

# WILD FRONTIER ECOLOGY

## Snettisham Neighbourhood Plan



## Supporting Evidence for Habitats Regulations Assessment

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## 1 Non-Technical Summary

A Neighbourhood Plan is being finalised for the parish of Snettisham in north-west Norfolk. The main thrust of the policies within the plan is to identify a suitable site for a 20-40 house development within the village.

The site is close to sections of three sites designated and protected under the EC Habitats Directive; The Wash SPA/ Ramsar, The Wash and North Norfolk Coast SAC, Roydon Common and Dersingham Bog SAC and Ramsars, and the North Norfolk Coast SPA/ SAC/ Ramsar.

The development proposals are within 8 kilometres regular driving distance of a SAC/SPA, and are therefore subject to a Habitats Regulations Assessment to determine the impacts that they may have on the notified features and habitats.

The report considers whether the proposal represents an adverse effect on the integrity of the above European sites. Specifically, whether there is a potential for disturbance effects on designated bird species, generated by increased recreational activity associated with the housing development, both alone and in-combination with other allocated sites within the Sites Allocations and Development Management Plan of the Borough Council of King's Lynn and West Norfolk.

The Poppyfields development is estimated to provide dwellings for 46-92 additional people, and of the 20-40 households, 6 -10 are likely to have at least 1 dog.

It is considered that the three European sites are likely to experience a very moderate increase in additional visitors as a result of the proposed development alone, but no likely significant effects are predicted. Minor disturbance impacts are possible, especially at the most proximate of the European sites to the development, The Wash SPA, which may experience a small increase in dog walking visitors. However, alternative areas for dog walking are present in closer proximity to the proposed housing site, which is considered likely to reduce the pressure on this site.

The issue of recreational disturbance has already been considered for the borough-wide Site Allocations and Development Management Plan (SADMP). That plan contained a Monitoring and Mitigation Strategy which specified mitigation for allocated development on a similar scale within the village (34 houses). In combination with this plan, therefore, no adverse effects on European sites are predicted.

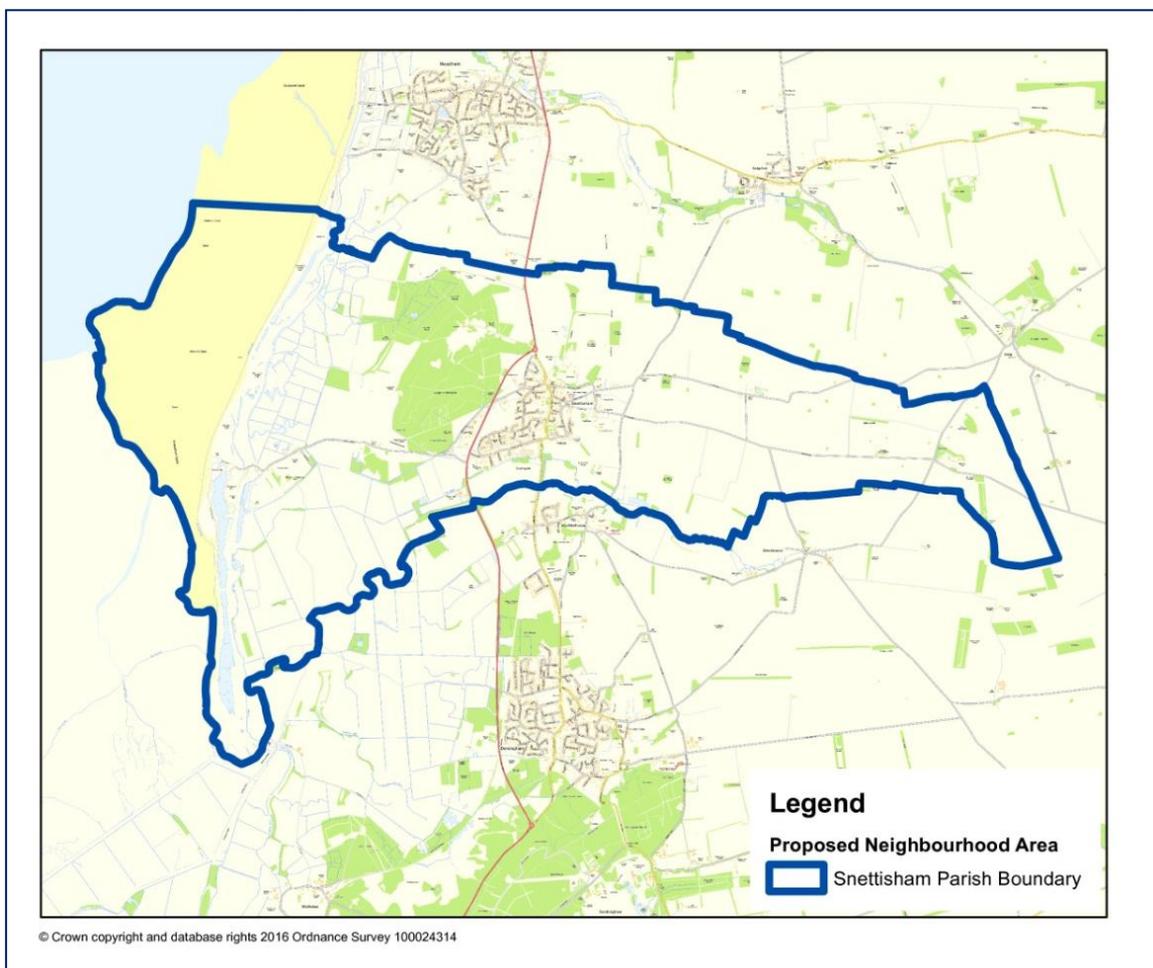
## 2 Introduction

### 2.1 Project Background

Snettisham Parish have produced a draft Neighbourhood Plan<sup>1</sup>, covering the period 2017 to 2032. Under the Habitat Regulations (2010) sufficient information needs to be available for the determining authority (in this case the Borough Council of King's Lynn and West Norfolk) to make an appropriate assessment of the effects of the Plan on sites of European importance (SAC, SPA and Ramsar designations).

The area covered by the plan is Snettisham parish, illustrated in Figure 1. The current population of Snettisham - Census 2011 - is 2,570 (1,196 male and 1,374 female)<sup>2</sup>.

**Figure 1.** Snettisham Parish Boundary



<sup>1</sup> Snettisham Neighbourhood Plan, final draft version March 2017.

<sup>2</sup> Snettisham Neighbourhood Plan, 2017-2032, Final draft.

## 2.2 Summary of Relevant Legislation

### *International (European) Site Designations*

The European Council Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC) as amended directs the designation of important wildlife sites through the European Community as Special Areas of Conservation (SACs), and gives statutory protection to habitats and species listed in the Directive as being threatened or of community interest. Sites identified as candidate SAC (cSAC) are provided with the same level of protection as SAC.

Annex I of 92/43/EEC as amended lists habitat types which are regarded as being of European importance. Included within these are a number of 'priority habitat types' which are habitats regarded as being in danger of disappearance and whose natural range falls broadly within the European Union. This European law had been transposed into UK legislation by The Conservation (Natural Habitats) &c Regulations 1994, now replaced by The Conservation of Habitats and Species Regulations 2010.

Habitats of European-wide importance for birds are listed under the EC Wild Birds Directive (79/409/EEC) as amended. Habitats designated under this Directive are notified as Special Protection Areas (SPAs) and are identified for holding populations >1% of the reference population as defined in Appendix 4 of the SPA review of bird species listed in Annex 1 of the same Council Directive. Sites identified as potential SPA (pSPA) are provided with the same level of protection as SPA.

Wetlands of international importance are designated under the Ramsar Convention.

### *The Conservation of Habitats and Species Regulations 2010*

The Conservation of Habitats and Species Regulations 2010 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).

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. This is now usually referred to as a Habitats Regulations Assessment (HRA). HRA 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.

## 2.3 HRA Process

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)*<sup>3</sup> 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".

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<sup>4</sup>. It addresses determining the need for an Appropriate Assessment for a given plan and the provision of an assessment if one is required.

The report therefore takes the following format:

- Evidence gathering. Identifying European sites within the District and outside which have qualifying features with the potential to be affected by the proposal. Followed by establishing the condition of the European sites and their conservation objectives. Finally, identifying any other relevant plans or projects which could result in cumulative effects.
- Stage 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.
- Stage 2 - Appropriate Assessment and ascertaining the effect on site integrity.
- Stages 3 and 4, given below, are not relevant to this HRA.

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<sup>3</sup> UK Government (1994). Planning Policy Guidance 9.

<sup>4</sup> DCLG (2006). Planning for the Protection of European Sites: Appropriate Assessment - Guidance for Regional Spatial Strategies and Local Development Documents, <http://www.communities.gov.uk/index.asp?id=1502244>.

**Table 1: Habitats Regulations Assessment Process**

Stage	Details
Stage 1: Screening	This stage should seek to identify whether a proposed plan or project is necessary for the management of the European site, or likely to have a significant effect on a European Site, either alone or in combination with other plans or projects. If it is necessary for the management of the European site, or if no likely significant effect is identified then the project can be 'screened out' and no further assessment is necessary.
Stage 2: Appropriate assessment	Identification and assessment of potential impacts of the proposed plan or project on the integrity of a European Site's structure, function and conservation objectives, either alone or in combination with other plans or projects. Competent authorities can consent to plans or projects that will not adversely affect the integrity of a European Site. Where the integrity of the European Site is predicted to be adversely affected, mitigation options need to be considered and the mitigated impacts then re-assessed. If adverse impacts on the European Site's integrity cannot be avoided despite mitigation measures then consent for the project can only be awarded by following stages 3 and 4.
Stage 3:.* Assessment of alternative solutions	Alternative options for achieving the objectives of the proposed plan or project need to be considered. If there are any feasible alternative solutions then the original plan cannot be consented and the alternative solution will then need to start the appropriate assessment process from stage 1.
Stage 4:.* Imperative Reasons of Overriding Public Interest and compensatory measures	Where mitigation cannot remove adverse impacts and alternative solutions are not feasible/available, the proposed plan or project can only be consented for Imperative Reasons of Overriding Public Interest (IROPI) and if compensatory measures are secured.

\*Stages 3 and 4 are not relevant to this plan at this stage of the assessment.

## 2.4 Planning Background

The Snettisham Neighbourhood Plan is being produced to complement the Local Development Framework (LDF) planning process. Neighbourhood planning is a right for communities introduced through the Localism Act 2011<sup>5</sup>. Communities can shape development in their areas through the production of Neighbourhood Development Plans, Neighbourhood Development Orders and Community Right to Build Orders.

Neighbourhood Development Plans become part of the Local Plan and the policies contained within them are then used in the determination of planning applications. Neighbourhood Development Orders and Community Right to Build Orders allow communities to grant planning permission either in full or in outline for the types of development they want to see in their areas.

Policies produced cannot block a development that is already part of the Local Plan, but what they can do is shape where that development will go and what it will look like.

<sup>5</sup> <http://www.legislation.gov.uk/ukpga/2011/20/contents/enacted>

The determining authority for this plan is the Borough Council of King's Lynn and West Norfolk (BCKLWN).

Policy DM19 in the Borough Council for King's Lynn and West Norfolk's Site Allocations and Development Management Policies document<sup>6</sup> (SADMP) covers Green Infrastructure, and Habitats Monitoring and Mitigation. The document has been appropriately assessed under the Habitats Regulations.

In relation to Habitats Regulations Assessment monitoring and mitigation the Council has endorsed a Monitoring and Mitigation Strategy within policy DM19 including:

*Project level HRA to establish affected areas (SPA, SAC, RAMSAR) and a suite of measures including all/some of: Provision of an agreed package of habitat protection measures, to monitor recreational pressure resulting from the new allocations and, if necessary, mitigate adverse impacts before they reach a significant threshold, in order to avoid an adverse effect on the European sites identified in the HRA. This package of measures will require specialist design and assessment, but is anticipated to include provision of:*

*i. A monitoring programme, which will incorporate new and recommended further actions from the Norfolk visitor pressure study (anticipated to be completed in Spring 2016) as well as undertaking any other monitoring not covered by the County-wide study.*

*ii. 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.*

*iii. Contribution to enhanced management of nearby designated nature conservation sites and/or alternative green space;*

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

*Notwithstanding the above suite of measures the Borough Council will levy an interim Habitat Mitigation Payment of £50 per house to cover monitoring/small scale mitigation at the European sites. The amount payable will be reviewed following the results of the 'Visitor Surveys at European Sites across Norfolk during 2015 and 2016'.*

## 2.5 Summary of Neighbourhood Plan Content

The major purpose of the Neighbourhood Plan (according to the plan itself) is to show where new development should (and should not) take place within the Parish boundary, what type that development should be, and the number of new dwellings that would be involved.

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<sup>6</sup> Borough Council of King's Lynn and West Norfolk Natura 2000 Sites Monitoring and Mitigation Strategy. September 2015.

Of further relevance to the effects on European sites, is that the plan also states that there is currently a considerable lack of greenspace in the village, and this must be addressed cumulatively rather than in a piecemeal fashion.

There are 17 policies, which are screened for likely significant effect on European sites in Section 4.

### **3 Objectives**

The main objective of this report is to assist BCKLWN in determining whether the proposed development will have a Likely Significant Effect (LSE) on European sites (i.e. Assessment Stage 1). If LSE is predicted, then the determination of adverse impact on site integrity is considered (Assessment Stage 2).

## 4 European Protected Sites

The European sites considered within this HRA are as follows:

### Potentially affected International and European Protected Sites

#### Special Areas of Conservation (SAC)<sup>7</sup>

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

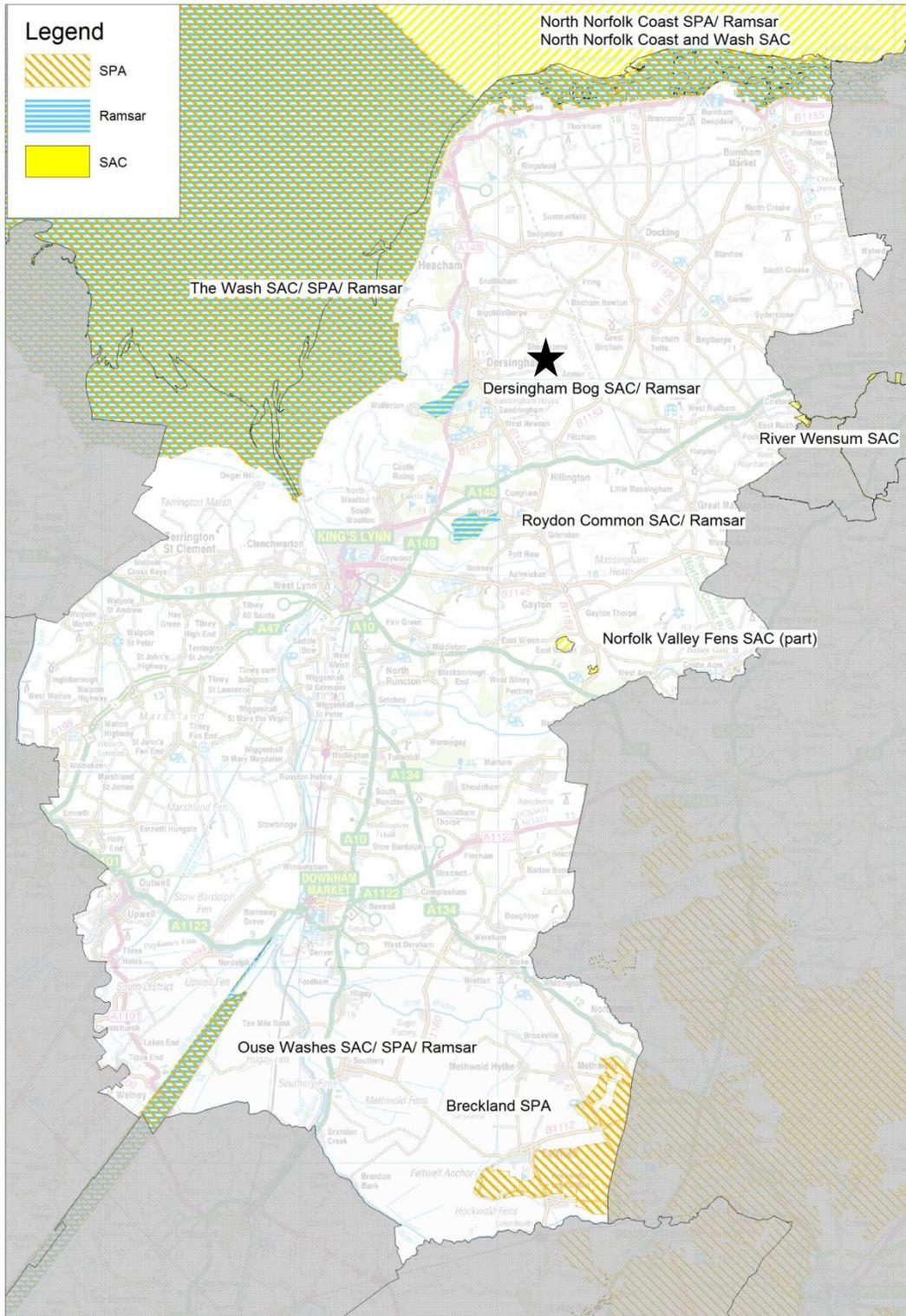
- Dersingham Bog
- North Norfolk Coast
- Ouse Washes
- Roydon Common
- The Wash

The parish contains a part of The Wash SPA, which overlaps with The Wash and North Norfolk Coast SAC. The Dersingham Bog section of the Roydon Common and Dersingham Bog SAC and Ramsar site lies approximately 3.3 kilometres south of Snettisham village, and 1.77km from the nearest point of the parish (Shepherd's Port).

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<sup>7</sup> [jncc.defra.gov.uk](http://jncc.defra.gov.uk)

**Figure 2.** Plan showing location of European Sites within West Norfolk Snettisham village location marked with a star. (Base map reproduced from Ordnance survey digital map data, © Crown Copyright 2011).



Information for these sites is set out in Appendix 1.

## 5 Potential Impacts on European Sites

### 5.1 Disturbance during Construction

Given the separation distances between the proposed housing site and the three European sites under consideration, it is considered extremely unlikely that direct construction impacts such as noise, creation of fumes, ground vibration and light pollution will cause negative effects to these protected sites.

Indirect effects such as construction traffic will likely be subsumed into the general traffic of the area. No negative effects from construction are expected.

### 5.2 Recreational Disturbance

Recreational use of European sites, including walking dogs, creates the possibility of impacts on sites. Impacts may be through physical damage to habitats (e.g. trampling of vegetation, erosion of dunes, etc), physical disturbance to species (e.g. 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).

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. Honey-pot sites such as Titchwell RSPB reserve 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.

Studies indicate that new housing development is likely to result in the new residents 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.<sup>8,9</sup>

The Norfolk Visitor Impact Survey<sup>10</sup> showed that visitors to Roydon and Dersingham SAC mainly arrived by car, were from local settlements, were mainly walking dogs, were regular visitors, and stayed for a short period (most commonly less than 30 minutes). Most visitors were either unsure whether the site had any conservation designation, or thought it did not.

Visitors to Snettisham (The Wash SPA) were noted by the report as being mainly dog walkers, walkers or beach visitors from local settlements, generally spending more time at the location, but on average visiting fewer times during the course of a week. Most

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<sup>8</sup> Natural England (2011). *Monitor of Engagement with the Natural Environment: The national survey on people and the natural environment: 2010 / 2011 national visitor survey*. NE, Peterborough.

<sup>9</sup> Cruickshanks K, Liley D and Hoskin R (2011) Suffolk Sandlings Living Landscape Project Visitor Survey Report.

<sup>10</sup> Panter, C., Liley, D. & Lowen, S. (2016). Visitor surveys at European protected sites across Norfolk during 2015 and 2016. Unpublished report for Norfolk County Council. Footprint Ecology.

visitors were either unsure whether the site had any conservation designation, or thought it did not.

## 6 Stage 1 Assessment - Screening

### 6.1 Screening Criteria

No consultation has been undertaken with BCKLWN or Natural England for their consideration of which European sites should be considered within the HRA. However, the main issue is likely to be recreational impacts from the new housing, particularly from residents exercising dogs; these impacts are identified within the borough-wide SADMP, and have been identified as the major likely source of impacts for proposals throughout East Anglia.

In assessing LSE for recreational impacts, a distance of 1km on foot and 8km by car has been identified as an average travel distance for people wishing to walk dogs. Screening uses those distances plus site access (as well as the vulnerability of site features) to identify the likelihood of a significant effect.

The reasoning for screening is given in table 2.

Criteria are set out below for the screening of policies for Likely Significant Effect.

**Table 2. Screening of Affected European Sites.**

European site	Relationship to Snettisham	Screening
Norfolk Valley Fens SAC	15.5km to the south, private access	Distance and lack of access - No likely significant effect
Ouse Washes SAC	29.3km to the SSW, some public access	Considerable distance and limited public access - No likely significant effect
Roydon Common and Dersingham Bog SAC	Dersingham section is 3.3km south of the village, including proposed development area. Public access allowed.	Close to village and accessible. Increased visitor levels could affect the management of SAC habitats. Likely significant effect.
The Wash and North Norfolk Coast SAC	Within parish boundary.	Designated features are not likely to be affected - no likely significant effect
North Norfolk Coast SAC	8km to the north, public access	Designated features are not likely to be affected - no likely significant effect
River Wensum SAC	11.5km distant, nearest part of SAC is on private land. Parish is in different river catchment to the SAC.	Considerable distance, no water issues and limited public access - No likely significant effect

European site	Relationship to Snettisham	Screening
Breckland SPA	23km distant to south-east, some public access	Considerable distance - No likely significant effect given scale of development
The North Norfolk Coast SPA	8km to the north, widespread public access	Nearest portion is within 8km of village and accessible. Visitors could disturb SPA bird populations. Likely significant effect only in combination with other developments.
The Ouse Washes SPA	29.3km to the SSW, some public access	Considerable distance and limited public access - No likely significant effect
The Wash SPA	Within parish boundary.	Bird disturbance of SPA populations through recreation and dog exercising - Likely significant effect.
Dersingham Bog Ramsar	3.3km south of the village, including proposed development area. Public access allowed.	Close to village and accessible. Increased visitor levels could affect the management of habitats which Ramsar invertebrates depend on. Likely significant effect.
North Norfolk Coast Ramsar	8km to the north, widespread public access	Nearest portion is within 8km of village and accessible. Visitors could disturb bird populations. Likely significant effect only in combination with other developments.
Ouse Washes Ramsar	29.3km to the SSW, some public access	Considerable distance and limited public access - No likely significant effect
Roydon Common Ramsar	10.5km south of the village	Sufficiently distant from village. No likely significant effect
The Wash Ramsar	Within parish boundary.	Disturbance of bird populations through recreation and dog exercising - Likely significant effect.

## 6.2 Policy Screening

Policies are screened below for effects on European sites.

Table 3. Screening of NP Policies

Policy	Is the policy necessary for the management of the European site?	Wash SPA/ SAC/ Ramsar	Dersingham Bog SAC/ Ramsar	North Norfolk Coast SPA/ Ramsar
<b>NP01 - New residential development should take place on currently available land near to Poppyfields.</b>	No	Location is within 8km of European site - Likely significant effect from increased recreational pressure only in combination with other developments.	Location is within 8km of European site - Likely significant effect from increased recreational pressure only in combination with other developments.	Location is within 8km of European site - Likely significant effect from increased recreational pressure only in combination with other developments.
<b>NP02 - The number of new dwellings should be 20-40.</b>	No	Location is within 8km of European site - Likely significant effect from increased recreational pressure only in combination with other developments.	Location is within 8km of European site - Likely significant effect from increased recreational pressure only in combination with other developments.	Location is within 8km of European site - Likely significant effect from increased recreational pressure only in combination with other developments.
<b>NP03 - New dwellings should consist predominantly of semi-detached houses and bungalows with two or three bedrooms. An</b>	No	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect

Policy	Is the policy necessary for the management of the European site?	Wash SPA/ SAC/ Ramsar	Dersingham Bog SAC/ Ramsar	North Norfolk Coast SPA/ Ramsar
<b>alternative dwelling mix could be supported where this meets changed local housing needs during the lifetime of the Plan.</b>				
<b>NP04 - Newly built dwellings should be fully occupied and not used as second/holiday homes - this to be enforced through a covenant.</b>	No	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect
<b>NP05 - There should be between 20-30% affordable units. Where affordable housing provision exceeds 20% the additional affordable homes may include shared equity homes and starter homes.</b>	No	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect
<b>NP06 - Affordable units should be available with a mix of rent &amp; purchase options.</b>	No	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect
<b>NP07 - Dwellings should include local materials, e.g. carstone, and be in keeping with the rest of the village.</b>	No	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect

Policy	Is the policy necessary for the management of the European site?	Wash SPA/ SAC/ Ramsar	Dersingham Bog SAC/ Ramsar	North Norfolk Coast SPA/ Ramsar
<b>NP08 - Dwellings should be constructed to the best practicable environmental standards.</b>	No	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect
<b>NP09 - Dwellings should have gardens.</b>	No	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect
<b>NP10 - All dwellings should have off-road parking, appropriate to their size.</b>	No	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect
<b>NP11 - Within the village envelope only small scale retail and other business should be allowed.</b>	No	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect
<b>NP12 - Larger scale commercial development should only take place west of the A149.</b>	No	Any development would be at least 2.5km from the nearest point of the	Any development would be at least 3.5km from the nearest point of the	No mechanism for direct or indirect effects - No likely significant effect

Policy	Is the policy necessary for the management of the European site?	Wash SPA/ SAC/ Ramsar	Dersingham Bog SAC/ Ramsar	North Norfolk Coast SPA/ Ramsar
		SPA - and no recreation issue. No likely significant effect	SAC - and no recreation issue. No likely significant effect	
<b>NP13 - No development should take place on, or beyond, those areas marked on the map.</b>	No	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect
<b>NP14 - The “six-acre standard” for open space should guide long-term planning decisions in Snettisham.</b>	No	This policy should encourage the creation of more than the required amount of greenspace, since the parish is currently deficient. No likely significant effect.	No likely significant effect	No likely significant effect
<b>NP15 - All planning decisions relating to the Parish should take account of the natural environment and access to it.</b>	No	The policy aims to encourage public access to natural areas around the village - no likely significant effect	The policy aims to encourage public access to natural areas around the village - no likely significant effect	The policy aims to encourage public access to natural areas around the village - no likely significant effect
<b>NP16 - Any development should encourage pedestrian access to the Centre of the Village and prioritise traffic movements via current</b>	No	No mechanism for direct or indirect effects - No likely	No mechanism for direct or indirect effects - No likely	No mechanism for direct or indirect effects - No likely

Policy	Is the policy necessary for the management of the European site?	Wash SPA/ SAC/ Ramsar	Dersingham Bog SAC/ Ramsar	North Norfolk Coast SPA/ Ramsar
<b>junctions with the Bypass.</b>		significant effect	significant effect	significant effect
<b>NP17 - This Plan should remain in force until the end of 2032.</b>	No	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect	No mechanism for direct or indirect effects - No likely significant effect

### **6.3 Stage 1 Screening Summary.**

Likely significant effects are identified for The Wash SPA/ Ramsar, Dersingham Bog SAC/ Ramsar, and the North Norfolk Coast SPA/ Ramsar. These derive from policies NP01 and NP02.

The modest size of the proposed housing in NP01 and NP02, together with the diffuse nature of the potential impact of recreational disturbance, lead to a conclusion that a LSE will only arise in combination with other housing proposals within the Borough. This is in line with the HRA for the SADMP, which predicted a similar screening outcome. These policies are therefore taken forward to Stage 2 - Appropriate Assessment.

## 7 Stage 2. Appropriate Assessment

### 7.1 Policy NP01

The preferred location of the new development, at Poppyfields, is much more than 1km distant from any European site (at least 2.5km), and therefore is unlikely to create adverse effects by residents and dogs visiting the European sites on foot, as most people are unlikely to walk this far<sup>11</sup>.

Residents (with and without dogs) driving from the new housing are likely to visit European sites within an 8km radius.

### 7.2 Policy NP02

The modest number (20-40) of proposed dwellings would support approximately 46-92 new residents, with 6-10 homes owning at least one dog<sup>12</sup>.

Being a very small percentage increase in the population of Snettisham and West Norfolk, these people would be certain to make up a small proportion of the overall numbers visiting any of the European sites.

### 7.3 Appropriate Assessment Summary

The small number of new residents (outside of typical walking distance) does not suggest that the Poppyfields site alone would create an adverse impact on the integrity of any of the European sites. Poppyfields may have an adverse impact on SPA/SAC integrity when considered in combination with other development proposals within the Borough, particularly those closer to the sites such as Dersingham, where walking to the European site may be possible.

However, a development on the scale of the Poppyfields development was already anticipated within the SADMP, and suitable mitigation for such in-combination impacts was provided within the Monitoring and Mitigation Strategy associated with the SADMP. Suitable elements of this mitigation are identified in section 8.

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<sup>11</sup> Natural England (2011). *Monitor of Engagement with the Natural Environment: The national survey on people and the natural environment: 2010 / 2011 national visitor survey*. NE, Peterborough.

<sup>12</sup> Pet Food Manufacturers Association (2015) online at: [www.pfma.org.uk/pet-population-2015](http://www.pfma.org.uk/pet-population-2015)



## **9 Post-Mitigation Impacts**

The Appropriate Assessment identified a potential for the proposed Poppyfields development to increase recreational pressure on European sites, but only when in combination with other developments. Mitigation measures to offset the likelihood and magnitude of these impacts have been proposed (i.e. financial levy, footpath provision, signage and allocated greenspace). Assuming these measures are adopted, it is predicted that the proposed development would have **no adverse effects on the European sites**, either alone or in combination with other proposals.

## 10 Appendix 1: European Site Information

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

#### 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.

This site comprises a series of valley-head spring-fed fens. Such spring-fed flush fens are very rare in the lowlands. The spring-heads are dominated by the small sedge fen type, mainly referable to black-bog-rush - blunt-flowered rush (*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*.

In places the calcareous fens grade into acidic flush communities on the valley sides. Purple moor-grass *Molinia caerulea* is often dominant with a variety of mosses including thick carpets of bog-moss *Sphagnum* spp. Marshy grassland may be present on drier ground and purple moor-grass is again usually dominant but cross-leaved heath *Erica tetralix* can be frequent. Alder *Alnus glutinosa* forms carr woodland in places by streams. Wet and dry heaths and acid, neutral and calcareous grassland surround the mires.

Within the Norfolk Valley Fens there are a number of marginal fens associated with 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 Desmoulin's whorl snail *Vertigo moulinsiana* as part of a rich assemblage of rare and scarce species in standing water habitat. At Flordon Common a strong population of narrow-mouthed whorl snail *Vertigo angustior* occurs in flushed grassland with yellow iris *Iris pseudacorus*.

#### 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%)

#### Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

#### 10.1.1 Qualifying Features:

H4010. Northern Atlantic wet heaths with *Erica tetralix*; Wet heathland with cross-leaved heath

H4030. European dry heaths

H6210. Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*Festuco-Brometalia*); Dry grasslands and scrublands on chalk or limestone

H6410. *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*); Purple moor-grass meadows

H7210. Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*; Calcium-rich fen dominated by great fen sedge (saw sedge)\*

H7230. Alkaline fens; Calcium-rich springwater-fed fens

H91E0. Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*); Alder woodland on floodplains\*

S1014. *Vertigo angustior*; Narrow-mouthed whorl snail

S1016. *Vertigo moulinsiana*; Desmoulin`s whorl snail

\* denotes a priority natural habitat or species

### **Ouse Washes SAC**

Designated on 20th May 2004

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

The Ouse Washes is one of the country's few remaining areas of extensive washland habitat. The associated dykes and rivers hold a great variety of aquatic plants; the pondweeds *Potamogeton* spp. are particularly well represented. The associated aquatic fauna is similarly diverse and includes spined loach *Cobitis taenia*. The Counter Drain, with its clear water and abundant aquatic plants, is particularly important, and a healthy population of spined loach is known to occur.

#### **Site Condition**

19.13% of the SSSI is in favourable, or "unfavourable recovering" condition. All of the site units within the Borough are in "unfavourable no change" condition.

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%)

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. Access in West Norfolk is largely limited to such access points, or a substantial walk from nearby settlements or car parking areas.

#### **Conservation Objectives**

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of the habitats of qualifying species
- The structure and function of the habitats of qualifying species
- The supporting processes on which the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

#### **Qualifying Features:**

S1149. *Cobitis taenia*; Spined loach

### **Roydon Common and Dersingham Bog SAC**

Designated on 20th May 2004

Site Area: 351.83ha, entirely within the Borough.

Roydon Common and Dersingham Bog represent the largest and best examples of cross-leaved heath - bog-moss (*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 black darter dragonfly *Sympetrum scoticum*, a northern species with a very local distribution in south-east England. The site also contains an area of dry heathland, which is dominated by heather *Calluna vulgaris*, gorse *Ulex europaeus* and young silver birch *Betula pendula*, and has areas of bracken around the margins.

There are examples of depressions on peat substrates in natural bog pools of patterned valley mire, in flushes on the margins of valley mire and locally in disturbed areas associated with trackways and paths in mire and wet heath. Mosaics containing this habitat type are important for bog orchid *Hammarbya paludosa*.

#### **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 (though the warden at Roydon also covers a number of other sites). There are small car parks and well established access points at the north-west and north-east of Roydon Common. There are 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.

#### **Conservation Objectives**

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely

*Qualifying Features:*

- H4010. Northern Atlantic wet heaths with *Erica tetralix*; Wet heathland with cross-leaved heath
- H4030. European dry heaths
- H7150. Depressions on peat substrates of the *Rhynchosporion*

### **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.

The Wensum is a naturally enriched, calcareous lowland river. The upper reaches are fed by springs that rise from the chalk and by run-off from calcareous soils rich in plant nutrients. This gives rise to beds of submerged and emergent vegetation characteristic of a chalk stream. Lower down, the chalk is overlain with boulder clay and river gravels, resulting in aquatic plant communities more typical of a slow-flowing river on mixed substrate. Much of the adjacent land is managed for hay crops and by grazing, and the resulting mosaic of meadow and marsh habitats, provides niches for a wide variety of specialised plants and animals.

*Ranunculus* vegetation occurs 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 in association with the wide range of aquatic and emergent species that contribute to this vegetation type. The river supports an abundant and rich invertebrate fauna including the native freshwater crayfish *Austropotamobius pallipes* as well as a diverse fish community, including bullhead *Cottus gobio* and brook lamprey *Lampetra planeri*. The site has an abundant and diverse mollusc fauna which includes Desmoulin's whorl-snail *Vertigo moulinsiana*, which is associated with aquatic vegetation at the river edge and adjacent fens.

#### **Site Condition**

As on 22<sup>nd</sup> January 2010, 13.74% of the site was in favourable condition, with 56.69% "unfavourable recovering", a further 29.56% being "unfavourable no change".

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.

#### **Conservation Objectives**

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,

- The distribution of qualifying species within the site.

### *Designated Features*

H3260. Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation; Rivers with floating vegetation often dominated by water-crowfoot

S1016. *Vertigo moulinsiana*; Desmoulin's whorl snail

S1092. *Austropotamobius pallipes*; White-clawed (or Atlantic stream) crayfish

S1096. *Lampetra planeri*; Brook lamprey

S1163. *Cottus gobio*; Bullhead

### **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.

The Wash is the largest embayment in the UK. 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. Subtidal 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, otter *Lutra lutra* and common seal *Phoca vitulina*. The extensive intertidal flats provide ideal conditions for common seal breeding and hauling-out.

Sandy sediments occupy most of the subtidal area, resulting in one of the largest expanses of subtidal sandbanks in the UK. The subtidal sandbanks vary in composition and include coarse sand through to mixed sediment at the mouth of the embayment. 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*.

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. The reefs extend into The Wash where super-abundant *S. spinulosa* occurs and where reef-like structures such as concretions and crusts have been recorded. The reefs are diverse and productive habitats which support many associated species that would not otherwise be found in predominantly sedimentary areas. Associated motile species include large numbers of polychaetes, mysid shrimps, the pink shrimp *Pandalus montagui*, and crabs.

Sandy flats predominate in the intertidal zone with some soft mudflats in the areas sheltered by barrier beaches and islands along the north Norfolk coast. The biota includes especially large numbers of polychaetes, mysid shrimps, the pink shrimp and crabs. 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.

The site contains the largest single area of saltmarsh in the UK and is one of the few areas in the UK where saltmarshes are generally accreting. The proportion of the total saltmarsh vegetation represented by glasswort *Salicornia* and other colonising annuals is high because of the extensive enclosure of marsh in this site and is also unusual in that it forms a pioneer community with common cord-grass *Spartina anglica*. There are large ungrazed saltmarshes on the North Norfolk Coast and traditionally grazed saltmarshes

around the Wash. Saltmarsh swards dominated by sea-lavenders *Limonium* spp. are particularly well-represented. In North Norfolk, in addition to typical lower and middle saltmarsh communities, there are transitions from upper marsh to tidal reedswamp, sand dunes (which are largely within the adjacent North Norfolk Coast SAC), shingle beaches and mud/sandflats. Mediterranean saltmarsh scrub vegetation is dominated by a shrubby cover up to 1 metre high of 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.

### 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 largely 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. Scott Head Island) large-scale access is limited by tides and physical features.

### Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species

- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

### *Qualifying Features*

H1110. Sandbanks which are slightly covered by sea water all the time; Subtidal sandbanks

H1140. Mudflats and sandflats not covered by seawater at low tide; Intertidal mudflats and sandflats

H1150. Coastal lagoons\*

H1160. Large shallow inlets and bays

H1170. Reefs

H1310. *Salicornia* and other annuals colonising mud and sand; Glasswort and other annuals colonising mud and sand

H1330. Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)

H1420. Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*); Mediterranean saltmarsh scrub

S1355. *Lutra lutra*; Otter

S1365. *Phoca vitulina*; Common seal

## Description, Characteristics and Conservation Objectives of SPA Sites

### **Breckland SPA**

Site Area: 39,433.66ha, 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 oedicephalus* 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.

### *Conservation Objectives*

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

### *Qualifying Features*

A133 *Burhinus oedicephalus*; Stone-curlew (Breeding)

A224 *Caprimulgus europaeus*; European nightjar (Breeding)

A246 *Lullula arborea*; Woodlark (Breeding)

### **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.

#### **Site Condition**

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.

Natural England assesses the West Norfolk units of the SSSI 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 freshmarshes and elsewhere. It is also noted that the condition assessments in many units neglect to mention bird populations at all.

#### **Conservation Objectives**

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

#### **Qualifying Features**

A021 *Botaurus stellaris*; Great bittern (Breeding)

- A040 *Anser brachyrhynchus*; Pink-footed goose (Non-breeding)
- A046a *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding)
- A050 *Anas penelope*; Eurasian wigeon (Non-breeding)
- A081 *Circus aeruginosus*; Eurasian marsh harrier (Breeding)
- A084 *Circus pygargus*; Montagu's harrier (Breeding)
- A132 *Recurvirostra avosetta*; Pied avocet (Breeding)
- A143 *Calidris canutus*; Red knot (Non-breeding)
- A191 *Sterna sandvicensis*; Sandwich tern (Breeding)
- A193 *Sterna hirundo*; Common tern (Breeding)
- A195 *Sterna albifrons*; Little tern (Breeding)

### ***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.

The Ouse Washes Special Protection Area is a wetland of major international importance comprising seasonally flooded washlands which are agriculturally managed in a traditional manner. It provides breeding and winter habitats for important assemblages of wetland bird species, particularly wildfowl and waders. The boundaries of the Special Protection Area are coincident with those of the Ouse Washes SSSI apart from the exclusion of a section of the Old Bedford River in the north of the SSSI.

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. Access in West Norfolk is largely limited to such access points, or a substantial walk from nearby settlements or car parking areas.

#### ***Site Condition***

19.13% of the SSSI is in favourable, or "unfavourable recovering" condition. All of the site units within the Borough are in "unfavourable no change" condition.

#### ***Conservation Objectives***

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

#### ***Qualifying Features***

A037 *Cygnus columbianus bewickii*; Bewick's swan (Non-breeding)

A038 *Cygnus cygnus*; Whooper swan (Non-breeding)

A050 *Anas penelope*; Eurasian wigeon (Non-breeding)

A051 *Anas strepera*; Gadwall (Breeding)

A052 *Anas crecca*; Eurasian teal (Non-breeding)

A053 *Anas platyrhynchos*; Mallard (Breeding)

A054 *Anas acuta*; Northern pintail (Non-breeding)

A055 *Anas querquedula*; Garganey (Breeding)  
A056 *Anas clypeata*; Northern shoveler (Non-breeding)  
A056 *Anas clypeata*; Northern shoveler (Breeding)  
A082 *Circus cyaneus*; Hen harrier (Non-breeding)  
A151 *Philomachus pugnax*; Ruff (Breeding)  
A156a *Limosa limosa limosa*; Black-tailed godwit (Breeding)  
Waterbird assemblage  
Breeding bird assemblage

### **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.

#### **Site Condition**

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.

#### **Conservation Objectives**

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring;

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and,
- The distribution of the qualifying features within the site.

#### **Qualifying Features**

A037 *Cygnus columbianus bewickii*; Bewick's swan (Non-breeding)  
A040 *Anser brachyrhynchus*; Pink-footed goose (Non-breeding)  
A046a *Branta bernicla bernicla*; Dark-bellied brent goose (Non-breeding)  
A048 *Tadorna tadorna*; Common shelduck (Non-breeding)  
A050 *Anas penelope*; Eurasian wigeon (Non-breeding)  
A051 *Anas strepera*; Gadwall (Non-breeding)  
A054 *Anas acuta*; Northern pintail (Non-breeding)  
A065 *Melanitta nigra*; Black (common) scoter (Non-breeding)  
A067 *Bucephala clangula*; Common goldeneye (Non-breeding)  
A130 *Haematopus ostralegus*; Eurasian oystercatcher (Non-breeding)

- A141 *Pluvialis squatarola*; Grey plover (Non-breeding)
- A143 *Calidris canutus*; Red knot (Non-breeding)
- A144 *Calidris alba*; Sanderling (Non-breeding)
- A149 *Calidris alpina alpina*; Dunlin (Non-breeding)
  
- A156 *Limosa limosa islandica*; Black-tailed godwit (Non-breeding)
- A157 *Limosa lapponica*; Bar-tailed godwit (Non-breeding)
- A160 *Numenius arquata*; Eurasian curlew (Non-breeding)
- A162 *Tringa totanus*; Common redshank (Non-breeding)
- A169 *Arenaria interpres*; Ruddy turnstone (Non-breeding)
- A193 *Sterna hirundo*; Common tern (Breeding)
- A195 *Sterna albifrons*; Little tern (Breeding)

## Description, Characteristics and Conservation Objectives of Ramsar Sites

### *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.

### **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 2000 Census)

Species with peak counts in spring/autumn:

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

Species with peak counts in winter:

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

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

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

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

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

Species with peak counts in spring/autumn:

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

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

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

### **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)

### ***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 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.

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

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

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

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

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

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

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

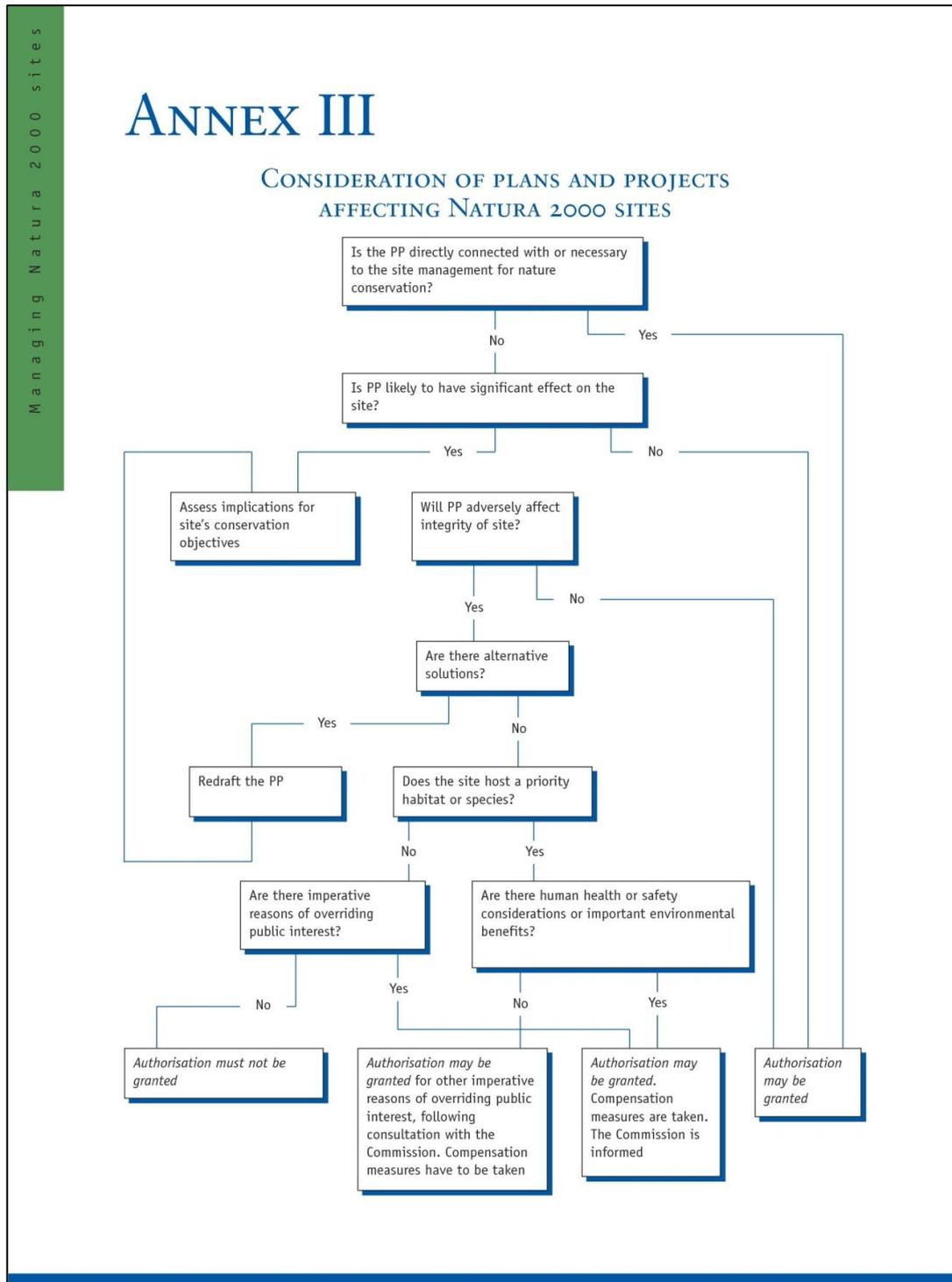
Species with peak counts in spring/autumn

*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)

## 11 Appendix 2: Appropriate Assessment Process

11.1.1 The following diagram is taken from “Managing Nature 2000 Sites: The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC” (2000)<sup>14</sup>.



<sup>14</sup> European Commission (2000). *Managing Nature 2000 Sites: The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC*. European Commission, Belgium.