limited access points, many of which are nature reserve watchpoints.

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%)

#### 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.

#### *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, Phrygana (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%)

Both sites are open access under the CROW Act, but are also nature reserves with full time wardens. There are small car parks and well established access points at the north-west and north-east of Roydon Common. Roydon Common has areas of land under restoration to wildlife habitats nearby which are also accessible to the public. Access to Dersingham Bog is mainly from the southern end.

#### *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.

#### *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%

Most parts of the SAC are on private land and are not accessible to the public. There are a few well used access points to the river, none of which are within the Borough.

#### *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 Callitricho-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. Concurrent with much of the Wash SPA and North Norfolk Coast SPA.

#### *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%)

Most of the Wash part of the site is inaccessible to the public because of the dangerous tidal habitats. However, within the Borough, there are footpaths adjacent (the Peter Scott Walk), or access points to shingle banks which can all be walked and are open access. Some of the more accessible sites (e.g. Snettisham) are nature reserves and are wardened year-round. Other areas (e.g. Snettisham north to Hunstanton) are not wardened.

The North Norfolk coast is accessible to the public; some areas (e.g. Titchwell) are wardened nature reserves and offer more restricted access, but are nevertheless popular, and visiting is encouraged. In other areas (e.g. Scolt Head Island) large-scale access is limited by tides and physical features.

#### *Designated Features*

<u>Annex I habitats that are a primary reason for selection of this site:</u>

*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[1]). 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[2]).

*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

[1] 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.

[2] 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

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 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 1,987.2ha is within the Borough. The only component sections within the Borough are Breckland Farmland SSSI and Breckland Forest SSSI. Breckland Forest makes up 1,062ha within the Borough, and Breckland Farmland is 925.2ha.

*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.

*Site Condition*

100% of Breckland Farmland SSSI and 99.91% of Breckland Forest SSSI is reported as being in favourable condition, with 0.09% of Breckland Forest reported as being in unfavourable recovering condition.

Throughout this large SPA there are areas of public access and other areas of limited access. Within the Borough, there is public access through Forestry Commission land (Breckland Forest) but very limited public access to the field boundaries of Breckland Farmland east and south of Feltwell.

*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 as 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.

#### *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.

Natural England assesses the West Norfolk units of the SPA as all being in favourable condition, except for one small unit noted as "unfavourable recovering". This is despite concerns in some units about declining numbers of birds such as brent goose on Holkham freshmarhes and elsewhere. It is also noted that the condition assessments in many units neglect to mention bird populations at all.

#### *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:

<u>During the breeding season:</u>

*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 totanus:* 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.

#### *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.

#### *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:

<u>During the breeding season:</u>

*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)

<u>Over winter:</u>

*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:

<u>During the breeding season</u>:

*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).

<u>Over winter:</u>

*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.

#### *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.

#### *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:

<u>During the breeding season:</u>

*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)

<u>Over winter:</u>

*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:

<u>On passage:</u>

*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.

*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.

*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.

*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.

*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 200 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.

*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.

*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 scarce chaser 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.

*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)

*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

*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.

*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.

*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*.

*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 occuring at levels of international importance.

*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 brachyrhyncus (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)

*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:

- KLWN Core Strategy 2011-2025 adopted 28th July 2011;
- Local Transport Plan for Norfolk 2011-2026;
- 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;
- Shoreline Management Plans for North Norfolk and the Wash;
- Wash Biodiversity Action Plan – Currently being prepared;
- The Wash Estuary Management Plan 2nd Revised Edition 2004;
- Brecks Biodiversity Action Plan – Currently being prepared;
- 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 around Hilgay;
- "Grasslands: Magical Meadows" – Currently being undertaken by Norfolk Wildlife Trust;
- Gaywood Valley SURF Project report;
- Wissey Living Landscape Project;
- Breckland Stone Curlew 1500m development exclusion zone policy/Breckland Adopted Core Strategy 2009.
- KLWN Green Infrastructure Action Plan

### 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.

### 6.5.2 Increases in Settlement Populations

Based on an average of 2.25 persons per new household, the housing allocations per settlement allow for an increase in population of around 3% for key rural service centres, and around 2% for rural villages. The core strategy proposes 16,533 new homes in the Borough within the plan period, an estimated increase in population of 31,800. This represents a population increase of 25.8% during the plan period. The housing allocations in King's Lynn, Downham Market, Hunstanton and Wisbech will therefore account for by far the greatest proportion of the overall increase, with 11,350 new homes or an estimated 25,537 population increase.

# 7 Appropriate Assessment and Plan Analysis

## 7.1 Process

In order to determine whether the BCKLWN Site Allocations and Development Management Policies – Proposed Submission Document represents an adverse affect to the integrity of any European Site within the Borough a two stage assessment has been carried out, in line with relevant guidance.

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?

## 7.2 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.

The impacts considered are as follows.

### 7.2.1 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.

### 7.2.2 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.

### 7.2.3 Non-specific Proximity Impacts (stone curlew)

These are the impacts on protected habitats and species brought about by their proximity to development, especially new housing. They are numerous, diverse and largely site and project specific, but contributing factors 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 an unspecified proximity impact from new built development on the Breckland SPA species, stone curlew. This has been identified by a study undertaken for Breckland District Council (Sharp et al 2008). 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 Detailed Policies and Sites Plan therefore follow this policy.

An approach to site-specific proposals has been agreed between the Council and Natural England, whereby:

- The Council will carry out a Habitats Regulations screening assessment (stages 1 & 2) in accordance with ODPM Circular 06/2005 (see appendix 1) and the Conservation of Habitats and Species Regulations 2010, 61 (1) (a) on the suitable sites to ascertain whether allocation would have a likely significant effect on the integrity of the SPA.

- The findings from the Habitats Regulations screening will form part of the Habitats Regulation Assessment (HRA) of the detailed Policies and Sites Plan.

- The Council can then select the "preferred options" taking in to account all of the relevant planning issues.

If a preferred site is considered as likely to have a significant effect on the SPA in the stage 2 assessment, the Borough Council will introduce a policy in the "preferred options," requiring the landowner to provide information to inform an appropriate assessment to assess the implications of the allocation on the SPA.

Prior to publication of the "preferred options" consultation document the Borough Council will consult Natural England on the "preferred options," in the SPA buffer area.

### *7.2.4 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. River Wensum, Ouse Washes and The Wash could be affected by increased nutrient and sediment discharge and deposition.

However, within the River Wensum SAC catchment, only 10 houses are allocated at East Rudham, well away from the watercourse, so this issue can effectively be ruled out on the basis of negligible effects.

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 seriously 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 where phosphate levels are of critical importance to site condition. This impact is relevant only to East Rudham, which is in the only settlement within the Wensum catchment.

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*

**Green Infrastructure Study**

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.

As many of the site-specific policies refer to increasing the volume of housing in the Borough, the population will inevitably rise, although it is not absolutely certain by how much. 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 taken into consideration that the Natura 2000 sites attract visitors from outside of the Borough. Increased recreation in these areas is therefore only partially contributed to by local residents.

**Types of Visitor**

The HRA of the Core Strategy for Suffolk Coastal District contains a useful categorisation of the type of visitors to natural areas within that district. Visitors are described in three ways; "tourists", "day trippers" and "local users".

- Tourists would stay overnight or longer, and their use would typically be seasonal and short-lived, and would not be related to housing growth inferred by the policies assessed here. Whilst, therefore, there may be many factors influencing the numbers of tourist visitors to the Borough, the policies within the assessed plan document are not one of those factors.
- Day trippers may be local, or come from a distance. There is currently no evidence base to suggest where most day visitors come from, but it would be reasonable to suggest that they come from a distance feasible to preclude an overnight stay. This could perhaps include areas as far as 2-3 hours' drive away, and might therefore be a large, but unspecified number. There is also no data to suggest how frequently such visitors might come.
- Local users would typically live within walking distance, or a short drive, of the European site, and use the area as convenient local green space. As can be seen from the Natural England study below, local users make up the majority of

visitors to green spaces.

As far as housing allocations go, the second and third categories are clearly the most relevant to the plan document, on the assumption that people who live in the Borough would be unlikely to go on holiday there.

Local users will tend to be more frequent in their use of European sites, while day trippers are likely to come from further afield. Any increase in day trippers from this plan is likely to contribute to a wider increase in visitor numbers from rising populations in the east of England, and the overall impact is therefore harder to predict.

### Visitor Studies

Some visitor studies have been undertaken in other areas or nationally, parts of which have some relevance to West Norfolk.

In 2010 a visitor survey in Suffolk Coastal District was commissioned by a consortium led by Suffolk Wildlife Trust and Forestry Commission, and funded by the Haven Gateway Partnership. There is some similarity between Suffolk Coastal and West Norfolk, though population levels are higher in Suffolk Coastal. Use of the European sites in that area are, however, likely to be broadly similar to West Norfolk.

Findings from the 2010 South Sandlings Visitor Survey were:

- 19% of visitors in summer and 6% of visitors in winter were tourists.
- 63% of visitors had dogs with them; the proportion being slightly higher in the winter than in summer.
- Dog walking was undertaken by 52.8% of people interviewed; walking, exercise, family outings and cycling were undertaken by the majority of other visitors.
- Half of all visitors who arrived on foot lived within 420m of the access point, and half of all visitors who arrive by car live less than 8km away. Over 75% of dog walkers lived within 10km of the access point.

Studies in Dorset, carried out to investigate the impact of development on European sites there, have demonstrated that the average distance walked on heaths by walkers with or without dogs, was 2.2km. Of the people who walked to the site, 75% had walked less than 500m to reach the heath, and 89% had walked less than 1km. Half the people who arrived at the site by car came from up to 3.7km away and most who arrived by car had come from up to 8km away.

Natural England has published the results of a 2010 / 2011 national visitor survey (Natural England 2011) which gives a national picture of visitor use of the countryside, urban greenspaces and the sea coast. The findings included:

- Just over half of visits to the natural environment were taken to the countryside (53%), while 37% were to green spaces within towns and cities. In total, 11% of visits were taken in coastal locations of which seven per cent were taken to a green space in a seaside town and four per cent to another coastal location.
- While parks in towns and cities continued to be the most visited location, representing
- 22% of all visits (558 million visits), these visits decreased from the levels recorded in 2009/10 when 24% of all visits were taken to this type of location (679 million visits).
- Two-thirds of visits (66%) were taken within two miles (3.2km) of the respondents home (or other start point e.g. their workplace or holiday accommodation) highlighting the importance of accessible green space that is close to home (local users).

- Visits to coastal areas were more likely to be taken by car, while the majority of countryside visits were taken on foot by people living locally in rural or urban fringe areas. Visits to coastal locations were more likely to involve a longer journey of 5 miles (8km) or more (32 per cent of visits to coastal resorts or towns, 31 per cent to other coastal areas).
- The average visit to the natural environment lasted for just under 2 hours (1 hour 58 minutes).
- Around half of all visits (51%) involved walking with a dog.
- The largest proportion of visits involved walking (63%). A car or van was used in 30% of visits and public transport was used for only 2% of visits.
- The vast majority (92%) of visits involving a journey of less than one mile (1.6km) were taken on foot.
- 79% of visits where the journey was 8km or more featured a car or van as the main mode of transport used. Urban locations were most likely to have been visited on foot (67%). Seaside resorts or towns and other coastal areas were the type of place most likely to involve travelling by car (40% and 45% respectively).
- 82% of all journeys to a greenspace were under 8km.
- Only 9% of dog owners would travel more than 8km to reach a greenspace.
- Nearly half (48%) of dog owners travelled less than 1 mile (1.6km) to reach a greenspace.

Most people travelled by foot to their greenspace, and most journeys were under a mile (1.6km). This is considered likely to reflect the routine use of convenient local greenspace by most people most of the time, with occasional visits at greater distance. Most people travelled less than 8km by vehicle to a greenspace, consistent with the South Sandlings visitor survey.

The Borough Council have been working with the Norfolk Coast Partnership to undertake some visitor surveys in 4 sensitive areas along the North Norfolk Coast. Preliminary results are as follows:

22% of visitors were walking a dog.

18% of visitors were local residents
21% Day Visitors (travelling direct from home)
Remainder of visitors staying overnight locally (tourists).

22% gave "character of area" given as their main influence on visiting.
19% gave habit/custom as the main influence.
15% gave wildlife as the main influence.

When asked how far visitors had travelled that day, visitors replied as follows:

| | |
|---|---|
| Less than 5 miles | 31% |
| 5-10 miles | 22% |
| 10-20 miles | 14% |
| 20-50 miles | 12% |
| Over 50 miles | 22% |

45% of visitors stayed an hour or less.

35% of visitors went less than 100 metres from the entrance.
65% of visitors went less than 500 metres from entrance.

60% claimed knowledge of the areas' importance for wildlife.

38% said they were influenced in their use of the site by their knowledge of the sites' importance for wildlife. Others said they were influenced in their use by (among other things) information boards (14%), zoning schemes (5%) and specific warning/info signs (3%).

### *7.1.5.3 Visitors to European Sites in West Norfolk*

Within West Norfolk, it is speculated that, due to the dispersed pattern of development, visitors will travel further by car to reach attractive destinations, perhaps the north coast in particular, and that the proportion of visitors using cars to coastal areas will be proportionally greater. This is a hypothesis supported by the Natural England (2011) study, and by the preliminary results from the NCP visitor survey.

Increases in visitors from the site specific allocations plan to areas where access is permitted or facilitated are likely to be both "day trippers" and "local users", but not "tourists". Such usage creates the possibility of impacts on sites through physical damage to habitats (i.e. trampling of vegetation, erosion of dunes etc), physical disturbance to species (nest trampling, occupying areas used by birds and other designated features) and visual and noise disturbance (i.e. indirect disturbance to birds and other sensitive species through scaring).

**Table 1. Likely vulnerability of European sites from Recreation**

| European Site | Perceived vulnerability to disturbance impacts | Likely use of European site | | |
|---|---|---|---|---|
| | | Local users by foot | Local users by car | Day trippers |
| Roydon Common and Dersingham Bog (Roydon/ Dersingham SAC/ Ramsar) | Physical disturbance to SAC habitats. Limited access points. Limited walking distance available. Disturbance to birds with SPA level populations. | No | Yes | No |
| North Norfolk Coast SPA/ Ramsar | SPA birds, several access points, some not tightly controlled | Yes | Yes | Yes |
| Wash SPA/ Ramsar | SPA birds, several access points, some not tightly controlled | No | Yes | Yes |
| Wash and NNC SAC | Habitats, several access points, some not tightly controlled | No | Yes | Yes |
| River Wensum SAC | SAC habitats. Little public access within range of local users. No housing allocation within catchment. | No | No | No |
| Norfolk Valley Fens SAC | Habitats. Public access allowed but not well visited, and habitats robust. | No | No | No |
| Ouse Washes SPA/ SAC/ Ramsar | Birds. Public access, but a long walk, or a nature reserve (Welney) where access tightly controlled. | No | No | No |
| Breckland SPA | SPA birds | Yes | No | No |

The possible harm to habitats and disturbance to species can be, and usually is very effectively reduced when the visited site is a wardened nature reserve, and honeypot sites such as Titchwell RSPB handle many thousands of visitors every year without causing significant disturbance to birds. The most important techniques for reducing visitor disturbance are on-site wardening presence, physical barriers to visitor movement (such as temporary fencing), and education of visitors.

### *Day Trippers*

Many sites are visited by individuals or families for longer trips, often involving more family members and often timed over weekends. This might be particularly the case for coastal sites, where such family parties are commonly encountered, and there is the added attraction of beaches and a range of walking possibilities. Some sites are likely to be less well used in this respect, for example where there is a limited distance and paths for walking. Examples where day trips are less likely include Dersingham Bog and Roydon Common, which are probably more suited to shorter visits by local users, or shorter visits by specialist visitors from further afield.

### *Local Users*

The frequent use of sites by resident populations may be significant in that there is less of a seasonal bias (Rushmer 2009a), and a resulting increase in winter use of European sites. Rushmer's review study suggests that the disturbance caused by people walking dogs is proportionally much greater (around 8x) than those without dogs on sites around

the Wash and North Norfolk Coast both in summer and winter. Also, dogs off leads cause far more disturbance (by area of site) than those on leads. The study also concluded that around 85% of visitations around the Wash were the result of local users, rather than day trippers.

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, although the volume and frequency of usage is likely to be a lot lower than pedestrians with and without dogs.

The above studies indicate that housing development is likely to result in local users living in new housing walking to any European site within 1km, and driving to any European site within 8km, for walking or other recreation where facilities such as open access or rights of way exist.

The new housing provisions within the Borough of King's Lynn and West Norfolk are therefore likely to result in an increase in local user recreation on European sites within 1km (for people walking) and 8km (for people driving to a car parking location). This would be a greater increase than that increase on day trips to the AONB generally, as regular visits to places near home tend to be much more frequent (e.g. for daily dog walking) than visits to attractive sites at some distance. It is therefore necessary to identify European sites within the 1km and 8km distances of proposed housing allocations, and assess whether any increase in visitors is likely to occur there. To assess if an increase in visitors is likely to occur, the existence of alternative sites for recreation needs to be taken into account, and the availability of the European sites for access needs to be identified.

The cumulative impacts of several developments are considered, and only if a number of proposed allocations were within the 1km and 8km distance bands of particular parts of European sites would a cumulative impact occur whilst considering specific site impact. Distances are in reality the distance that people travel by road or other network, rather than straight-line distances. Obstructions to travel, such as road networks or rivers with no crossing points therefore reduce the straight-line distance from which people will not travel to a European site.

The effect of developments on specific European sites within 1km and 8km distances should be considered in combination with the additional visitors from day trips expected across the whole suite of European sites.

In addition to the major allocations, a number of smaller allocations across the District combined could also cause an increase of visitor pressure on the suite of European sites in the District.

### Recreation along the Coast

Two SPA species of the North Norfolk Coast, ringed plover and little tern, have been identified as being in particular risk of visitor 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 wardened nature reserves, and therefore possible to defend against disturbance events, ringed plovers can be more dispersed, and more challenging to conserve. The nesting period coincides with increased visitor numbers in the April to June period. Numbers of pairs of ringed plovers recorded in 2011 (Norfolk Bird and Mammal Report) are much lower than the 220 pairs cited for the North Norfolk Coast SPA.

Main concentrations of little terns in West Norfolk are found at Holme, Scolt Head and

Holkham, and their productivity in 2011 was half that of 2006, although overall numbers were higher.

Ringed plovers are found at wardened reserves at Holme, Titchwell, Scolt Head, Snettisham and on unwardened beaches between Snettisham and Hunstanton. However, nesting ringed plover is not a site feature of the Wash SPA, and cannot therefore strictly be considered in the HRA.

Impacts from disturbance for both species are best alleviated by effective on-site protection, such as by wardening or temporary fencing of nesting sites, and by on-site education (Rushmer 2009b). Table 1 details information collected for North Norfolk Coast sites by North Norfolk District Council and specifically for this report.

**Table 2: Existing visitor estimates, and management measures at specific sites**

| Site and Management organisation | Visitors per annum | Management measures in place |
|---|---|---|
| Brancaster (National Trust) | 150,000 (per National Trust Brancaster) | No wardened visitor management on beach – however, west of entrance is intended to be a dog-free zone. Large car park. |
| Snettisham (RSPB) | 29,000 | The southern lagoon is fenced off to prevent access/disturbance –viewing takes place from four birdwatching hides.<br>During the breeding season there is an issue regarding nesting ringed plovers and oystercatchers on the beach. One area on a large spit is cordoned off with signs asking people not to enter due to nesting birds. Along the remainder of the reserve beach, there are signs at all access points, informing visitors that there are nesting birds, and to help them by staying on the path at the top of the beach from late April to early August. Most visitors adhere to these restrictions. |
| Holme Dunes<br>(Norfolk Wildlife Trust) | 100,000 visitors per annum | Car parking for a max of 100 cars. Visitor centre with information / education boards.<br>Bird hides and walking trail. Norfolk coast path runs through the site. Nesting areas for ringed plovers are fenced off during the breeding season.<br>Site Wardens |
| Holkham<br>(Natural England) | 800,000 – 1,000,000 | Information Boards.<br>Site Wardens and volunteers. Nesting areas are fenced off during the breeding season. |
| Scolt Head | 5,000 visits per annum | Difficult to access (can get access by boat) and has a management policy of non-intervention. Wardened site. |
| Titchwell | Capacity of 125,000 | The car park is a natural barrier to visitor numbers |

| | | |
|---|---|---|
| RSPB | visitors per annum. Received 76,500 visitors in financial year 2011/12 | exceeding capacity on any day – once the car park is full people have to consider moving to another area as the only way to access the site is through the car park and visitor centre. Nesting areas for ringed plovers are fenced off during the breeding season. |
| **OUTSIDE BOROUGH** | | |
| Blakeney / Morston<br><br>(National Trust) | 100,000 visitors park at Blakeney and Morston Quay. | Information centre at Morston Quay.<br>Restricted access to certain areas of the Point during bird breeding season (April to September). Large areas are fenced off.<br>Circular walking route with boardwalks and interpretation. Tours available. |
| Cley Marshes<br><br>(Norfolk Wildlife Trust) | 100,000 visitors per annum<br><br>(30,000 on reserve.<br>90,000 in centre) | Visitor centre with information / education boards.<br><br>Boardwalks around the Reserve with few opportunities to divert from them. |
| Salthouse marshes<br>Norfolk Wildlife Trust | ? | No NWT car park, but parking is available nearby.<br>Norfolk coast path runs along its southern edge. |

In addition to the wardened reserves, the area of beach leading north from Snettisham beach car park to the south end of Hunstanton is an important area for breeding ringed plovers, and currently this area has no visitor management for ringed plovers. Increasing numbers of people in this area are likely to contribute to a further decline in its ringed plover population, unless some form of visitor management is undertaken. Increasing numbers of people on this area of beach have been occurring for some years.

Between Snettisham and King's Lynn, human disturbance is less likely to be an issue, as there is no public access to the seawall. The Wash edge west of King's Lynn has a footpath (the Peter Scott Walk) running along the seawall, but is lightly used and there are limited access points.

Table 3 gives numbers of ringed plovers and little terns from the most recent Norfolk Bird and Mammal Report (2012).

**Table 3. Numbers of ringed plovers and little terns in the North Norfolk Coast and Wash SPA, 2012.**

| Location | Ringed Plover | Little Tern |
|---|---|---|
| Snettisham | 15 pairs, 10 young fledged | None |
| Snettisham - Hunstanton | 5 pairs, success not noted | None |
| Holme | 27 pairs, min 6 young fledged | 34 pairs, none fledged (fox predation) |
| Scolt Head | 61 pairs, c35 young fledged | 220 pairs, 175 young fledged |

| | | |
|---|---|---|
| Holkham | 22 pairs, success not noted | 114 pairs, 20 young fledged |
| Blakeney Point | 3 pairs, success not noted | 140 pairs, 28 young fledged |

## Recreation in Breckland

The two SPA species in the Breckland which are likely to be vulnerable to visitor 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).

The Borough Council Core Strategy specifies a 400 metre buffer for these two species, within which proposals will require a project level HRA. 400 metres is specified due to potential in-combination impacts from proximity of housing, and recreation. The nearest development proposal (Methwold) within the assessed plan is around 1.6km from the forested areas where these two species are likely to occur.

### Recreation around King's Lynn

Both Roydon Common and Dersingham Bog are adjacent to King's Lynn. Although currently. The European site (comprising the two component sites) is not designated as SPA. However, the two sites combined appear to fulfil the requirements for designation in relation to breeding woodlark and nightjar (numbers given in table 4 below), and overwintering hen harrier. It is quite possible that by the time any housing developments take place, designation of SPA will have occurred. Therefore this report takes into account the likelihood of the site (Dersingham Bog and Roydon Common) becoming (proposed) SPA, and assesses the site accordingly.

The recreational issues around the sites are identified by the site managers in the Norfolk Wildlife Trust response to the Preferred Options document. These are largely associated with the increasing numbers of dogs being exercised on the sites, which have the potential to cause disturbance to breeding birds with SPA level populations of Annex 1 species on the two sites. Table 4 outlines the numbers of pairs at both sites:

**Table 4. Most Recent Numbers of Nightjar and Woodlark at Dersingham and Roydon (numbers supplied by NWT and Natural England).**

| Component Site | Numbers of nightjar pairs | Numbers of woodlark territories |
|---|---|---|
| Roydon Common | 24 in 2012. Peak count of 37 in 2003. Scattered throughout the site. | 12 in 2012, 11 in 2013. |
| Dersingham Bog | 23 in 2014, fluctuating between 12 and 28 pairs from 2004 to 2014. | 5 in 2014, between 1-5 pairs from 2004-2014. |

There is evidence that disturbance can cause reduction in numbers and productivity of nightjar (Langston *et al* 2007). This study, relating to sites in Dorset, is perhaps more comparable to the situations at Roydon and Dersingham than to a study undertaken by Dolman (2009) in Breckland, where no clear relationship was found between recreational use and nightjar/ woodlark nest predation. The Breckland heaths have lower levels of recreational use than is the case at Roydon/ Dersingham, and nightjars and woodlarks use clearfell in Breckland rather than heathland.

There is most potential for conflict when nightjars and woodlarks are breeding. The breeding season for nightjar occurs from mid-May through to August, with a peak in June; woodlark nest from March until July, but commence territorial activity from early February. Hen harriers use Roydon Common for roosting in the winter months, but there is perhaps less potential for disturbance of hen harriers than the other two species.
Nightjar and woodlark are both ground nesters. The potential for disturbance and other effects is well summarised in Langston et al (2007) and quoted here:

*Nests which failed were significantly closer to paths, tended to be closer to the main points of access to heaths, in areas with higher footpath density, notably of high levels of use, and in more sparsely vegetated locations. The proximate cause of nest failure was most frequently egg predation.*

Although the disturbance issue is not necessarily confined to dog owners and their dogs, the evidence given in Rushmer (2009a, 2009b) strongly suggests that this group are likely to cause much more disturbance than walkers without dogs, or other users, and especially so if the dog is off the lead. At Roydon and Dersingham, the main other users are people visiting the sites for their natural features and wildlife, which make up a small percentage of the overall visitor numbers.

Another issue which dogs can cause is conflict with grazing animals. Scaring of, and damage to, grazing animals can affect the ability of the site managers to properly manage the site. For example Roydon Common is fenced and grazed, and would not currently be practically manageable without grazing animals (see comments from Norfolk Wildlife Trust).

### 7.2.5 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. At a site level, there may be proximity impacts from increased traffic at specific points near to new housing, which may need to be addressed by mitigation at the site design stage.

### 7.2.6 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. At a site-specific level, this is likely to relate to the accumulated effects of housing developments on specific European sites, depending on the distance from access points to those sites. Potential cumulative impacts on European sites are detailed in table 6.

### 7.2.7 Changes since the Preferred Options HRA

The following changes have occurred in settlement housing allocations since the preferred options were consulted on in 2013:

**Table 5. Main Settlements.**

| Settlement | Preferred Options Allocations | Site Allocations and Development Management Policies – Proposed Submission Document | Change +/- |
|---|---|---|---|
| King's Lynn Town Centre | 1,410 | 1,450 | +40 |
| West Lynn | 249 | 249 | No change |
| South Wootton | 300 | 300 | No change |
| Knight's Hill | 600 | 600 | No change |
| West Winch | 1,600 | 1,600 | No change |
| Downham Market | 390 | 390 | No change |
| Hunstanton | 220 | 333 | +113 |
| Wisbech | 550 | 550 | No change |
| Total | 5,319 | 5,472 | +153 |

**Table 6. Key Rural Service Centres**

| Key Rural Service Centres | Preferred Options Allocations | Submission Version | Change +/- |
|---|---|---|---|
| Brancaster with Brancaster Staithe and Burnham Deepdale | 14 | 15 | +1 |
| Burnham Market | 30 | 32 | +2 |
| Castle Acre | 11 | 11 | No change |
| Clenchwarton | 56 | 50 | -6 |
| Dersingham | 30 | 30 | No change |
| Docking | 16 | 20 | +4 |
| East Rudham | 0 | 10 | +10 |
| Emneth | 40 | 36 | -4 |
| Feltwell | 60 | 70 | +10 |
| Gayton with Grimston and Pott Row | 46 | 46 | No change |
| Great Massingham | 12 | 12 | No change |
| Heacham | 66 | 66 | No change |
| Marham | 25 | 50 | +25 |
| Methwold and Northwold | 40 | 45 | +5 |
| Snettisham | 20 | 34 | +14 |
| Stoke Ferry | 15 | 27 | +12 |
| Terrington St Clement | 55 | 62 | +7 |
| Terrington St John with St John Highway and Tilney St Lawrence | 0 | 35 | +35 |
| Upwell with Outwell | 65 | 80 | +15 |
| Watlington | 32 | 32 | No change |
| West Walton with Walton Highway | 16 | 20 | +4 |
| Total | 649 | 783 | +134 |

**Table 7. Rural Villages**

| Rural Villages | Preferred Options Allocations | Submission Version | Change +/- |
|---|---|---|---|
| Ashwicken | 5 | 0 | -5 |
| Burnham Overy Staithe | 0 | 0 | No change |
| Castle Rising | 0 | 0 | No change |
| Denver | 10 | 0 | -10 |
| East Winch | 10 | 10 | No change |
| Fincham | 5 | 10 | No change |
| Flitcham | 0 | 0 | No change |
| Great Bircham with Bircham Tofts | 10 | 10 | No change |
| Harpley | 5 | 5 | No change |
| Hilgay | 12 | 12 | No change |
| Hillington | 5 | 5 | No change |
| Ingoldisthorpe | 8 | 10 | +2 |
| Marshland St James with St Johns Fen End | 15 | 25 | +10 |
| Middleton | 15 | 15 | No change |
| Old Hunstanton | 0 | 0 | No change |
| Runcton Holme | 10 | 10 | No change |
| Sedgeford | 10 | 10 | No change |
| Shouldham | 10 | 10 | No change |
| Southery | 15 | 15 | No change |
| Syderstone | 5 | 5 | No change |
| Ten Mile Bank | 5 | 5 | No change |
| Thornham | 5 | 0 | -5 |
| Three Holes | 5 | 5 | No change |
| Tilney All Saints | 5 | 5 | No change |
| Walpole Cross Keys | 5 | 0 | -5 |
| Walpole Highway | 6 | 10 | +4 |
| Walpole St Peter with Walpole St Andrew and Walpole Marsh | 16 | 20 | +4 |
| Welney | 7 | 22 | +15 |
| Wereham | 8 | 8 | No change |
| West Newton | 0 | 0 | No change |
| Wiggenhall St Germans | 12 | 0 | -12 |
| Wiggenhall St Mary Magdalen | 10 | 10 | No change |

| | | | |
|---|---|---|---|
| Wimbotsham | 0 | 0 | No change |
| Wormegay | 0 | 0 | No change |
| Total | 234 | 232 | -2 |

There have also been changes in policy numbering. The following table is included for ease of reference, so policies can be directly compared between the Preferred Options HRA and the current version.

**Table 8. Relationship of Pre-Submission Development Management Policies to the Preferred Options Version**

| Pre-Submission Document | Preferred Options |
|---|---|
| **DM1:** Presumption in favour of sustainable development | **POAW 1:** Presumption in favour of sustainable development |
| **DM2:** Development Boundaries | **POAW 2:** Development Boundaries |
| **DM3:** Infill Development in the Smaller Villages & Hamlets | **POAW 3:** Infill Development in the Smaller Villages & Hamlets |
| **DM4:** Houses in Multiple Occupation | **POAW 12:** Houses in Multiple Occupation |
| **DM5:** Enlargement of Dwellings | **POAW13:** Enlargement of dwellings outside settlements |
| **DM6:** Housing needs of rural workers | **POAW 14:** Housing needs of rural workers |
| **DM7:** Residential Annexes | **POAW 15:** Residential Annexes |
| **DM8:** Delivering Affordable Housing on phased development | **POAW 20:** Delivering Affordable Housing |
| **DM9:** Retail development outside town centres | **POAW 8:** Promoting Town Centres |
| **DM10:** Touring and permanent holiday sites | **POAW 16:** Touring and Permanent Holiday Sites |
| **DM11:** Strategic road network | **POAW 17:** Strategic Road Network |
| **DM12:** Disused railway track ways | **POAW 18:** Disused Railway Track ways |
| **DM13:** Development associated with CITB Bircham Newton & RAF Marham | None – new policy |
| **DM14:** Environment, Design and Amenity | **POAW 4:** Environment, Design and Amenity |
| **DM15:** Provision of recreational open space for residential developments | **POAW 7:** Provision of recreational open space |
| **DM16:** Parking Provision in New Development | **POAW 21:** Parking Provision in New Development |
| **DM17:** Coastal Flood Risk Hazard Zone | **POAW 9:** Coastal Flood Risk |

| | |
|---|---|
| | Hazard Zone |
| **DM18**: Green Infrastructure | **POAW 10**: Green Infrastructure |
| **DM19**: Renewable Energy | **POAW 11**: Renewable Energy |
| **DM20**: Allocated Sites in Areas of High Flood Risk | **POAW 19**: Allocated sites in areas of flood risk |
| **DM21**: Community Facilities | **POAW5**: Community facilities and allotments |
| **DM22**: Protection of local open space | **POAW 6**: Protection of local open space |
| Policy E1.1 King's Lynn – Town Centre | PO King's Lynn 1 Town Centre |
| Policy E1.2 King's Lynn – Town Centre Retail Expansion Area | PO King's Lynn 2 Retail Expansion |
| Policy E1.3 King's Lynn – Gaywood Clock Area | PO King's Lynn 3 Gaywood Clock |
| Policy E1.4 King's Lynn – Marsh Lane | PO King's Lynn 4 Marsh Lane KL1 |
| Policy E1.5 King's Lynn – Boal Quay | PO King's Lynn 5 Boal Quay KL2 |
| Policy E1.6 King's Lynn – South of Parkway | PO King's Lynn 6 South of Parkway KL3 |
| Policy E1.7 King's Lynn – Land at Lynnsport | PO King's Lynn 7 Land at Lynnsport KL4 |
| Policy E1.8 King's Lynn – South Quay | PO King's Lynn 8 South Quay KL5 |
| Policy E1.9 King's Lynn – Land west of Columbia Way | PO King's Lynn 10 Land west of Columbia Way KL7 |
| Policy E1.10 King's Lynn – North of Wisbech Road | PO King's Lynn 11 North of Wisbech Road KL8 |
| Policy E1.11 King's Lynn - Southgates | None – new site |
| Policy E1.12 King's Lynn – Employment Land | PO KL 12 Employment Sites |
| Policy E1.13 King's Lynn – King's Lynn Green Infrastructure | PO KL 13 Green Infrastructure |
| Policy E1.14 West Lynn – West of St Peter's Road | West Lynn 1 |
| Policy E1.15 West Lynn – Land at Bankside | PO King's Lynn 9 Land at Bankside (KL6/West Lynn 2) |
| Policy E2.1 – West Winch Growth Area Strategic Policy | West Winch 1 |
| Policy E3.1 – Hall Lane, South Wootton | South Wootton 1 |
| Policy E4.1 – Knights Hill | Knights Hill |
| Policy F1.1 – Downham Market Town Centre Area and Retailing | PO1 Town Centre and Retail |
| Policy F1.2 – Land off St John's Way, Downham Market | PO2 Employment Land St John's Way |
| Policy F1.3 – Land North-East of Downham Market | PO DW 2 |
| Policy F1.4 – Land South East of Downham Market | PO DW3 |

| | |
|---|---|
| Policy F2.1 Hunstanton – Town Centre and Retailing | PO1 Town Centre and Retailing |
| Policy F2.2 Hunstanton – Land to the east of Cromer Road | H1 Land to the east of Cromer Road |
| Policy F2.3 Hunstanton – Land east of King's Lynn Road | H2 Land south of Hunstanton Commercial Park |
| Policy F2.4 Hunstanton – Land north of Hunstanton Road | New site |
| Policy F2.5 – Land south of Hunstanton Commercial Park | EMP4 Land south of Hunstanton Commercial Park |
| Policy F3.1 Wisbech Fringe Land east of Wisbech (west of Burrowgate Road) | Policy Wisbech Fringe WF1 – Land East or Wisbech (West of Burrowgate Road) |

# 8 Task 1: Screening for Likely Significant Effects.

Please refer to tables, 4, 5 and 6 for determination of Likely Significant Effects.

Policies highlighted in pink are those considered likely to result in a significant effect.

**Table 4: 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 relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| Policy E1.1 King's Lynn Town Centre | 6km from Roydon Common | No mechanism for impact identified. | No features identified | No |
| Policy E1.2 King's Lynn – Town Centre Retail Expansion area | 6km from Roydon SAC | No mechanism for impact identified. | No features impacted | No |
| Policy E1.3 Gaywood Clock Area | 6km from Roydon SAC | No mechanism for impact identified. | No features impacted | No |
| Policy E1.4 Marsh Lane. (170 houses) | 6km from Roydon SAC | The proposed housing numbers would not, in isolation, result in a likely significant effect on the qualifying SAC/ Ramsar features. However there may be effects on Annex 1 species (nightjar and woodlark) which nest on the site, these are also addressed in view of the possibility of designation as SPA.<br><br>The policy, in common with other proposed housing sites around King's Lynn, directly addresses the issue of recreational disturbance to designated sites in the area, including Roydon and Dersingham SAC (and their stated bird interest which is of SPA quality). The series of safeguards the policies stipulate are effective in removing the likelihood of a significant effect.<br><br>Increased day-trip visitors to the coast from King's Lynn may contribute to physical, visual and noise disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA, and SAC features. They may | SPA features (disturbance of breeding/wintering birds) SAC features (coastal habitats) | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| | | also contribute to physical damage of SAC coastal habitats. These visitors are not likely to cause a likely significant effect in isolation, but should also be considered in combination with other housing allocations. Physical disturbance to SAC habitats are also not likely to be significant in isolation, but should be considered in combination. | | |
| Policy E1.5 King's Lynn – Boal Quay (350 houses) | 6km from Roydon SAC | The proposed housing numbers would not, in isolation, result in a likely significant effect on the qualifying SAC/ Ramsar features. However there may be effects on Annex 1 species (nightjar and woodlark) which nest on the site, these are also addressed in view of the possibility of designation as SPA.<br><br>The policy, in common with other proposed housing sites around King's Lynn, directly addresses the issue of recreational disturbance to designated sites in the area, including Roydon and Dersingham SAC (and their stated bird interest which is of SPA quality). The series of safeguards the policies stipulate are effective in removing the likelihood of a significant effect.<br><br>Increased day-trip visitors to the coast from King's Lynn may contribute to physical, visual and noise disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA, and SAC features. They may also contribute to physical damage of SAC coastal habitats. These visitors are not likely to cause a likely significant effect in isolation, but should also be considered in combination with other housing allocations. Physical disturbance to SAC habitats are also not likely to be significant in isolation, but should be considered in combination. | SPA features (disturbance of breeding/wintering birds) SAC features (coastal habitats) | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| Policy E1.6 King's Lynn – South of Parkway (260 houses) | 6km from Roydon SAC | The proposed housing numbers would not, in isolation, result in a likely significant effect on the qualifying SAC/ Ramsar features. However there may be effects on Annex 1 species (nightjar and woodlark) which nest on the site, these are also addressed in view of the possibility of designation as SPA.<br><br>The policy, in common with other proposed housing sites around King's Lynn, directly addresses the issue of recreational disturbance to designated sites in the area, including Roydon and Dersingham SAC (and their stated bird interest which is of SPA quality). The series of safeguards the policies stipulate are effective in removing the likelihood of a significant effect.<br><br>Increased day-trip visitors to the coast from King's Lynn may contribute to physical, visual and noise disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA, and SAC features. They may also contribute to physical damage of SAC coastal habitats. These visitors are not likely to cause a likely significant effect in isolation, but should also be considered in combination with other housing allocations. Physical disturbance to SAC habitats are also not likely to be significant in isolation, but should be considered in combination. | SPA features (disturbance of breeding/wintering birds) SAC features (coastal habitats) | No |
| Policy E1.7 King's Lynn – Land at Lynnsport (450 houses) | 6km from Roydon SAC | The proposed housing numbers would not, in isolation, result in a likely significant effect on the qualifying SAC/ Ramsar features. However there may be effects on Annex 1 species (nightjar and woodlark) which nest on the site, these are also addressed in view of the possibility of designation as SPA.<br><br>The policy, in common with other proposed housing sites | SPA features (disturbance of breeding/wintering birds) SAC features (coastal habitats) | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| | | around King's Lynn, directly addresses the issue of recreational disturbance to designated sites in the area, including Roydon and Dersingham SAC (and their stated bird interest which is of SPA quality). The series of safeguards the policies stipulate are effective in removing the likelihood of a significant effect.<br><br>Increased day-trip visitors to the coast from King's Lynn may contribute to physical, visual and noise disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA, and SAC features. They may also contribute to physical damage of SAC coastal habitats. These visitors are not likely to cause a likely significant effect in isolation, but should also be considered in combination with other housing allocations. Physical disturbance to SAC habitats are also not likely to be significant in isolation, but should be considered in combination. | | |
| Policy E1.8 King's Lynn – South Quay (50 houses) | 6km from Roydon SAC | The number of houses is not large enough, in a King's Lynn context, to contribute significantly to effects on European sites either in isolation or cumulatively. | SPA features (disturbance of breeding/wintering birds) SAC features (coastal habitats) | No |
| Policy E1.9 King's Lynn – Land west of Columbia Way (100 houses) | 6km from Roydon SAC | The proposed housing numbers would not, in isolation, result in a likely significant effect on the qualifying SAC/ Ramsar features. However there may be effects on Annex 1 species (nightjar and woodlark) which nest on the site, these are also addressed in view of the possibility of designation as SPA.<br><br>The policy, in common with other proposed housing sites around King's Lynn, directly addresses the issue of recreational disturbance to designated sites in the area, | SPA features (disturbance of breeding/wintering birds) SAC features (coastal habitats) | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
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| | | including Roydon and Dersingham SAC (and their stated bird interest which is of SPA quality). The series of safeguards the policies stipulate are effective in removing the likelihood of a significant effect.<br><br>Increased day-trip visitors to the coast from King's Lynn may contribute to physical, visual and noise disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA, and SAC features. They may also contribute to physical damage of SAC coastal habitats. These visitors are not likely to cause a likely significant effect in isolation, but should also be considered in combination with other housing allocations. Physical disturbance to SAC habitats are also not likely to be significant in isolation, but should be considered in combination. | | |
| Policy E1.10 King's Lynn - North of Wisbech Road (50 houses) | 6km from Roydon SAC | The proposed housing numbers would not, in isolation, result in a likely significant effect on the qualifying SAC/ Ramsar features. However there may be effects on Annex 1 species (nightjar and woodlark) which nest on the site, these are also addressed in view of the possibility of designation as SPA.<br><br>The policy, in common with other proposed housing sites around King's Lynn, directly addresses the issue of recreational disturbance to designated sites in the area, including Roydon and Dersingham SAC (and their stated bird interest which is of SPA quality). The series of safeguards the policies stipulate are effective in removing the likelihood of a significant effect.<br><br>Increased day-trip visitors to the coast from King's Lynn may contribute to physical, visual and noise disturbance of breeding and wintering birds at The Wash SPA and | SPA features (disturbance of breeding/wintering birds) SAC features (coastal habitats) | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| | | North Norfolk Coast SPA, and SAC features. They may also contribute to physical damage of SAC coastal habitats. These visitors are not likely to cause a likely significant effect in isolation, but should also be considered in combination with other housing allocations. Physical disturbance to SAC habitats are also not likely to be significant in isolation, but should be considered in combination. | | |
| Policy E1.11 King's Lynn – Southgates | 6km from Roydon SAC | The number of houses is not large enough, in a King's Lynn context, to contribute significantly to effects on European sites either in isolation or cumulatively. | SPA features (disturbance of breeding/wintering birds) SAC features (coastal habitats) | No |
| Policy E1.12 King's Lynn – Employment Land | 6km from Roydon SAC | No mechanism for impact identified. | No features identified | No |
| Policy E1.13 King's Lynn Green Infrastructure | n/a | The policy acknowledges the need for an additional package of GI measures to mitigate potential adverse effects on Natura 2000 sites. Therefore any likely significant effect is anticipated and is not likely to occur as a result of the policy. | SAC features | No |
| Policy E1.14 and E1.15; West Lynn – 249 homes | Road distances: 10.8km from Roydon Common, 4.4km from Wash SPA. | The Wash SPA is probably too far for most on-foot visitors, but may be visited by car. However the Wash SPA coast in this area is not well visited and has capacity for more without likely significant effects. | SPA features (disturbance of breeding/wintering birds) | No |
| Policy E2.1 – West Winch growth Area | Distance by road: 7.84km from Roydon Common SAC/ Ramsar; 17km from | May result in an increase in number of local users of Roydon Common – however, within 8km there are several other greenspace alternatives which are not European sites, including Bawsey Country Park which is much | SPA features (disturbance of breeding/wintering | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
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| Strategic Policy | Wash SPA | closer. The proposed housing numbers would not, in isolation, result in a likely significant effect on the qualifying SAC/ Ramsar features. However there may be effects on Annex 1 species (nightjar and woodlark) which nest on the site, these are also addressed in view of the possibility of designation as SPA.<br><br>The policy, in common with other proposed housing sites around King's Lynn, directly addresses the issue of recreational disturbance to designated sites in the area, including Roydon and Dersingham SAC (and their stated bird interest which is of SPA quality). The series of safeguards the policies stipulate are effective in removing the likelihood of a significant effect.<br><br>Increased day-trip visitors to the coast may make a minor contribution to physical, visual and noise disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA. They may also contribute to physical damage of SAC coastal habitats. These visitors are not likely to cause a likely significant effect in isolation, but should also be considered in combination with other housing allocations, and other general population increases in the east of England. Physical disturbance to SAC habitats also not likely to be significant in isolation, but also need to be considered in combination. | birds) | |
| Policy E3.1 – Hall Lane, South Wootton: around 300 homes | Road distances; 17km by road from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC. | The proposed housing numbers would not, in isolation, result in a likely significant effect on the qualifying SAC/ Ramsar features. However there may be effects on Annex 1 species (nightjar and woodlark) which nest on the site, these are also addressed in view of the possibility of designation as SPA. | SPA features (disturbance of breeding/wintering birds)<br><br>SAC features | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
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| | 3.6km by road to Roydon Common SAC/ Ramsar. 8.8km by road to Dersingham Bog SAC/ Ramsar | The policy, in common with other proposed housing sites around King's Lynn, directly addresses the issue of recreational disturbance to designated sites in the area, including Roydon and Dersingham SAC (and their stated bird interest which is of SPA quality). The series of safeguards the policies stipulate are effective in removing the likelihood of a significant effect.<br><br>Increased day-trip visitors to the coast from King's Lynn may contribute to physical, visual and noise disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA, and SAC features. They may also contribute to physical damage of SAC coastal habitats. These visitors are not likely to cause a likely significant effect in isolation, but should also be considered in combination with other housing allocations. Physical disturbance to SAC habitats are also not likely to be significant in isolation, but should be considered in combination. | (habitats) | |
| Policy E4.1. King's Lynn NE – adjacent to Knight's Hill: 600 homes | Road distances; 1.1km from Roydon Common and 6km from Dersingham Bog SAC. 14.8km from Wash SPA | The proposed housing numbers would not, in isolation, result in a likely significant effect on the qualifying SAC/ Ramsar features. However there may be effects on Annex 1 species (nightjar and woodlark) which nest on the site, these are also addressed in view of the possibility of designation as SPA.<br><br>The policy, in common with other proposed housing sites around King's Lynn, directly addresses the issue of recreational disturbance to designated sites in the area, including Roydon and Dersingham SAC (and their stated bird interest which is of SPA quality). The series of safeguards the policies stipulate are effective in removing the likelihood of a significant effect. | SPA features (disturbance of breeding/wintering birds) SAC features (coastal habitats) | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
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| | | Increased day-trip visitors to the coast from King's Lynn may contribute to physical, visual and noise disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA, and SAC features. They may also contribute to physical damage of SAC coastal habitats. These visitors are not likely to cause a likely significant effect in isolation, but should also be considered in combination with other housing allocations. Physical disturbance to SAC habitats are also not likely to be significant in isolation, but should be considered in combination. | | |
| North Wootton: no allocation | Distance by road: 15.4km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC. 5.6km from Roydon Common | No current allocation of houses, therefore no likely significant effect. | | No |
| Policies F1.1 to F1.4. Downham Market: 390 homes | Distance by road: 3.52km from Ouse Washes SAC/ SPA/ Ramsar, plus 3km walk from nearest parking place, or 14km to Welney nature reserve | Unlikely to result in increased disturbance levels to Ouse Washes because of limited vehicle and foot access, and managed access at next-nearest point (Welney reserve).<br>Increased day trip visitors to the coast may contribute to physical, visual and noise disturbance of breeding and wintering birds at The Wash SPA and North Norfolk Coast SPA. Probably too far to travel for most on-foot visitors, but may be visited by more people using vehicles. | SPA features (disturbance of breeding/wintering birds) | No |
| Policies F2.1 – F2.5. Hunstanton: 333 | Distance by road: 1.8km from The Wash Ramsar and SPA and The Wash | Hydrological Impacts – increased sewage discharge. However the Core Strategy Appropriate Assessment predicted no likely significant effect based on results of | SPA features (disturbance of breeding/wintering | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| homes | and North Norfolk Coast SAC | the Water Cycle Study.<br>Increased local users at the coast may contribute to physical, visual and noise disturbance of breeding and wintering birds. However, the policies provide significant safeguards for European sites through increased green space provision, pedestrian routes and contribution to wider green infrastructure. | birds) | |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| Policy F3.1. Wisbech Fringe: 550 homes (divided between Emneth and Walsoken) | Distance by road: 10-11km from the Nene Washes SPA and Ramsar, 20km from the Wash SPA. | Development not sufficiently close enough for local users affect European sites. Day trippers from Wisbech may visit the Wash or North Norfolk Coast, but even these are quite distant and numbers are likely to be a negligible addition to any cumulative effect, and not of likely significance in themselves. | | No |
| Brancaster/ Brancaster Staithe/Burnham Deepdale: 15 homes | 0.68km from The North Norfolk Coast SPA and Ramsar and The Wash and North Norfolk Coast SAC | The preferred location for development is to the south of the main settlement, and will not therefore result in direct disturbance impacts on the European site. The main access to the European site from the development would be along Broad Lane or the coastal footpath, already well used routes. The 11 homes would increase the population of Brancaster by 3%, and the increase in usage would be almost imperceptible given the already heavy use of the area.<br><br>Development not sufficiently large enough to Natura 2000 site to cause a likely significant effect. | | No |
| Burnham Market: 32 homes | Distance by road: 2km from The North Norfolk Coast SPA and Ramsar and The Wash and North Norfolk Coast SAC | Not sufficiently close for local users to get to the coast on foot, but will do so by car. Nearest access to the SPA is at Burnham Norton, a potentially sensitive site. While the numbers of houses are not high, there is a possibility of localised disturbance effects.<br><br>The policy stipulates that a programme of publicity aimed at occupants of the development and other residents in Burnham Market highlighting the opportunities for recreation (especially dog-walking) in the vicinity avoiding areas within the Wash Special Protection Area and the North Norfolk Coast Special Protection Area should be put in place. This will highlight the sensitivity of those protected areas to dog-walking and other recreation. The policy will not result | SPA birds | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
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| | | in significant impacts in isolation, but is also considered cumulatively. | | |
| Castle Acre: 11 homes | 6.42km from Norfolk Valley Fens SAC | The location, within Castle Acre village, is in an area where there is a good supply of public open space and footpaths. Development is also not sufficiently close or large enough to any Natura 2000 site to cause a likely significant effect. | | No |
| Clenchwarton: 50 homes | 3.18km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC | The preferred development site is well connected to the Clenchwarton Parish Walk via a minor road. The Wash SPA is nevertheless probably too far for most on-foot visitors, but may be visited by car. However the Wash SPA coast in this area is not well visited and probably has capacity for more without adverse effects. | | No |
| Dersingham: 30 homes | 1.4km from Dersingham Bog SAC and Ramsar. 8.06km by road from the Wash SPA. | Dersingham Bog SAC is already at capacity for recreational disturbance, any more than a negligible increase would trigger likely significant effect. Increased visitors would damage habitat features of Dersingham Bog SAC. However the location and number of houses, and the position of access points to the Bog, indicate that this allocation in itself is unlikely to cause a likely significant effect; however cumulative effects on this site are also considered.<br>May contribute to cumulative impacts on the Wash SPA from recreational disturbance. | SAC features<br>SPA features | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| Docking: 20 homes | 6.47km from The North Norfolk Coast SPA and Ramsar and The Wash and North Norfolk Coast SAC | Too far to travel to North Norfolk Coast SPA for most on-foot visitors, but may be visited by more people using vehicles. However the number of houses proposed is small, and the most likely close sites (Brancaster, Burnham Overy, perhaps Holme) are already well visited, so the increase in usage would be almost imperceptible given the already heavy use of the area. | SPA birds | No |
| East Rudham: 10 homes | 2.06km from River Wensum SAC | Inside the catchment for the River Wensum. Potential issues with sewerage capacity; no issues for disturbance as access to the SAC on upper stretches is limited, and the sites are robust.<br><br>The policy states no construction shall commence before sewerage arrangements and confirmation of sewerage capacity have been submitted to and approved by the local planning authority. No likely significant effect is therefore predicted. | SAC features | No |
| Feltwell & Hockwold cum Wilton: 75 homes | 0.29km from Breckland SPA | Proximity impacts for birds sensitive to human presence (stone curlew).<br><br>Recreational impacts from daily activities of local people 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.<br><br>Developments within Feltwell and Hockwold cum Wilton should only be permitted if no adverse effects on the SPA are determined by a project-level Habitats Regulations Assessment, as specified in the Preferred Options document. | SPA features particularly stone curlew for sensitivity to human presence, and nightjar and woodlark for recreational impacts. | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| Gayton, Grimston and Pott Row: 46 homes (23 Gayton, 23 Pott Row) | 2.43km from Norfolk Valley Fens, 1.8km from Roydon Common SAC by road | May result in an increase in number of local users of Roydon Common – however, within 8km there are several other greenspace alternatives which are not European sites, including Bawsey Country Park which is much closer. Such an increase would not on its own result in a likely significant effect on the qualifying SAC/ Ramsar features. However there may be effects on Annex 1 species (nightjar and woodlark) which nest on the site, these would also need to be addressed in view of the possibility of designation. Additionally there may be a need to form a strategic plan for recreation with the owners of Roydon Common to prevent cumulative effects from this and other large developments around King's Lynn. | SAC habitats | No |
| Great Massingham: 12 homes | 8.67km from Norfolk Valley Fens, 10.1km from Roydon Common SAC | The allocation is too far for regular recreational visits to European sites. Development is therefore not large enough or sufficiently close to European sites to cause a likely significant effect. | | No |
| Heacham: 60 homes | 1.18km from The Wash Ramsar and SPA. 10.1km from the North Norfolk Coast SPA. | Increased local users at the coast may contribute to physical, visual and noise disturbance of breeding and wintering birds. Visitors may visit the Wash by foot or by vehicle.<br>However, the policy provides significant safeguards for European sites through increased green space provision, pedestrian routes and contribution to wider green infrastructure. | SPA features | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| Marham: 50 homes | 5.59km from Breckland SPA | Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect.<br><br>Probably too far to travel for most on-foot visitors, but may be visited by more people using vehicles. However this diffuse and limited impact is not likely to cause a significant effect. | | No |
| Methwold and Northwold: 45 homes | 1.62km from Breckland SPA | Outside of 1500 metre stone curlew buffer.<br><br>Recreational impacts from daily activities such as dog walking in the forest. Probably too far to travel for most on-foot visitors, but may be visited by more people using vehicles.<br><br>The recreational impacts are thought to be insufficient in scale from the proposed allocation alone to cause likely significant effects, as it is beyond the 400 metre buffer specified for woodlark and nightjar. | SPA features particularly stone curlew for sensitivity to human presence, and nightjar and woodlark for recreational impacts. | No |
| Outwell/ Upwell: 85 homes | 10.5km from Ouse Washes Ramsar and SAC | Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect. Too far to travel for most on-foot visitors, and not a likely destination for vehicle-bound visitors unless it is Welney where access is strictly controlled. | SPA features | No |
| Snettisham: 34 homes | 2.97km from The Wash Ramsar and SPA. 7.1km from Dersingham Bog SAC/ Ramsar | Dersingham Bog SAC is already at capacity for recreational disturbance, any more than a negligible increase would trigger likely significant effect. Increased visitors would damage habitat features of Dersingham Bog SAC. However the location and number of houses, and the position of access points to the Bog, indicate that this allocation in itself is unlikely to cause a likely significant effect; however it may contribute to cumulative effects on this site. The policy has been | SPA birds | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
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| | | adjusted in the submission document to clarify the potential for green infrastructure improvements | | |
| Stoke Ferry: 27 homes | 8.3km by road from Norfolk Valley Fens (Foulden Common) | Too far to travel for most on-foot visitors, but site may be visited by more people using vehicles. However Foulden Common is not especially well visited currently, and has not indicated signs of negative effects on habitats from disturbance. Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect. | | No |
| Terrington St. Clement: 27 homes | 6.15km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC | The Wash is too far to travel for most on-foot visitors, but may be visited by more people using vehicles. However the Wash SPA coast in this area is not well visited and probably has capacity for more visitors without adverse effects. | | No |
| Terrington St. John/St. John's Highway/ Tilney St. Lawrence: 35 homes | 11.06km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC | Development would not be sufficiently close or large enough to Natura 2000 site to cause a likely significant effect. | | No |
| Watlington: 32 homes | 16km by road 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 |
| West Walton/ Walton Highway: 20 homes | 15km by road from Nene Washes Ramsar and SPA | Development not sufficiently close or large enough to Natura 2000 site to cause a likely significant effect. | | No |
| Ashwicken: **[no allocation]** | 2.90km from Roydon Common Ramsar and Roydon Common and Dersingham Bog SAC | No allocation, and therefore no likely significant effect. | | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| Burnham Overy Staithe: **[no allocation]** | 0.43km from The North Norfolk Coast SPA and Ramsar and The Wash and North Norfolk Coast SAC | No allocation, and therefore no likely significant effect. | SPA features | No |
| Castle Rising: [**no allocation**] | 2.22km from Roydon Common and Dersingham Bog SAC and Roydon Common Ramsar | No allocation, and therefore no likely significant effect. | None | No |
| Denver: [**no allocation**] | 2.7km by road plus 2.8km by foot from Ouse Washes SPA/ SAC/ Ramsar | No allocation, and therefore no likely significant effect. | | No |
| East Winch: 10 homes | 6.1km by road from Norfolk Valley Fens (East Walton Common) | Too far to travel for most on-foot visitors, but may be visited by more people using vehicles. However East Walton Common is not especially well visited currently, and has not indicated signs of negative effects on habitats from disturbance. The distance from the site and small number of houses indicate no likely significant effect. | SAC habitats | No |
| Fincham: 5 homes | 8km from Breckland SPA | The recreational impacts on Breckland SPA are thought to be insufficient in scale from the proposed allocation alone to cause likely significant effects, as it is considerably beyond the 400 metre buffer specified for woodlark and nightjar. | Breckland SPA | No |
| Flitcham: [**no allocation**] | 4.18km from Roydon Common and Dersingham Bog SAC and Roydon Common | No allocation, and therefore no likely significant effect. | | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| | Ramsar | | | |
| Great Bircham/Bircham Tofts: 10 homes | 12.6km by road from the Wash SPA, 13.2km by road from 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 |
| Harpley: 5 homes | 7.7km by road from River Wensum SAC; 11.9km from Roydon Common and Dersingham Bog SAC. | Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect. | | No |
| Hilgay: 12 homes | 9.8km by road from Ouse Washes Ramsar and SPA | Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect. Nearest convenient access is Welney reserve, where public access is strictly controlled. | SPA birds | No |
| Hillington: 5 homes | 4.8km by road from Roydon Common SAC; | Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect on its own, but may contribute to cumulative effects on the SAC. | | No |
| Ingoldisthorpe: 10 homes | 5.3km by road from Dersingham Bog SAC and Ramsar. 4.7km from the Wash SPA | Too far to travel for most on-foot visitors, but may be visited by more people using vehicles.<br>Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect on its own, but may contribute to cumulative effects on the SAC. | | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| Marshland St. James, St. Johns Fen/Tilney Fen End: 25 homes | 16.6km by road plus 2.8km on foot from Ouse Washes Ramsar and SAC | Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect through recreation. Nearest convenient access is Welney reserve, where public access is strictly controlled and is significantly further away. | | No |
| Middleton: 15 homes | 9.5km by road from Roydon Common SAC; | Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect. | | No |
| Old Hunstanton: [**no allocation**] | 0.42km from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC | No allocation, and therefore no likely significant effect. | SPA features | No |
| Runcton Holme: 10 homes | 12.75km by road from Ouse Washes Ramsar and SAC, further to other European sites. | Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect. | | No |
| Sedgeford: 10 homes | 5.8km by road from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC | Too far to travel to North Norfolk Coast SPA and Wash SPA for most on-foot visitors, but may be visited by more people using vehicles. However the number of houses proposed is small, and the most likely close sites (Snettisham, Hunstanton, Heacham) are already well visited, so the increase in usage would be almost imperceptible given the already heavy use of the area. May contribute to in-combination effects. | | No |
| Shouldham: 10 homes | 11.4km by road from Breckland SPA | Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect. | | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| Southery: 15 homes | 11.1km by road from Ouse Washes SPA and Ramsar | Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect. Nearest convenient access is Welney reserve, where public access is strictly controlled. | | No |
| Syderstone: 5 homes | 3.6km from River Wensum SAC. 12.55km from The North Norfolk Coast SPA and Ramsar and The Wash and North Norfolk Coast SAC | There would be no effects on the River Wensum SAC, as the development is sufficiently distant and would have negligible effect on discharge levels, being 1.5km above the source. Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect. | | No |
| Ten Mile Bank: 5 homes | 7.3km by road from Ouse Washes SPA and Ramsar | Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect. Nearest convenient access is Welney reserve, where public access is strictly controlled. | | No |
| Three Holes: 5 homes | 7.9km by road from Ouse Washes SPA, SAC and Ramsar | Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect. Nearest convenient access is Welney reserve, where public access is strictly controlled. | | No |
| Thornham: [**no allocation**] | 0.14km from The North Norfolk Coast SPA and Ramsar and The Wash and North Norfolk Coast SAC | No allocation, and therefore no likely significant effect. | | No |
| Tilney All Saints: 5 homes | 10km by road 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 relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| Walpole Cross Keys: [**no allocation**] | 11.2km by road 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 |
| Walpole Highway: 10 homes | 15.5km by road 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 |
| Walpole St Peter / Walpole St Andrew / Walpole Marsh: 20 homes | 14.3km by road 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 |
| Welney: 20 homes | 0.1km from Ouse Washes SPA SAC Ramsar | Possible disturbance of SPA features during construction, particularly breeding or wintering birds.<br>Disturbance impacts for birds sensitive to human presence.<br>Subsequent to the Preferred Options document, Natural England have requested that any proposal should be accompanied by sufficient information, including drainage arrangements, to demonstrate that there will be no adverse effect on the Ouse Washes SAC, SPA, Ramsar. This wording has been incorporated into the policy. | SPA birds | No |
| Wereham: 8 homes | 8.1km by road from Norfolk Valley Fens SAC (Foulden | Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect. | | No |

| Site | Distance to relevant Natura 2000 sites | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|---|
| | Common) | | | |
| West Newton: [**no allocation**] | 2.22km from Dersingham Bog Ramsar and Dersingham Bog SAC | No allocation, and therefore no likely significant effect. | | No |
| Wiggenhall St Germans: [**no allocation**] | 18km by road from The Wash Ramsar and SPA and The Wash and North Norfolk Coast SAC | No allocation, and therefore no likely significant effect. | | No |
| Wiggenhall St Mary Magdalen: 10 homes | 13.2km by road from Ouse Washes SAC/ SPA/ Ramsar | Development not sufficiently large or close enough to Natura 2000 site to cause a likely significant effect. | | No |
| Wimbotsham: [**no allocation**] | 4.99km from Ouse Washes SPA and Ramsar | No allocation, and therefore no likely significant effect. | | No |
| Wormegay: [**no allocation**] | 13.4km by road from Norfolk Valley Fens | No potential sites identified, and therefore no likely significant effect. | | No |

**Table 5: Identification of likely significant effects on Natura 2000 sites as a result of Area-wide policies**

| **Area-wide Policies** | | | |
|---|---|---|---|
| **Policy** | **Possible Mechanism by which Policy may Impact European Site** | **Possible Feature(s) Impacted** | **Likely significant effect and need for Appropriate Assessment?** |
| DM1: Presumption in favour of sustainable development | There is no mechanism for effects on European sites | None | No |
| DM2: Development boundaries | The policy defines the function of the new single development boundary and describes exceptions where development might be permitted. Those exceptions would be subject to CS policies, and would be outside the scope of this policy. No mechanism is therefore identified for effects on European sites. | None | No |
| DM3:<br>Infill development in the smaller villages and hamlets | Allows for infill development along a road frontage of up to 3 houses in smaller villages and hamlets within or adjacent to current development. It is considered that the location and scale of such development will almost always be too small to cause a likely significant effect. | None | No |
| DM4:<br>Houses in multiple occupation | There is no mechanism for effects on European sites. | | |
| DM5:<br>Enlargement of dwellings outside settlements | There is no mechanism for effects on European sites. | | No |
| DM6:<br>Housing needs of | There is no mechanism for effects on European sites. | | No |

| | | | |
|---|---|---|---|
| rural workers | | | |
| DM7: Residential annexes | There is no mechanism for effects on European sites. | | |
| DM8:<br>Delivering affordable housing on phased development | There is no mechanism for effects on European sites | None | No |
| DM9:<br>Retail development outside town centres | There is no mechanism for effects on European sites. | | No |
| DM10:<br>Touring and permanent holiday sites | The policy has been amended from the Preferred Options document to reflect a fuller consideration for effects on European sites. Therefore no likely significant effect is predicted. | SPA birds, SAC habitats | No |
| DM11:<br>Strategic road network | There is no mechanism for effects on European sites. | | No |
| DM12:<br>Disused railway trackbeds | There is no mechanism for effects on European sites. | | No |
| DM13: Development Associated with CITB Bircham Newton and RAF Marham | There is no mechanism for effects on European sites | None | No |
| DM14: Environment, design and amenity | There is no mechanism for effects on European sites. | None | No |

| | | | |
|---|---|---|---|
| DM15:<br>Provision of recreational open space | This policy defines the amount of recreational space that should be provided in new developments. The open space referred to is of the "sports field" and children's play space type. While there is some limited crossover between the use of this type of space and the kind of recreational use of European sites, it is not considered that LSE would arise from this policy alone. | | No |
| DM16:<br>Parking provision in new development | There is no mechanism for effects on European sites | None | No |
| DM17:<br>Coastal flood risk hazard zone | The policy refers to the area of tidal flood zone at the coast between Wolferton and Hunstanton, and applies a precautionary approach to development within this area. However there is no clear mechanism for adverse effects on European sites. | | No |
| DM18: Green Infrastructure | The policy aims to ensure the delivery of green infrastructure through supporting the delivery of the projects outlined in the 2010 GI study. The policy states that the Council will identify a range of green infrastructure enhancements to support new housing and other development and mitigate any potential adverse effects on designated sites of nature conservation interest. Also that major development will contribute to delivery of green infrastructure, except where it can be demonstrated the development will not add to the demand or need for green infrastructure. In the event that such a contribution would render the development unviable, the development will not be permitted unless it helps deliver the Core Strategy, and the relevant contribution to that Strategy could not be achieved by alternative development, including in alternative locations or in the same location at a later time. This wording takes full account of the importance of GI, and therefore no likely significant effect is predicted | SPA birds, SAC habitats | No |
| DM19: Renewable energy | The policy details the potential impacts to be taken into consideration for renewable energy proposals. These include both designations and biodiversity alone and in combination; it is therefore considered that the policy takes full account of any likely | | No |

| | | | |
|---|---|---|---|
| | significant effect on European sites. | | |
| DM20:<br>Allocated sites in areas of flood risk | There is no mechanism for effects on European sites. | | |
| DM21:<br>Community facilities and allotments | There is no mechanism for effects on European sites. | None | No |
| DM22:<br>Protection of local green space | The policy aims to protect existing locally important open space. | SPA birds/ SAC habitats | No |

**Table 6: Identification of likely significant effects on Natura 2000 sites as a result of in-combination effects**

| Site | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|
| Dersingham Bog SAC and Ramsar | Combined effects of increased recreational pressure from new housing at Knights Hill (600), South Wootton (300), Dersingham (30), Snettisham (34) and Ingoldisthorpe (10), total 974 houses. Combined effects from development outside the Borough are not likely, because of the nature of the users of the site (mostly local users).<br>Subsequent to the Preferred Options document, a package of measures is now proposed for each settlement policy which ensures overall cumulative effects will be reduced.<br>Monitoring | SAC habitats | Yes |
| Roydon Common SAC and Ramsar | Combined effects of increased recreational pressure from new housing at King's Lynn (1450), Knights Hill (600), South Wootton (300), Runcton/ West Winch (1600), Gayton/ Grimston/ Pott Row (46) and | SAC habitats | Yes |

| Site | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|
| | Hillington (5), total 4,001 houses. Combined effects from development outside the Borough are not likely, because of the nature of the users of the site (mostly local users).<br><br>Subsequent to the Preferred Options document, a package of measures is now proposed for each settlement policy which ensures overall cumulative effects will be reduced. | | |
| North Norfolk Coast SPA/ Ramsar | Combined effects of increased recreational disturbance from new housing at Hunstanton (333), and Burnham Market (30), total 363 houses. Combined effects from outside the Borough are likely, because of the mixed nature of users (local, day trippers and tourists).<br><br>Subsequent to the Preferred Options document, a package of measures is now proposed for each settlement policy which ensures overall cumulative effects will be reduced. | SPA birds | Yes |
| Wash SPA/ Ramsar | Combined effects of increased recreational disturbance from new housing at Hunstanton (333), Heacham (66), Snettisham (34), Ingoldisthorpe (10), Dersingham (30), total 473 houses. Combined effects from outside the Borough are likely because of the mixed nature of users (local, day trippers and tourists).<br><br>Subsequent to the Preferred Options document, a package of measures is now proposed for each settlement policy which ensures overall cumulative effects will be reduced. | SPA birds | Yes |
| Wash and North Norfolk Coast SAC | Combined effects of increased recreational pressure from new housing at Hunstanton (333), Heacham (66), Snettisham (34), Ingoldisthorpe (10), Dersingham (30), and Burnham Market (32), total 505 houses. Combined effects from outside the Borough are likely because of the mixed nature of users (local, day trippers and tourists).<br><br>Subsequent to the Preferred Options document, a package of measures is now proposed for each settlement policy which ensures overall | SAC habitats | Yes |

| Site | Possible Mechanism by which Policy may impact European Site(s) | Possible Feature(s) Impacted | Likely significant effect and need for Appropriate Assessment? |
|---|---|---|---|
| | cumulative effects will be reduced. | | |
| Breckland SPA/ SAC | No LSE has been identified for the allocation at Feltwell/ Hockwold. No further cumulative issues are identified for the European site. | None | No |
| Ouse Washes SPA/ SAC/ Ramsar | Although a number of settlements are within 8km of the site by road, there is also a significant walk-in at the northern end of the Ouse Washes before the European site is reached. More straightforward access is attainable at Welney reserve, where access is strictly controlled. No in-combination effects are predicted, despite development affecting this site outside the Borough, because of the limited access. | None | No |
| Norfolk Valley Fens SAC | East Walton Common and Foulden Common are not well visited, and are relatively robust to human disturbance. No in-combination effects are predicted. Other component sites of the SAC may be affected by separate issues, though this plan would not contribute to those issues or a cumulative effect. | None | No |
| River Wensum SAC | Public access is limited near to settlements within the Borough. No in-combination effects are predicted. East Rudham is the only settlement that influences this site. | None | No |

In conclusion, the following policies are found to result in Likely Significant Effect, and are taken through to the Task 2 Appropriate Assessment.

- In-combination effects on Dersingham Bog SAC/ Ramsar
- In-combination effects on Roydon Common SAC/ Ramsar
- In-combination effects on North Norfolk Coast SPA/ Ramsar
- In-combination effects on Wash SPA/ Ramsar
- In-combination effects on North Norfolk Coast and The Wash SAC

# *9. Task 2: Appropriate Assessment*

## 9.1 Policy Modifications and Avoidance Measures

In the preferred options document HRA, the following policy amendment was suggested to housing proposals within 8km of sensitive European sites. This approach does not seem unreasonable given that sites such as Roydon Common and Dersingham Bog SAC are judged to be at their capacity for recreational pressure. Policy wording was proposed as follows:

1. *Provision of ….*
    a. *an agreed package of habitat protection measures, to mitigate potential adverse impacts of additional recreational pressure associated with the allocated development upon nature conservation sites covered by the Habitats Regulations Assessment. This package of measures will require specialist design and assessment, but is anticipated to include provision of:*
        i. *Enhanced informal recreational provision on (or in close proximity to) the allocated site [Sustainable Accessible Natural Greenspace], to limit the likelihood of additional recreational pressure (particularly in relation to exercising dogs) on nearby relevant nature conservation sites. This provision will be likely to consist of an integrated combination of*
            1. *Informal open space (over and above the Council's normal standards for play space);*
            2. *Landscaping, including landscape planting and maintenance;*
            3. *A network of attractive pedestrian routes, and car access to these, which provide a variety of terrain, routes and links to the wider public footpath network.*
        ii. *Contribution to enhanced management of nearby designated nature conservation sites and/or alternative green space;*

iii. *A programme of publicity to raise awareness of relevant environmental sensitivities and of alternative recreational opportunities.*

It is acknowledged that the success of such measures is not entirely predictable, and that a level of monitoring of use of European and alternative sites will be required post-development. The results of this monitoring would need to lead to further measures being taken if harm to European sites is thought to be likely.

### 9.2 Avoidance Measures for Impacts on Dersingham Bog and Roydon Common SAC/ Ramsar (with potential to achieve SPA status).

For housing allocations within 8km of Roydon Common SAC/ Ramsar, the following provisions should apply. These should be applied *in proportion* with the size of the proposed development.

The following package of habitat protection measures, to mitigate potential adverse impacts of additional recreational pressure associated with the allocated development upon nature conservation sites covered by the Habitats Regulations, is proposed. This package of measures will require specialist design and assessment, but is anticipated to include provision of:

Enhanced informal recreational provision on (or in close proximity to) the allocated site, to limit the likelihood of additional recreational pressure (particularly in relation to exercising dogs) on nearby relevant nature conservation sites. This provision will be likely to consist of an integrated combination of:

a. Informal open space (over and above the Council's normal standards for play space); the spaces provided will need to demonstrate their suitability for a variety of uses, including linear/ circular routes for dog exercising. It is acknowledged that people will choose to use a number of different places for dog walking, and that some may choose on occasion to visit Roydon and Dersingham. This may be offset to an extent by existing residents choosing to walk their dogs in the new open space provided.

b. Landscaping, including landscape planting and maintenance; landscaping in itself will make little difference to alleviate recreational pressure on Roydon or Dersingham. However it may help to make the new housing areas more attractive to residents and dissuade them from travelling a greater distance.

c. A network of attractive pedestrian routes, and car access to these, which provide a variety of terrain, routes and links to the wider public footpath network; Norfolk Wildlife Trust have offered to assist the Borough Council in looking into how green infrastructure could be provided in areas, such as the Gaywood Valley outside of the immediate environment of Roydon Common and Grimston Warren and in the Bawsey/Leziate pits area. However, specifically for Knight's Hill, a crossing point at Sandy Lane would not be suitable, as it is likely that this would increase the footfall across Roydon Common and Grimston Warren to the south. Ultimately, new offsite pedestrian routes will require co-operation of a number of stakeholders – an appropriate forum needs to be set up for such discussions. It would be advantageous if this updated green infrastructure strategy for the King's Lynn area were subject to further HRA once settled.

d. Contribution to enhanced management of nearby designated nature conservation sites and/or alternative green space; this could come in the form of a Community

Infrastructure Levy (CIL) which could support any changes to the infrastructure on the European sites. CIL could also support site monitoring. Another possibility is that CIL could be used to purchase additional land for public access. However, CIL may not be a suitable mechanism for funding ongoing management of sites once such infrastructure is in place.

e. An ongoing programme of publicity to raise awareness of relevant environmental sensitivities and of alternative recreational opportunities away from the sensitive sites. For example, prominent and permanent signage could be provided both at the new development and at the sensitive sites.

f. The new developments should be subject to screening for HRA. This does not replace those measures specified above, nor does it abdicate the duties of this HRA; rather it provides an additional safeguard that, at the point of delivery, a likely significant effect has been avoided.

g. Use of the European sites should be subject to ongoing monitoring, as a part of an agreed mitigation strategy, to identify whether adverse effects on site integrity are predicted and, if so, the proportion of such harm arising from visitors from the developments in question. This monitoring should be able to provide timely evidence to inform the developers' obliged response, which would be likely to involve influencing future recreational use of these areas through future phases of development, contributions to European site management measures, alternative recreational provision, influencing wider recreation take up, or some combination of these.

h. There should be an ongoing dialogue, most likely organised by the Borough Council, and involving all relevant stakeholders, with the specific aim of reducing effects on these sites, examining the results of site monitoring and acting on any findings.

i. The Borough and other stakeholders should continue to explore options for obtaining long-term access or acquiring further recreational greenspace on an opportunistic basis.

j. As the potential effects on the European site come from a number of sources, some of which are outside the scope of this plan (for example existing settlements), the site managers should continue to innovate and explore ways of reducing on-site impacts of recreational disturbance. This could also be assisted by developer contributions.

**Avoidance Measures for North Norfolk Coast SPA/ Wash SPA/ SAC**

Avoidance of adverse effects in combination with other proposals outside the Borough has already been considered at Core Strategy level, but that the Preferred Options HRA specified that further work is needed to develop an agreed package of habitat protection measures. Baseline visitor pressure data, monitoring and management measures will need to be developed and demonstrated to be deliverable. The Borough will continue to work with its partners in pursuit of this.

With regard to the combined effect of housing proposals specific to the submission document (Heacham, Hunstanton, Docking, Burnham Market, Snettisham Ingoldisthorpe, Dersingham), it is recommended that a parallel strategy of green infrastructure provision, plus a programme of permanent public information, should be sufficient to ensure reduction of likely impacts to an insignificant level, and no adverse effect on integrity. This should be tested for larger proposals by submission to HRA screening.

For the adjoining district of North Norfolk, a programme of monitoring was proposed in the site-specific HRA (Royal Haskoning 2009). The programme was designed to be proactive in helping to predict where adverse effects may occur within the European site. The Borough should consult with North Norfolk District Council to clarify progress with this monitoring programme, and where feasible, and in partnership with others, ensure that a similar programme is installed in West Norfolk.

**Table 7: Appropriate Assessment**

| 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 |
|---|---|---|---|---|
| **Dersingham Bog SAC/ Ramsar** in combination impacts from housing at Knight's Hill, South Wootton, Dersingham, Snettisham and Ingoldisthorpe (974 houses) | No | Development can be modified and designed to reduce off-site impacts. | Approach specified in Section 9.2 to be applied to larger proposals. To provide additional certainty, larger proposals should be subject to screening for project level HRA. | Yes |
| **Roydon Common SAC/ Ramsar** in combination impacts from housing at King's Lynn, Knight's Hill, South Wootton, Runcton/ West Winch, Gayton/ Grimston/ Pott Row, and Hillington. (4001 houses) | No | Development can be modified and designed to reduce off-site impacts. | Approach specified in Section 9.2 to be applied to larger proposals. To provide additional certainty, larger proposals should be subject to screening for project level HRA. | Yes |
| **North Norfolk Coast SPA**<br><br>In combination effects from housing at Hunstanton, and Burnham Market. | No | Yes | Policy should ensure the provision of such facilities and, if required to achieve this, an increase/improvement in local greenspace provision over and above the normal allocation. Developments should be required to provide a programme of publicity aimed at occupants of the | Yes |

| 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 |
|---|---|---|---|---|
| | | | development and other residents highlighting the opportunities for recreation (especially dog-walking) in the vicinity avoiding areas within the Wash Special Protection Area and the North Norfolk Coast Special Protection Area. To provide additional certainty, larger proposals should be subject to screening for project level HRA. | |
| **Wash SPA**<br>In-combination effects from new housing at Hunstanton, Heacham, Snettisham, Ingoldisthorpe and Dersingham. | No | Yes | Policy should ensure the provision of such facilities and, if required to achieve this, an increase/improvement in local greenspace provision over and above the normal allocation. Developments should be required to provide a programme of publicity aimed at occupants of the development and other residents highlighting the opportunities for recreation (especially dog-walking) in the vicinity avoiding areas within the Wash Special Protection Area and the North Norfolk | Yes |

| 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 |
|---|---|---|---|---|
| | | | Coast Special Protection Area. To provide additional certainty, larger proposals should be subject to screening for project level HRA. | |
| **Wash and North Norfolk Coast SAC**<br><br>In-combination effects from new housing at Hunstanton, Heacham, Snettisham, Ingoldisthorpe, Dersingham and Burnham Market. | No | Yes | Policy should ensure the provision of such facilities and, if required to achieve this, an increase/improvement in local greenspace provision over and above the normal allocation. Developments should be required to provide a programme of publicity aimed at occupants of the development and other residents highlighting the opportunities for recreation (especially dog-walking) in the vicinity avoiding areas within the Wash Special Protection Area and the North Norfolk Coast Special Protection Area. To provide additional certainty, larger proposals should be subject to screening for project level HRA. | Yes |

# 10. Conclusion

This document has considered potential effects on designated sites of European importance of the Site Allocations and Development Management Policies – Proposed Submission Document for the Borough of King's Lynn and West Norfolk. The potential effects were considered to arise from loss of supporting habitats, habitat fragmentation, non-specific proximity impacts, increased recreation and leisure pressures, increased use of roads, and the cumulative impacts on sites arising from multiple housing allocations.

By far the most important of these, in a borough-wide context, was considered to be the multi-faceted and complex impacts arising from increased recreation and leisure pressures on European sites. These were considered in some detail, and the best available evidence was used to inform the assessment. This indicated that visitors likely to cause greatest impacts were those local site users, in particular those exercising dogs. Impacts were predicted to be greatest where local users were within comfortable walking distance of European sites (estimated to be 1km), and would also occur where sites were in a reasonable range of driving, estimated to be around 8km or 5 miles.

While the effects of individual preferred options for housing were considered not to give rise to Likely Significant Effect, a more substantial effect was predicted when the in-combination effects of groups of new housing allocations within range of the European sites were considered. This was especially severe for the combined heath/ bog SAC of Roydon Common and Dersingham Bog where visitor numbers are already considered to be at their upper limit. With large housing allocations proposed for King's Lynn at Knight's Hill, South Wootton and West Winch, the challenge is to accommodate the recreational needs of the extra population while demonstrating no adverse effect on the SAC.

This HRA provides a framework for a workable solution to this issue, which if followed will ensure no adverse effect will result from the proposals. It is impossible to predict with absolute certainty the behaviours of recreation, but a monitoring framework is specified to anticipate potential adverse effects as development progresses.

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# Appendix: Comments on Preferred Options HRA

**RSPB Comments**

6.1 Draft Habitats Regulations Assessment

We agree with the broad conclusions of the HRA in its current draft stage that the proposed allocations (in particular at Feltwell and Hockwold) will not result in a likely significant effect on Special Protection Areas.

Regarding the likely increased visitor pressure on designated sites from new housing allocations in the District, the Core Strategy's Habitats Regulations Assessment recommended that a strategy should be developed that sets out an access management and monitoring programme that provides measures to prevent increasing visitor pressure, and that suitable mitigation would be installed should monitoring indicate that recreational pressure is having an impact on designated site features.

We note the recommendation in the current DPD's draft HRA that further work is needed to develop an agreed package of habitat protection measures. In order for the following submission DPD stage to demonstrate that the allocations will not result in an adverse effect on Natura 2000 sites, baseline visitor pressure data, monitoring and management measures will need to be developed and demonstrated to be deliverable. A key point we wish to make that differs from the recommendation in the Core Strategy HRA is that the plan needs to be able to demonstrate that it can avoid an adverse effect, rather than just to be able to mitigate it after it has occurred. Any monitoring programme should be designed so that adverse effects can be anticipated and mitigation put in place to avoid them occurring.

Indirect visitor pressure on Natura 2000 sites has been addressed recently in adjacent plan areas – a useful reference would be the Access and Bird Monitoring Implementation Framework in the adopted Breckland Site Specific Allocations and Thetford Area Action Plan DPDs.

(Email sent by RSPB East of England Norfolk)

**Norfolk Wildlife Trust Web Comments**

**Habitats Regulation Assessment**

*Findings of the HRA*

The Executive Summary of the HRA states that "while the effects of individual preferred options for housing were considered in places to give rise to Likely Significant Effect, a more substantial effect was predicted when the in-combination effects of groups of new housing allocations within range of the European sites were considered. This was especially severe for the combined heath/bog SAC of Dersingham Bog and Roydon Common where visitor numbers are already considered to be at their upper limit."

As result, Section 9 of the HRA outlines potential policy modifications and avoidance measures and these have been included in the site allocation policies for Knights Hill, South Wootton and West Winch. As stated above it is our view that these policies should also apply to other major developments in and around King's Lynn.

However, the HRA also makes clear that there are still issues to be resolved and the summary states that "HRA also goes some way towards indicating a workable solution to this issue, but falls short of indicating that no adverse effect will definitely result from the proposals. Further work is required before submission to provide certainty that the "avoidance of harm" approach suggested through additional policy wording is practical and achievable."

This issue will need to be addressed if the final document is to be considered sound when submitted. Further to this, it is our view that the HRA did not consider all impacts sufficiently, making it even more difficult for policies to be successful in mitigating impacts.

*Potential SPA designation*

The HRA (table 4 (page 57)) recognises that there may be impacts in Annex 1 species which nest on the site and that these would need to be covered by an EIA. However, it fails to recognise the likelihood of Dersingham Bog and Roydon Common meeting the requirements for a Special Protection Area. Dersingham Bog and Roydon Common already appear to fulfil the requirements for designation in relation to breeding woodlark and nightjar and for wintering hen harrier. As a result the potential for designation is being actively pursued by NWT and Natural England. This situation would have been apparent if evidence had been sought from NWT, as site manager for Roydon Common, whilst the HRA was being written. Although we recognise that the sites are not currently SPA, there is a likelihood that they will become so by the time any housing developments take place. Even if this is not the case, it should be noted that there are planning cases where an inspector has recognised that a site fulfils SPA requirements and has come to a decision that it should be treated as such, even when not designated.

*Impacts on SAC features:*

We do not agree with the conclusion that there will be no impact on SAC features. It is quite possible that visitors might impact the heathland or mire SAC habitats directly, or indirectly. For instance an increase in use by dog walkers could impact on the ability of NWT or NE to deliver essential grazing management on the SAC. Dog attacks on livestock are a reality even at current recreational levels. Without grazing management at the appropriate type and level it would not be possible to maintain present SAC features in favourable condition.

*Omissions from the HRA*

Table 1 of the HRA assesses that there will not be any visitors to Roydon Common on foot. This would clearly not be the case if there were to be a crossing point at Sandy Lane. This situation has not been addressed in the HRA and clearly should have been considered.

*Conclusion*

In our view, one of the key reasons that the proposed policies are unlikely to address the impacts of recreation pressure on Roydon Common is the apparent expectation that the Common can accommodate an increase in visitors even though it is recognised in the HRA (Section 9) "that sites such as Roydon Common and Dersingham Bog SAC are judged to be at their capacity for recreational pressure.". It is our view, as managers of Roydon Common that it cannot take more footfall, no matter how well managed because it is covered by the territories of sensitive and rare breeding birds for much of the year, holds a sensitive winter roost of hen harrier and requires grazing livestock to manage the heath and mire habitats.

We believe that the correct approach should be through provision of Suitable Alternative Natural Green Space (SANG). Suitable Alternative Natural Green Space (SANG) is green open space provided and managed to mitigate the harmful effects of new development on protected bird habitats. This approach was pioneered in relation Thames Basin Heaths and has also been used in relation to impacts on SPA bird species in Nottinghamshire. The Policies within the Local Sites Plan appear to go some way towards this approach (by recognising that alternative green space may be required) but do not set this out explicitly. Without there being an agreed plan to create new alternative green space, using the SANG approach, we are very concerned that it will be assumed wrongly that mitigation can be achieved through sensitive sites such as Roydon Common and Dersingham being able to absorb further recreational pressure and there being green space provided within new developments, at the same level as is provided when impacts on designated sites is not an issue.

Norfolk Wildlife Trust recognises the dilemma faced by the Borough in finding an approach that will allow for the required new housing, whilst ensuring that there will be no adverse impact on designated sites. We have offered in the past to work with the Borough and their chosen ecological consultant to find a solution that will ensure that the Local Sites Plan is found to be sound and this offer still stands. As part of this approach we are also happy to work with the Borough to explore how green infrastructure could be provided in areas, such as the Gaywood Valley outside of the immediate environment of Roydon Common and Grimston Warren and in the Bawsey/Leziate pits area.

**Natural England Comments**

We are generally satisfied that the report produced by Wild Frontier (July 2013) provides a reasonable assessment of the potential impacts of the preferred site allocations and policies, alone, on N2K sites. It is slightly confusing that the report is predominantly a screening assessment of the likely significant effects of sites and policies whilst incorporating an „Appropriate Assessment" which, rather than providing a detailed assessment, really only identifies additional mitigation; however, this does not affect the validity of the assessment and we generally concur with its conclusions.
In considering in-combination effects the HRA identifies a number of other relevant plans and projects, along with neighbouring authorities; however, there appears to be no detailed consideration of the effects of these plans, including those of neighbouring authorities, in-combination with the BCKLWN Detailed Policies and Sites Plan. The HRA only provides a detailed assessment of the combined effects of the individual developments within the BCKLWN Plan. The HRA should incorporate a more detailed assessment of the in-combination effects with other plans and projects, including the adjacent authorities" Local Plans.

The HRA concludes that the potential „in-combination" effects of development associated with a number of sites, through increased recreational pressure, requires a strategic approach with stakeholder involvement. Policy wording is recommended to require the provision of an agreed package of habitat protection measures to mitigate the potential adverse effects of additional recreational pressures; this recommendation appears to have been incorporated within the relevant policies. However, the HRA concludes that uncertainties remain regarding the deliverability of such a package of measures and that further detail needs to be secured to enable greater certainty (that there will be no adverse effect on N2K sites). Natural England will be pleased to engage with your authority on the preparation of a strategic approach to GI provision and a suitable delivery mechanism, to be implemented through the relevant policies, to ensure that the HRA is able to conclude no adverse effects from development on Dersingham Bog SAC, Ramsar, Roydon Common SAC, Ramsar, North Norfolk Coast SPA, Ramsar, the Wash SPA, Ramsar and North Norfolk Coast and Wash SAC.

The assessment of potential recreational impacts presented in the HRA can be used as a basis for identifying a strategic approach to GI provision and delivery; further consideration will also need to be given to potential „in-combination" effects and engagement with relevant cross-boundary authorities is recommended. The HRA acknowledges the requirement for post-development monitoring and we recommend that a suitable approach should be agreed and requirements for this embedded within the overall strategy.

As we mentioned in our previous response your council may find it helpful to refer to the HRA that was produced for neighbouring North Norfolk District Council"s (NNDC) Site Specific

Proposals Site Allocations. A number of issues, similar to ones identified for the site allocations within this borough, are also present in NNDC‟s area, and were addressed in their HRA. It may also be useful to look at the HRA produced for Suffolk Coast District Council‟s Core Strategy, in terms of recreational disturbance on internationally designated sites.

The HRA identifies potential hydrological impacts (increased sewage discharge) associated with development at King‟s Lynn and Hunstanton but states that the Core Strategy Appropriate Assessment predicted no likely significant effect on N2K sites based on the results of the Water Cycle Study. We would infer from this that there have been no significant changes in housing numbers since the Water Cycle Study was undertaken at the Core Strategy stage. Clarification should be provided if this is not the case.
(Web comment by Natural England)